Supplementary Appendix to:

Murphy, P., Bentall, R., Freeman, D., O'Rourke, S., Hutton, P. (in press). The 'paranoia-as-defence' model of persecutory delusions: A systematic review and meta-analysis. *The Lancet Psychiatry*

Content of Supplementary Appendix

A. Protocol

Title: Persecutory delusions and the attribution–self-representation cycle: protocol for a systematic review and meta-analysis.

Reviewers: Philip Murphy, Richard Bentall, Daniel Freeman, Paul Hutton

Review question(s)

Magnitude of externalising attributional bias:

1. Do individuals with non-affective psychosis with persecutory delusions have a greater externalising attributional bias than individuals with non-psychotic mental health problems?
2. Do individuals with non-affective psychosis with persecutory delusions have a greater externalising attributional bias than healthy individuals?
3. Do individuals with non-affective psychosis with persecutory delusions have a greater externalising attributional bias than individuals with non-affective psychosis without delusions?
4. Is there a positive correlation between persecutory delusion severity and the degree of externalising attributional bias?

Magnitude of explicit self-esteem:

5. Do individuals with non-affective psychosis with persecutory delusions have greater explicit self-esteem than individuals with non-psychotic mental health problems?
6. Do individuals with non-affective psychosis with persecutory delusions have greater explicit self-esteem than healthy individuals?
7. Do individuals with non-affective psychosis with persecutory delusions have greater explicit self-esteem than individuals with non-affective psychosis without delusions?
8. Is there a positive correlation between persecutory delusion severity and explicit self-esteem?

Magnitude of discrepancy between implicit and explicit self-esteem:

9. Do individuals with non-affective psychosis with persecutory delusions demonstrate a greater discrepancy between implicit and explicit self-esteem than individuals with non-psychotic mental health problems?
10. Do individuals with non-affective psychosis with persecutory delusions demonstrate a greater discrepancy between implicit and explicit self-esteem than healthy individuals?
11. Do individuals with non-affective psychosis with persecutory delusions demonstrate a greater discrepancy between implicit and explicit self-esteem than individuals with non-affective psychosis without delusions?
12. Is there a positive correlation between persecutory delusion severity and the magnitude of the discrepancy between implicit and explicit self-esteem?

Magnitude of fluctuation in self-esteem:

13. Do individuals with non-affective psychosis with persecutory delusions show greater self-esteem fluctuation than individuals with non-psychotic mental health problems?
14. Do individuals with non-affective psychosis with persecutory delusions show greater

self-esteem fluctuation than healthy individuals?

15. Do individuals with non-affective psychosis with persecutory delusions show greater self-esteem fluctuation than individuals with non-affective psychosis without delusions?
16. Is there a positive correlation between persecutory delusion severity and self-esteem fluctuation?

Searches

A librarian experienced in database searches will be consulted on the search strategy which is yet to be finalised but will include the following databases: PsycINFO, MEDLINE, EMBASE and Web of Science. Hand searches of references in eligible articles and key review articles will also be undertaken. As a final step, all corresponding authors of included articles will be contacted and asked if they are aware of any further studies potentially meeting our criteria, including both recently published and unpublished studies.
Only English language studies will be included.

Types of study to be included

Case-control, cross-sectional correlational and prospective designs will be included. Baseline data from experimental designs and intervention trials may also be included; however, outcome data or data that has been manipulated in these types of studies will be excluded.

Condition or domain being studied

Non-affective psychosis, persecutory delusions and the attribution–self-representation cycle.

Participants/ population

Group comparison studies will be required to recruit a sample of individuals with non-affective psychosis (e.g., schizophrenia, schizoaffective disorder, schizophreniform disorder, psychosis NOS) where at least half of the sample have persecutory delusions. Correlational studies will also be required to recruit a sample of individuals with non-affective psychosis and to report correlational data between a measure of paranoia/persecutory ideation and the construct of interest. Exclusion criteria include studies where over half of the sample have co-morbid diagnoses of an intellectual disability, bipolar disorder, a primary diagnosis of substance-induced psychosis or psychosis that is secondary to an organic pathology.

Intervention(s), exposure(s)

Not applicable.

Comparator(s)/ control

Both psychiatric and non-clinical controls will be included.

Context

No limitation on settings.

Outcome(s)

Primary outcomes

1. The first primary outcome is the magnitude to which external attributions for negative events are made. Attributions are typically measured via questionnaires such as the Internal, Personal, and Situational Attributions Questionnaire (IPSAQ)(1) and the Attributional Style Questionnaire (ASQ)(2) but they have also been measured in other

ways such as by coding the natural speech of participants.(3) Included studies will be required to measure attributions in one of these ways or to employ a conceptually equivalent measure. In the event that a study contains more than one index of attributions, the following hierarchy will be used to decide on the order of preference for inclusion of indices of attributions: IPSAQ > ASQ. If a study does not contain one of these indices but contains a conceptual equivalent, this will be used as long as it meets minimal criteria for reliability and validity.

2. The second primary outcome is the magnitude of explicit self-esteem. (It is worth noting that a broad concept of self-esteem will be used, with self-esteem referring to views - positive or negative - about the self.) The most common explicit measure of self-esteem appears to be the Rosenberg Self-Esteem Scale.(4) Other explicit indices of self-esteem include the Multidimensional Self-Esteem Inventory (MSEI),(5) the Self-Concept Questionnaire (SCQ)(6) and the 'positive self' and 'negative self' subscales of the Brief Core Schema Scale (BCSS).(7) Included studies will be required to include one of these explicit indices or a conceptual equivalent. In the event that a study contains more than one explicit index of self-esteem, the RSES will be the preference. If a study does not contain the RSES but contains a conceptual equivalent, this will be used as long as it meets minimal criteria for reliability and validity.
3. The third primary outcome is the magnitude of the discrepancy between implicit and explicit self-esteem. A variety of indices of implicit and explicit self-esteem have been employed. Some of the explicit indices of self-esteem are referred to above including the RSES. Commonly used implicit indices of self-esteem include the Implicit Association Task (IAT),(8) the Emotional Stroop Task(9,10) and the go/no-go association Task (GNAT).(11) Included studies will be required to include one of these implicit indices (or a conceptual equivalent) and one of these explicit indices (or a conceptual equivalent) for a comparison to be made. In the event that a study contains more than one implicit index and/or more than one explicit index of self-esteem, the RSES will once again be the preference for the explicit indices whereas the following hierarchy will be used for the implicit indices: IAT > Emotional Stroop Task > GNAT. As above, conceptually equivalent variants, which meet minimal criteria for reliability and validity, will be used should a study not contain these indices.
4. The fourth primary outcome is the magnitude of fluctuation in self-esteem. To assess this, studies have primarily used the Experience Sampling Method (ESM)(12) or have repeated the application of a self-esteem measure such as the RSES. Included studies will be required to assess self-esteem fluctuation in one of these ways. If an alternative method comes to light, it will be considered. Cross-sectional correlational studies, which have employed measures such as the Self-Esteem Instability Scale (SEIS),(13) will not be included. The same data extraction hierarchy will be used as above.

Secondary outcomes
None.

Data extraction, (selection and coding)
Selection of studies for the review will be conducted by the first author (Philip Murphy) against the inclusion/exclusion criteria. Decision-making will be recorded and checked with the study supervisor, Dr Paul Hutton.

Extracted data will include sample characteristics (e.g., gender, age, ethnicity, clinical diagnosis, stage of illness, sample source and location), study design, measure/s of

externalising attributional style or self-esteem, and outcome data (e.g., means, standard deviations, proportions, correlations and regression weights where applicable).

If data is not reported in usable format, the relevant authors will be contacted initially. If they do not reply, effect sizes will be attempted to be derived from other statistics (e.g., t test values, P-values, F-values) using equations specified in the Cochrane Handbook or by Borenstein and colleagues.

The extraction of data where depression is adequately controlled for will be prioritised. Therefore, the following hierarchy will be used to decide on the order of data to be prioritised in the analyses: data of estimates involving a non-depressed persecutory-deluded group and a non-depressed control group > data of estimates involving a persecutory-deluded group (with varying or unspecified levels of depression) which have been adjusted for depression scores > data of estimates involving a depressed persecutory-deluded group and a depressed non-persecutory-deluded group > data of estimates involving a persecutory-deluded group (with varying or unspecified levels of depression) which have not been adjusted for depression scores. Any moderator analysis could then examine whether the estimates belonging to the last category are different from the estimates belonging to the first three categories.

Risk of bias (quality) assessment
A methodological quality assessment tool for observational research, adapted from one used by the Agency for Healthcare Research and Quality (AHRQ)(14) will be used. In addition, the GRADE approach will be used to provide an assessment of quality at the outcome level.(15) The GRADE approach will be adapted so that observational studies will not automatically be marked down for quality. This is because all studies included in the proposed review will be observational.

The reviewer carrying out the quality assessments will complete the GRADE online training (http://cebgrade.mcmaster.ca). Quality assessments will be presented descriptively to guide the interpretation of findings. In addition, specific aspects of methodology will be tested as moderators of effect sizes. These will include blinding and the matching of participants on demographics.

Strategy for data synthesis
Hedge's g will be used to determine effect sizes for group differences on continuous outcomes. Where studies provide multiple comparisons between a group of individuals with non-affective psychosis with persecutory delusions and two or more control groups, a single weighted effect size, taking into account the non-independence in the data, will be calculated and used in the meta-analyses. However, control groups will only be combined if it is reasonable to do so (e.g., if both groups are non-psychotic clinical groups, or both groups are non-clinical control groups). It would not be reasonable to combine certain control groups (e.g., a psychotic control group with a non-psychotic clinical control group, or a non-psychotic clinical control group with a non-clinical control group). In addition, comparisons with either psychiatric controls and non-clinical controls will be explored separately.

For the correlational analyses, Pearson's correlations will be converted into Fisher's Z. Spearman's correlations will first be converted into approximate Pearson's correlations.
Every effort will be made to transform any other reported data into usable metric, following procedures outlined in the Cochrane Handbook or by Borenstein and colleagues. For all effects, 95% confidence intervals will be calculated and statistical significance will be set at

P = 0.05.

Publication bias will be tested for using funnel plots and applying the Trim and Fill method. Heterogeneity will be assessed via the Q-statistic and quantified via the I-squared statistic.

Random-effects meta-analyses will be undertaken as some degree of heterogeneity is expected across studies. Nonetheless, when there is less than moderate heterogeneity (i.e., I-squared statistic < 40%), a sensitivity analysis will be carried out to examine the difference between fixed-effects and randon-effects models.

Where it is not possible to perform a meta-analyses because of limited studies, a narrative review will be undertaken of the studies identified.

Analysis of subgroups or subsets
Depending on statistical power and number of studies, the moderators of effect size intended to be tested are as follows:

1. The stage of the psychosis (early psychosis vs. chronic psychosis);
2. Whether depression was controlled for;
3. The blinding of the researcher during the administration of the measure/s;
4. The matching of participants on demographics.

Dissemination plans
The completed review will be submitted for publication to a peer-reviewed journal.

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Subject index terms
Delusions; Humans; Paranoid Disorders; Self Concept; Self Psychology; Social Perception

Stage of review
Ongoing

Date of registration in PROSPERO
16 March 2016

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16 March 2016

Stage of review at time of original submission	*Started*	*Completed*
Preliminary searches	Yes	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Available from:
http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42016032782

B. Changes from Protocol and Further Specifications

The review protocol was registered in advance with the PROSPERO International Prospective Register of Systematic Reviews (registration number: CRD42016032782). A subsequent change was the decision to compare people with psychosis with current persecutory delusions (PDs) to people with psychosis without PDs (and, if specified, grandiose delusions; GDs) rather than to people with psychosis without delusions in general. We made this decision on the basis that most of the research in this area had compared people with psychosis with current PDs to people with psychosis without PDs, irrespective of whether or not they had other current delusions; thus, restricting our analyses to what we had originally planned would have meant that we would have had to exclude data from many group comparisons. However, we felt that it was important to exclude data from group comparison analyses when it was specified that 50% or more of the people with psychosis without PDs had GDs, given queries whether different aspects of the paranoia as defence model(16,17) including the externalising

attributional bias may be attributable to unassessed grandiosity.(18)

Another change was the decision to restrict non-psychotic psychiatric controls to people with depression, as the predictions of the paranoia as defence model relate to, among others, group differences between people with psychosis with PDs and people with depression; indeed, predictions have not been made about group differences between people with psychosis with PDs and other non-psychotic psychiatric controls (e.g., people with anorexia nervosa or an anxiety disorder). It should be noted that only three studies in total (two of these belonged to the externalising attributional bias domain and the other belonged to the implicit self-esteem domain) contained both people with depression and another non-psychotic psychiatric control group (i.e., all the non-psychotic psychiatric control groups in the other studies contained people with depression) and this change made no substantive difference to the results.

Additional changes included abandoning the 'data extraction hierarchy' that was intended to prioritise the extraction of data where depression was adequately controlled and instead using meta-regression to assess whether group differences in depression (the standardised mean difference, d, was computed from group means and associated SDs related to depression to quantify the degree to which groups differed in depression) moderated the different effect sizes. However, we still decided that we would prioritise data from certain group comparisons for the analyses. Specifically, if a study contained both a depressed PD group and a non-depressed PD group, we decided that the non-depressed PD group would take precedence over the depressed PD group for the relevant analysis. This enabled us to remove the potential confounding effect of depression from this analysis, and is consistent with our decision specified in our protocol to prioritise the extraction of data where depression was adequately controlled.

Where group differences in depression significantly moderated an effect size, we also decided to conduct a subgroup analysis to further explore the influence of depression on the relevant effect size.

Moreover, another change was our decision to check for publication bias using Doi plots as these are more sensitive than funnel plots.(19)

Further specifications included examining group differences and correlations in implicit self-esteem and developing the data extraction procedures with regard to externalising attributional bias and explicit self-esteem; none of these specifications were inconsistent with our original protocol.

Our subsequent planned analyses regarding implicit self-esteem were consistent with our hypotheses related to the discrepancy between implicit and explicit self-esteem as per our protocol. However, they allowed us to highlight the direction of any discrepancies (i.e., whether implicit self-esteem was lower or higher than explicit self-esteem) as well as, more specifically, the magnitude of any implicit self-esteem differences.

Regarding externalising attributional bias, we have specified and justified our 'data extraction hierarchy' elsewhere (Appendix E). We also provided a rationale for prioritising participants' self-ratings over independent judges' ratings as to the extent to which participants' attributional statements represented an externalising/internalising attributional bias. Moreover, we provided a rationale for prioritising negative explicit self-esteem over positive explicit self-esteem if a total explicit self-esteem score was not reported or easily calculated.

Finally, we abandoned two planned moderator analyses (namely, the blinding of the outcome assessor and the stage of psychosis) and the group comparisons in relation to self-esteem instability due to insufficient data. We made all of these decisions prior to analyses being undertaken.

C. Search Strategy

We started by assessing for eligibility studies identified in three previous systematic reviews of the relevant literature published in 2013 and 2014.(18,20,21)

In relation to the 2013 systematic review by Garety and Freeman,(18) they reported using three search techniques for studies related to delusions and the paranoia as defence model.(17) First, they searched the Web of Science and PubMed databases using the following search terms: "attribution bias" AND ("delusions" or "paranoia" or "schizophrenia"); ("self esteem" or "overt self esteem" or "covert self esteem" or "explicit self esteem" or "implicit self esteem" or "brief core schema scale") AND ("delusions" or "paranoia" or "schizophrenia"). Second, they consulted three widely cited review articles on delusions.(22–24) Third, they manually searched early view articles in the following journals: *Schizophrenia Bulletin; Schizophrenia Review; British Journal of Clinical Psychology; Behaviour Research and Therapy; Journal of Behavioural Therapy and Experimental Psychiatry; Psychological Medicine; Journal of Abnormal Psychology; Psychiatry Research.*

With regard to the 2013 systematic review by Kesting and Lincoln,(20) they reported using two main search strategies for studies related to self-esteem and persecutory delusions (PDs). First, they searched the PsycINFO and Ovid MEDLINE(R) databases in March 2012 using the following search terms: ("self-esteem" or "self-worth" or "self-concept" or "schema*") AND ("paranoia*" or "delus*" or "delud*" or "persecut*" or "suspicious*"). Second, they consulted three widely cited review articles on delusions.(17,23,24)

In the 2014 systematic review by Tiernan and colleagues,(21) they searched for studies related to self-esteem and PDs. Specifically, they searched the PsycINFO, Web of Science and MEDLINE databases from 2001-2012 using Boolean operators ("AND" and "OR") and combinations of the following search terms: "parano*", "persecut*", "psychosis", "psychotic", "schizophrenia", "delusion*", "self*", "schema*", "belief*", "self-esteem", "self-representation", "self-concept", "self-consciousness", "representation" and "concept".

We then searched PsychINFO, MEDLINE, EMBASE and Web of Science for studies published between 2012 and 10th September 2016 using the following terms:
("attribution bias*" or "attributional bias*" or "externalising bias*" or "externalizing bias*" or "personalising bias*" or "personalizing bias" or "self-serving bias*" or "self-esteem" or "self-worth" or "self-concept" or "schema") AND ("psychosis" or "psychotic" or "schizo*" or "delusion*" or "paranoi*" or "persecut*").

We subsequently searched the reference lists of all included full-text articles to identify any studies missed in the initial search. In every case where useable but unpublished data were thought to exist we contacted the relevant authors. As a final step, we contacted all corresponding authors of included studies for any further unpublished data.

D. Excluded Studies

The following table (**Table D.1)** details studies or reports excluded after inspection of the full-text report, or via correspondence with authors. Studies or reports excluded on basis of title or abstract alone are not detailed as these are too numerous and the vast majority were of different conditions or were otherwise unrelated to the review question.

Study Ref	Reason for Exclusion
Addington & Tran, 2009	Sample not suitable
An et al., 2010	No useable index of externalising attributional bias or self-esteem
Barrowclough et al., 2003	No useable index of paranoia/ persecutory ideation for correlational analysis
Beese & Stratton, 2004	Sample not suitable
Bentall & Kaney, 1996	No useable index of externalising attributional bias or self-esteem
Bentall et al., 2009	Cannot be used in analyses due to re-use of same sample/participants
Bowins & Shugar, 1998	Useable data not provided or made available upon request
Cantero, Duque, Valiente, Fuentenebro, & Villavicencio, 2012	No full-text available
Cella, Swan, Medin, Reeder, & Wykes, 2014	No useable index of paranoia/ persecutory ideation for correlational analysis
Chadwick, Trower, Juusti-Butler, & Maguire, 2005	Sample not suitable
Ciufolini et al., 2015	Sample not suitable
Craig, Hatton, Craig, & Bentall, 2004	Useable data not provided or made available upon request
Drake et al., 2004	No useable cross-sectional data
Ellett, Freeman, & Garety, 2008	No useable cross-sectional data
Fowler et al., 2006	Sample not suitable
Fowler et al., 2012	Cannot be used in analyses due to re-use of same sample/participants
Fraguas et al., 2008	Useable data not provided or made available upon request
Freeman, Garety, & Kuipers, 2001	No useable index of paranoia/ persecutory ideation for correlational analysis
Harris, Oakley, Reichenberg, Murphy, & Picchioni, 2012	No full-text available
Kaney & Bentall, 1989	Cannot be used in analyses due to re-use of same sample/participants
Katsura et al., 2012	No full-text available
Kinderman, Kaney, Morley, & Bentall, 1992	Cannot be used in analyses due to re-use of same sample/participants
Kinderman & Bentall, 1996	No useable index of externalising attributional bias or self-esteem
Krstev, Jackson, & Maude, 1999	Useable data not provided or made available upon request

Study Ref	Reason for Exclusion
Kumar, & Mohanty, 2016	No useable index of paranoia/ persecutory ideation for correlational analysis
Ludtke, Kriston, Schroder, Lincoln, & Moritz (in press)	No useable index of externalising attributional bias or self-esteem
Moorhead, Samarasekera, & Turkington, 2005	No useable index of externalising attributional bias or self-esteem
Nakamura et al., 2015	Sample not suitable
Paget & Ellet, 2014	No useable index of paranoia/ persecutory ideation for correlational analysis
Sitko et al., 2016	No useable index of externalising attributional bias or self-esteem
Smith et al., 2006	Cannot be used in analyses due to re-use of same sample/participants
So, Tang, & Leung, 2015	Sample not suitable
Stowkowy & Addington, 2012	Sample not suitable
Taylor et al., 2014	Sample not suitable
Thewissen et al., 2011	Cannot be used in analyses due to re-use of same sample/participants
Udachina, Varese, Myin-Germeys, & Bentall, 2014	No useable cross-sectional data
Valiente, Cantero, Sanchez, Provencio, & Wickham, 2014	Cannot be used in analyses due to re-use of same sample/participants
Valiente, Provencio, Espinosa, Duque, & Everts, 2015	No useable index of paranoia/ persecutory ideation for correlational analysis
Weinberg et al., 2012	No useable index of paranoia/ persecutory ideation for correlational analysis
Young & Bentall, 1997	No useable index of externalising attributional bias or self-esteem

E. Data Extraction Hierarchies/Procedures

Our first primary outcome was the magnitude to which negative events were attributed to external causes, especially other people (i.e., externalising attributional bias). With regard to this, the following 'data extraction hierarchy' (which specifies what data were most preferable, and what data would be used if these could not be acquired) was chosen: (a) the external-personal attribution score for negative events (a measure of the tendency to attribute negative events to other people – rather than to oneself or situational factors) > (b) the personalizing bias score (PB) (a measure of the tendency to attribute negative events to other people rather than to situational factors) > (c) the internality attribution score for negative events (a measure of the tendency to attribute negative events to oneself – rather than to other people or situational factors) > (d) the externalising bias score (EB) (a measure of the tendency to attribute negative, as opposed to positive events, to external causes – either to other people or situational factors). We chose the data extraction hierarchy above because we wanted to extract data as closely related as possible to the prediction of the paranoia as defence model that people with psychosis with current persecutory delusions (PDs), compared with the various controls, are more likely to make external-personal attributions for negative events in preference for either internal attributions or external-situational attributions.(17)

The rationale for deciding A and B should take precedence over C and D was that C and D fail to distinguish between external-personal and external-situational attributions. This distinction is important because Bentall and colleagues postulate that people with psychosis with current PDs make many external-personal attributions for negative events but few external-situational ones. Indeed, they hypothesize that external-personal attributions for negative events lead to paranoia but that external-situational ones are psychologically benign – *"neither priming negative self-representations nor negative perceptions of others' attitudes toward the self"*.(17)

We decided A should take precedence over B because if a group scored higher on A we can be certain that their sum of both internal attributions and external-situational attributions for negative events was less – this increased tendency to make external-personal attributions for negative events (in preference for either internal attributions or external-situational attributions) is consistent with the prediction of the paranoia as defence model above. Regarding B, we can be certain that if a group scored higher on B they made more external-personal rather than external-situational attributions for negative events, but we cannot be certain that their sum of both internal attributions and external-situational attributions for negative events was less.

We decided C should take precedence over D because our focus was on the magnitude to which negative events were attributed to external causes (especially to other people) and, as noted by Garety and Freeman,(24) D (which is a composite difference score calculated by subtracting attributional style for negative events from attributional style for positive events) does not permit inferences separately on internality/externality for positive and negative events – indeed, it is actually possible for a group to score higher on D (i.e., externalise negative events to a greater degree than positive events) but still make fewer external attributions for negative events. Moreover, D has been criticised on the grounds that attributional styles for positive and negative events show a low degree of correlation and therefore it has been argued that attributions for positive and negative events should be treated separately.(25)

In our original protocol, we had also made the decision to choose the Internal, Personal, and Situational Attributions Questionnaire (IPSAQ)(1) (which can be used to calculate all four indices in the hierarchy above) over the Attributional Style Questionnaire (ASQ)(2) (which can

only be used to calculate the bottom two indices in the hierarchy above) if a study contained both of these measures. The rationale for this decision was based on the superior reliability of the subscales of the IPSAQ over the ASQ.(17)

Moreover, we decided to prioritise participants' self-ratings over independent judges' ratings as to the extent to which participants' attributional statements represented an externalising/internalising attributional bias.

Bentall and colleagues had previously stated the following on this matter: *"Unfortunately, it is not obvious which type of rating – by the individual who makes the attributional statement or by an independent judge – is most meaningful, as self-ratings may reflect self-presentation biases and independent ratings may be adversely affected by the failure to take into account background information known but not articulated by the participant."*(17)

In the absence of guidance by Bentall and colleagues, we decided to prioritise self-ratings over independent judges' ratings, as the attributional style measures including the ASQ and IPSAQ were originally designed so that participants' attributional statements would be self-rated, and the psychometric properties of independent judges' ratings have not been subsequently tested. Our decision also took into account that, unlike self-ratings, independent judges' ratings were often blind to participant group status. In other words, we felt that a lack of support for the psychometric properties of independent judges' ratings was a more serious violation/limitation than the lack of blinding with regard to self-ratings.

Our second primary outcome was the magnitude of explicit self-esteem, which was assessed in the first instance by the Rosenberg Self-Esteem Scale (RSES);(4) if data from this scale were not available, we used a conceptually equivalent variant. We prioritised the RSES as this is the most commonly used measure of explicit self-esteem and has been shown to have good internal consistency in individuals with serious mental health problems.(26,27) Moreover, it is worth noting that we used a broad concept of self-esteem, with self-esteem referring to views – positive or negative – about the self.

We had also made the decision to prioritise negative explicit self-esteem over positive explicit self-esteem if a total explicit self-esteem score was not reported or easily calculated. Our rationale for this decision was based on the prediction of the earlier paranoia as defence model that, if external attributions for negative events are protective, they would prevent negative thoughts about the self from entering consciousness(16) (thus, negative explicit self-esteem would be expected to be low). Moreover, if negative explicit self-esteem is high, it has been argued that this would be salient regardless of high positive explicit self-esteem.(24)

Our third primary outcome was the magnitude of implicit self-esteem, which was derived using a measure pertaining to the following 'data extraction hierarchy': the Implicit Association Task (IAT);(8) the Emotional Stroop Task;(9,10) the Go/No-go Association Task (GNAT).(11) If data from one of these measures were not available, we used a conceptually equivalent variant. We decided the IAT would take precedence over the EST and the GNAT because it is considered to be the best measure of implicit self-esteem currently available (Bosson, Swann, & Pennebaker, 2000). We decided the EST would take precedence over the GNAT because it has been more commonly used and its psychometric properties have been more fully explored.(28)

Our fourth primary outcome was the magnitude of the discrepancy between implicit and explicit self-esteem (i.e., discrepancy score). This was calculated from the choice of implicit and explicit self-esteem indices above using a statistical method (reported in Appendix F), unless this was already reported.

Finally, our fifth primary outcome was the magnitude of self-esteem instability, which was assessed by the Experience Sampling Method (ESM)(12) or the repeated application a self-esteem measure such as the RSES. We had not prespecified which one of these methods would take precedence over the other in our original protocol, nor did we subsequently have to make this decision as no eligible study contained both of these methods.

F. Method for Calculating Discrepancy Scores

The results of studies on discrepancies between implicit and explicit self-esteem have been based on the comparison of the results between groups for each type of self-esteem separately, with two notable exceptions.(29,30) However, it has been argued that to adequately test the hypothesis of discrepancy, it is necessary to analyse the difference between implicit and explicit self-esteem within each group as well as differences between groups.(29,30)

Only one of the eligible studies(29) adequately reported scores on discrepancies between implicit and explicit self-esteem for each group (i.e., discrepancy scores) that we could use for our group comparison analyses. In this study, Kesting and colleagues firstly z-standardised levels of implicit and explicit self-esteem for each participant (to a mean of 0 and SD of 1) so these would be directly comparable. To explore whether the groups differed in their discrepancy scores, they then subtracted z-scores in implicit self-esteem from z-scores in explicit self-esteem for each participant following which group means and associated SDs were calculated (positive scores indicated higher explicit than implicit self-esteem).

As we considered the approach that Kesting and colleagues(29) adopted to be optimal, we firstly contacted the authors of the other eligible studies for their individual study data so we could calculate discrepancy scores accordingly. Only McKay and colleagues(31) were able to provide the requested data. However, we were able to develop a method for calculating discrepancy scores from the group means and associated SDs related to implicit and explicit self-esteem (as well as some other related statistics if reported) in the other studies, which allowed us to explore within and between group differences. Two of us (PM and PH) independently calculated these discrepancy scores following which any disagreements were resolved. We subsequently tested our method for calculating discrepancy scores against the discrepancy scores derived from the individual study data of Kesting and colleagues(29) and McKay and colleagues:(31) the standardised mean differences (SMDs) (d) in discrepancy scores for each group comparison were either identical or almost identical when comparing both approaches, which we believe attests to the validity of our method. Below we describe our method followed by our aforementioned tests.

Method

1. As implicit and explicit self-esteem were generally measured on different scales we firstly had to make the means and SDs for implicit and explicit self-esteem onto the same scale. To do this, we took advantage of the assumptions that underlie the SMD (i.e., the ratio of mean to SD is meaningful if the underlying distribution is normal) and did the following:

1.1. We referred to the mean explicit self-esteem for each group as *E-M* and the associated SD as *E-SD*. We then referred to the mean implicit self-esteem for each group as *I-M* and the associated SD as *I-SD*.

1.2. Using the method described in the Cochrane Handbook (Version 5.1: Section 7.7.3.8),(32) we calculated the weighted mean of *E-M* across all groups (*mean E-Ms*). We also calculated the weighted mean of *E-SD* across all groups (*mean E-SDs*). We then calculated the ratio of *mean E-Ms* to *mean E-SDs.* E.g., if *mean E-Ms* was 20 and *mean E-SDs* was 4, then the ratio was 5.

1.3. We calculated the weighted mean of *I-M* across all groups (*mean I-Ms*). We also calculated the weighted mean of *I-SD* across all groups (*mean I-SDs*). We then calculated the ratio of *mean I-Ms* to *mean I-SDs.* E.g., if *mean I-Ms* was 1 and *mean I-SDs* was 0.5, then the ratio was 2.

1.4. We calculated what value of *mean I-Ms* would be required to change the *mean I-Ms: mean I-SDs* ratio to match the *mean E-Ms: mean E-SDs* ratio, keeping *mean I-SDs* the same [i.e., what value of *mean I-Ms* (or *X*) would mean (*X*/*mean I-SDs*) = (*mean E-Ms/mean E-SDs*). In this case, (*X*/0.5) = (20/4); 0.5 multiplied by 20 = 10; 10 divided by 4 = 2.5; *X* = 2.5.

1.5. We calculated the ratio of *mean E-Ms* to the value of *mean I-Ms* calculated in Step 1.4. In this case, 20/2.5 = 8.

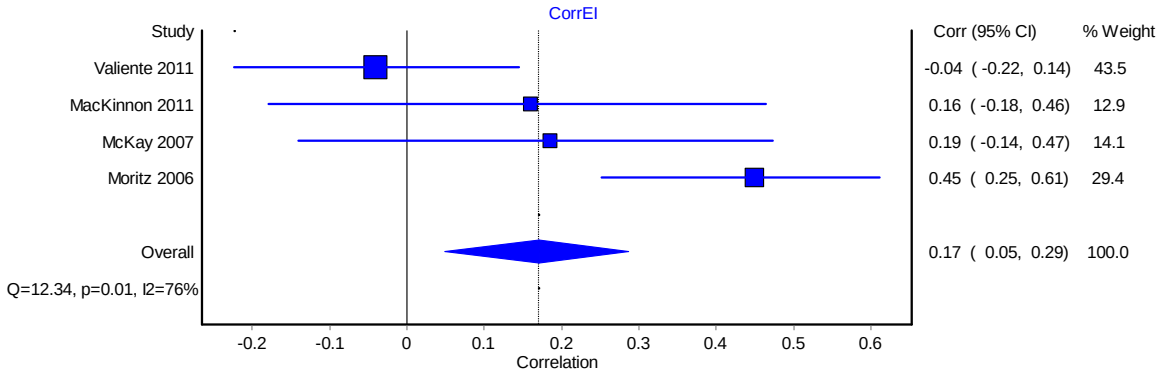
1.6. Separately, for each group, we multiplied the original *I-M* by the ratio calculated in Step 1.5, as well as the original *I-SD* by the ratio calculated in Step 1.5. This yielded the rescaled values of *I-M* and *I-SD* for each group. We then checked that the ratio between the rescaled *I-M* and *I-SD* values were the same as the ratio between the original ones.

2. Having made the means and SDs for implicit and explicit self-esteem onto the same scale, we then computed the mean discrepancy score for each group by simply subtracting the mean implicit self-esteem score from the mean explicit self-esteem score.

3. In the next step, we calculated the SD that was associated with each mean discrepancy score using the following approach:

3.1. We calculated the SD by following the calculations listed in part 2 of Section 16.1.3.2 of Version 5.1 of the Cochrane Handbook, replacing 'baseline' and 'final' with our two variables – i.e., ‘explicit’ and ‘implicit’ self-esteem.(32)

3.2. As part of Step 3.1 we needed to find or estimate the value of 'Corr'. Corr was just the correlation between explicit and implicit self-esteem within the group. It did not tell us anything about the differences in means of explicit and implicit self-esteem, but rather it quantified the degree to which the pattern of responses to both measures were similar, or whether there was a lot of variance. If the pattern was similar, Corr was high; if dissimilar, then Corr was low. As Corr was only reported in four of the eligible studies, we ran a meta-analysis of the reported correlations between explicit and implicit self-esteem and then replaced any missing estimates of Corr with the meta-analytical estimate, which was 0.17; see below.



Having completed the above, we had a mean discrepancy score and associated SD for each group. We were then able to enter these into the meta-analyses to test our different hypotheses.

Tests

As mentioned, we subsequently tested our method for calculating discrepancy scores against the discrepancy scores derived from the individual study data of Kesting and colleagues(29) and McKay and colleagues.(31)

1. Regarding Kesting and colleagues,(29) they reported the following discrepancy scores for acute deluded (AD), remitted deluded (RD), healthy (HC) and depressed (DC) participants using their method described above:

	AD (*n* = 28)	RD (*n* = 31)	HC (*n* = 59)	DC (*n* = 21)
Discrepancy scores (Z-RSES – Z-IAT); mean (SD)	–0.24 (1.21)	–0.23 (1.47)	0.55 (1.17)	–0.84 (1.12)

Abbreviations: IAT, Implicit Association Task; RSES, Rosenberg Self-Esteem Scale.

The SMDs (d) in discrepancy scores for each group comparison were as follows:

	D	95% CI
AD vs RD	–0.01	–0.52 to 0.50
AD vs HC	–0.67	–1.13 to –0.21
AD vs DC	0.51	–0.06 to 1.09

Using our method, we then calculated discrepancy scores from the reported group means and associated SDs related to implicit and explicit self-esteem as well as Corr:[a]

	AD (*n* = 28)	RD (*n* = 31)	HC (*n* = 59)	DC (*n* = 21)
RSES; mean (SD)	18.93 (5.21)	18.29 (5.98)	25.12 (3.53)	17.57 (6.47)
IAT; mean (SD)	0.50 (0.33)	0.45 (0.44)	0.60 (0.40)	0.64 (0.29)
Corr[1]	0.17	0.17	0.17	0.17
Discrepancy scores; mean (SD)	11.05 (6.71)	11.20 (8.35)	15.66 (6.68)	7.48 (7.26)

Abbreviations: IAT, Implicit Association Task; RSES, Rosenberg Self-Esteem Scale. [a]Corr was the correlation between explicit and implicit self-esteem, which was used for the calculation of the SD associated with the mean discrepancy score. As it was not reported in this study, we used the meta-analytical estimate.

The SMDs (d) in discrepancy scores for each group comparison were as follows:

	D	95% CI
AD vs RD	–0.02	–0.53 to 0.49
AD vs HC	–0.69	–1.15 to –0.23
AD vs DC	0.51	–0.06 to 1.09

As can be seen above, the SMDs (d) in discrepancy scores for each group comparison were either identical or almost identical when comparing both approaches.

2. Regarding McKay and colleagues,(31) as they provided us with their individual study data, we were able to calculate the following discrepancy scores for patients with current PDs, patients with remitted PDs, and healthy controls (HCs) using the method adopted by Kesting and colleagues:(29)

	Current PDs (n = 9)	Remitted PDs (n = 9)	HCs (n = 19)
Discrepancy scores (Z-RSES – Z-IAT); mean (SD)	–0.05 (1.41)	0.09 (0.99)	0.01 (1.30)

Abbreviations: IAT, Implicit Association Task; RSES, Rosenberg Self-Esteem Scale.

The SMDs (d) in discrepancy scores for each group comparison were as follows:

	D	95% CI
Current PDs vs Remitted PDs	–0.11	–1.04 to 0.81
Current PDs vs HCs	–0.05	–0.84 to 0.75

Using our method, we then calculated discrepancy scores from the group means and associated SDs related to implicit and explicit self-esteem as well as Corr:[a]

	Current PDs (n = 9)[b]	Remitted PDs (n = 9)[b]	HCs (n = 19)[b]
RSES; mean (SD)	2.66 (0.64)	3.32 (0.26)	3.16 (0.45)
IAT; mean (SD)	74.08 (73.18)	173.78 (74.38)	153.06 (87.29)
Corr[1]	0.36	0.36	0.01
Discrepancy scores; mean (SD)	2.22 (0.63)	2.29 (0.42)	2.25 (0.68)

Abbreviations: IAT, Implicit Association Task; RSES, Rosenberg Self-Esteem Scale. [a]Corr was the reported correlation between explicit and implicit self-esteem, which was used for the calculation of the SD associated with the mean discrepancy score. [b]Only participants who completed both measures were included in the analyses.

The SMDs (d) in discrepancy scores for each group comparison were as follows:

	D	95% CI
Current PDs vs Remitted PDs	–0.13	–1.06 to 0.79
Current PDs vs HCs	–0.05	–0.84 to 0.75

Once again, as can be seen above, the SMDs (d) in discrepancy scores for each group comparison were either identical or almost identical when comparing both approaches.

G. Moderators and Subgroups: Operational Definitions

Moderators

We examined two prespecified methodological moderators of effect size: (a) matching of groups on demographics; (b) group differences in depression.

With regard to the first moderator, we used the ratings in relation to the second criterion of our study quality assessment tool; see below.

2. Selection minimizes baseline differences in prognostic factors?
○ Is the comparison group matched with the clinical group on key demographics [age, gender, education (or IQ or a measure of intelligence if education is not reported), ethnicity]?
No = a standardised mean difference (SMD)(d) of ≥ 0.3 on at least 2; Partial = d of ≥ 0.3 on 1; Yes = d of < 0.3 on 4 or 3 excluding ethnicity

Specifically, if a group comparison received a *'no'* rating on this criterion, we categorised the groups as unmatched on demographics (as this moderator was binary, 0 = unmatched), whereas if a group comparison received a *'partial'* or *'yes'* rating on this criterion, we categorised the groups as matched on demographics (1 = matched). If a group comparison received an *'unclear'* rating on this criterion, we excluded this from the moderator analysis.

Regarding the second moderator, the SMD (d) was computed from group means and associated SDs related to depression to quantify the degree to which groups differed in depression.

Subgroups

Where group differences in depression significantly moderated an effect size, we also conducted a subgroup analysis to further explore the influence of depression on the relevant effect size. For this analysis, people with persecutory delusions were coded as either depressed (≥ mild depression) or non-depressed (< mild depression), using established clinical cut-offs on measures of depression. Studies which did not report levels of depression in people with persecutory delusions were excluded from this analysis. Established clinical cut-offs included:

On the original version of the Beck Depression Inventory (BDI-I),(33) a score of 10 or more indicates ≥ mild depression.(34)

On the revised version of the Beck Depression Inventory (BDI-II),(35) a score of 14 or more indicates ≥ mild depression.(35)

On the depression subscale of the Hospital Anxiety Depression Scale (HADS),(36) a score of 8 or more indicates ≥ mild depression.(36)

On the depression subscale of the Depression, Anxiety and Stress Scales (DASS-42),(37) a score of 10 or more indicates ≥ mild depression.(37,38)

On the depression item of the Brief Psychiatric Rating Scale (BPRS),(39) a score of 3 or more indicates ≥ mild depression.(39)

On the depression item of the Positive and Negative Syndrome Scale (PANSS),(40) a score of 3 or more indicates ≥ mild depression.(40,41)

H. Table H.1. Summary of Characteristics of the 64 Included Studies

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Aakre, 2009(42)	1. Outpatients with psychosis (schizophrenia or schizoaffective disorder) with PDs	18	External-personal attribution score for negative events (speech samples were coded using LACS)	USA	37.89 (10.82)	12/18 (67%)
	2. Outpatients with psychosis (as above) with remitted PDs	30			36.57 (9.15)	23/30 (77%)
	3. Outpatients with psychosis (as above) with remitted delusions which were non-persecutory	17			35.59 (8.01)	8/17 (47%)
	4. Healthy controls	29			37.66 (7.98)	19/29 (66%)
Bentall, 1991(43)	1. Inpatients and outpatients with psychosis (paranoid schizophrenia or delusional disorder) with PDs	17	External-personal attribution score for negative events (when presented with low DCC information) (SAQ)	UK	34.8 (13.33)	11/17 (65%)
	2. Mostly patients with depression (major depressive disorder)	17			39.82 (16.35)	11/17 (65%)
	3. Healthy controls	17			34.8 (13.64)	11/17 (65%)
Bentall, 2005(44)	1. Inpatients and outpatients with psychosis (paranoid schizophrenia or delusional disorder) with PDs	16	Internality attribution score for negative events (Expanded ASQ)	UK	33.37 (9.82)	14/16 (88%)
	2. Inpatients and outpatients with depression (major affective disorder)	16			36.93 (10.98)	14/16 (88%)
	3. Healthy controls	16			35.68 (12.63)	14/16 (88%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Bentall, 2008(45)	1. Inpatients and outpatients with psychosis (schizophrenia, schizoaffective disorder or delusional disorder) with PDs	39	Negative explicit self-esteem score (SERS negative subscale) Paranoia score (FPS)	UK	33.95 (8.38)	26/39 (67%)
	2. Inpatients and outpatients with psychosis (schizophrenia spectrum disorder) with remitted PDs	29			34.66 (10.35)	18/29 (62%)
	3. Inpatients and outpatients with depression (major depression without PDs)	27			48.37 (10.97)	9/27 (33%)
	4. Healthy controls	33			39.03 (13.96)	14/33 (42%)
Ben-Zeev, 2009(46)	1. Outpatients with psychosis (schizophrenia or schizoaffective disorder)	194	Explicit self-esteem score (SERS-SF) Paranoia score (PS)	USA	Not reported	Not reported
Berry, 2015(47)	1. Inpatients with psychosis (paranoid schizophrenia) with PDs	25	External-personal attribution score for negative events (IPSAQ)	UK	32.32 (9.25)	17/25 (68%)
	2. Healthy controls	25			31.88 (11.54)	17/25 (68%)
Besnier, 2011(48)	1. Inpatients with psychosis (paranoid schizophrenia) with PDs	30	Negative implicit self-esteem score (EST ‘depression interference’ index, calculated by subtracting response time to neutral words from response time to depression-related words)	France	33.5 (7.69)	19/30 (63%)
	2. Healthy controls	60			38.53 (11.44)	29/60 (48%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Candido, 1990(49)	1. Inpatients and outpatients with psychosis (paranoid schizophrenia or paranoid disorder) with PDs and no concomitant signs of depression	15	Internality attribution score for negative events (ASQ; 60-item version) Explicit self-esteem score (CSEI)	Canada	37.47 (11.89)	12/15 (80%)
	2. Inpatients and outpatients with psychosis (as above) with PDs and significant depressive symptoms (this group was just used for the correlational analysis)	15	Paranoia score (Paranoia Scale of the MMPI)		37.47 (13.65)	10/15 (67%)
	3. Inpatients and outpatients with depression (major unipolar depression) with no significant paranoid symptoms	15			41.93 (11.63)	10/15 (67%)
Carlin, 2005(50)	1. Forensic inpatients with psychosis (mostly schizophrenia) with PDs	31	External attribution score for negative events (BAI-R)	UK	Entire sample: 34 (11)	Entire sample: 73/82 (89%)
	2. Forensic inpatients with psychosis (as above) without PDs	34				
Collett, 2016(51)	1. Patients with non-affective psychosis with PDs	21	Explicit self-esteem score (RSES)	UK	45.6 (12.1)	10/21 (48%)
	2. Healthy controls	21			41.9 (12.2)	10/21 (48%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Combs, 2009(52)	1. Inpatients with psychosis (schizophrenia) with PDs	32	PB attribution score for negative events (IPSAQ)	USA	41.8 (9.5)	17/32 (53%)
	2. Inpatients with psychosis (as above) with non-persecutory delusions (>50% grandiose delusions; thus, this group was just used for the correlational analysis)	28	Explicit self-esteem score (RSES)		43 (10.9)	9/28 (32%)
	3. Healthy controls	50			22.1 (4.8)	9/50 (18%)
Diez-Alegria, 2006(53)	1. Mostly patients with psychosis (paranoid schizophrenia, schizoaffective disorder or brief psychotic disorder) with PDs	40	External-personal attribution score for negative events (IPSAQ)	Spain	33.3 (8.4)	27/40 (68%)
	2. Mostly inpatients and outpatients with psychosis (paranoid schizophrenia or schizoaffective disorder) with remitted PDs	25			31.1 (4.9)	21/25 (84%)
	3. Inpatients and outpatients with depression (major depressive disorder or dysthymia)	35			39.6 (12.2)	9/35 (26%)
	4. Healthy controls	36			30.4 (7.4)	21/36 (58%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Erickson, 2012(54)	1. Outpatients with psychosis (schizophrenia or schizoaffective disorder)	57	Explicit self-esteem score (mean of RSES across time points) Self-esteem instability score (SD of RSES across time points) Paranoia score (mean of PANSS P6 across time points)	USA	47.26 (8.31)	48/57 (84%)
Espinosa, 2014(55)	1. Inpatients with psychosis (schizophrenia spectrum disorder) with PDs	79	Negative explicit self-esteem score (EBS 'self-self' subscale)	Spain	34.9 (12)	46/79 (58%)
	2. Mostly outpatients with depression (depressive disorder)	38	Negative implicit self-esteem score (GNAT self index)		43.5 (11.4)	9/38 (24%)
	3. Healthy controls	52			37.4 (1.1)	30/52 (58%)
Fear, 1996(56)	1. Patients with psychosis (delusional disorder) with PDs	20	Internality attribution score for negative events (ASQ)	UK	Not reported	Not reported
	2. Patients with psychosis (delusional disorder) with non-persecutory delusions (>50% grandiose delusions; thus, this group was just used for the correlational analysis)	9			Not reported	Not reported
	3. Healthy controls	20			Not reported	Not reported

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Fornells-Ambrojo, 2009(57)	1. Patients with early psychosis (schizophrenia, schizophreniform or schizoaffective disorder) with 'poor me' PDs	20	External-personal attribution score for negative events (ARAT) Explicit self-esteem score (RSES)	UK	27.2 (7.9)	18/20 (90%)
	2. Patients with depression (unipolar depression)	21			42.6 (9.5)	9/21 (43%)
	3. Healthy controls	32			26.7 (5.3)	26/32 (81%)
Freeman, 1998(58)	1. Patients with psychosis (schizophrenia or delusional disorder) with PDs	28	Explicit self-esteem score (SCQ)	UK	39.1 (10.4)	18/28 (64%)
	2. Patients with psychosis (schizophrenia, delusional disorder or schizoaffective disorder) of whom most had non-persecutory delusions (reference to grandiose delusions; thus, this group was just used for the correlational analysis)	25			40 (12.7)	15/25 (60%)
Freeman, 2013(59)	1. Patients with psychosis (schizophrenia spectrum disorder) of whom most had PDs	130	Negative explicit self-esteem score (BCSS 'negative self' subscale) Paranoia score (using visual analog scales)	UK	41.1 (11.6)	82/130 (63.08%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Garety, 2013(60)	1. Patients with psychosis (schizophrenia, schizoaffective disorder or delusional disorder) with PDs alone	118	Explicit self-esteem score (RSES)	UK	37.68 (11.05)	80/118 (67.8%)
	2. Patients with psychosis (as above) with persecutory and grandiose delusions	52			38.48 (11.97)	43/52 (83%)
	3. Patients with psychosis (as above) with neither persecutory or grandiose delusions	43			34.92 (9.76)	27/43 (63%)
Humphreys, 2006(61)	1. Patients with recent onset psychosis (schizophrenia, schizophreniform or schizoaffective disorder) with PDs	15	EB attribution score (IPSAQ) Explicit self-esteem score (RSES)	UK	Entire sample: 27.91 (7.81)	Entire sample: 28/35 (80%)
	2. Patients with recent onset psychosis (as above) without PDs	20	Negative explicit self-esteem score (SESS-sv NES dimension) Paranoia score (PANSS P6)			
Janssen, 2006(62)	1. Inpatients and outpatients with psychosis (schizophrenia, schizoaffective disorder or unspecified functional psychosis)	23	EB attribution score (IPSAQ) Paranoia score (PSE item)	Netherlands	31.8 (9.3)	17/23 (74%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Jolley, 2006(63)	1. Patients with psychosis (schizophrenia, schizoaffective psychosis or delusional disorder) with PDs alone	7	Internality attribution score for negative events (ASQ)	UK	Entire sample: 37.1 (9.3)	Entire sample: 50/71 (70%)
	2. Patients with psychosis (as above) with persecutory and grandiose delusions	7				
	3. Patients with psychosis (as above) without PDs	34				
Jones, 2010(64)	1. Patients with psychosis (schizophrenia)	87	Explicit self-esteem score (RSES) Paranoia score (CPRS 'ideas of persecution' item)	UK	39 (10.5)	50/87 (57%)
Kesting, 2011(29)	1. Inpatients and outpatients with psychosis (schizophrenia) with PDs	28	Explicit self-esteem score (RSES)	Germany	34.64 (11.26)	18/28 (64%)
	2. Inpatients and outpatients with psychosis (schizophrenia) with remitted PDs	31	Implicit self-esteem score (IAT D-measure)		32 (9.7)	20/31 (65%)
	3. Inpatients with depression (depressive disorder)	21			46.75 (8.12)	7/21 (33%)
	4. Healthy controls	59			35.15 (1163)	39/59 (66%)
Kinderman, 1994(65)	1. Inpatients and outpatients with psychosis (schizophrenia or delusional disorder) with PDs	16	Negative explicit self-esteem score (endorsement of negative adjectives from the whole PPQ)	UK	34.3 (12.5)	12/16 (75%)
	2. Inpatients and outpatients with depression	16	Negative implicit self-esteem (EST 'negative interference' index)		33.9 (9.2)	11/16 (69%)
	3. Healthy controls	16			31.3 (11)	11/16 (69%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Kinderman, 1997(66)	1. Patients with psychosis (schizophrenia or delusional disorder) with PDs	20	External-personal attribution score for negative events (IPSAQ)	UK	Not reported	13/20 (65%)
	2. Patients with depression (major depressive episode)	20			Not reported	15/20 (75%)
	3. Healthy controls	20			Not reported	15/20 (75%)
Kinderman, 2003(67)	1. Inpatients and outpatients with PDs of whom most had psychosis (schizophrenia and paranoid psychosis)	13	Explicit self-esteem score (SCC 'self-actual' index)	UK	Not reported	8/13 (62%)
	2. Inpatients with depression	11			Not reported	6/11 (55%)
	3. Healthy controls	13			Not reported	4/13 (31%)
Langdon, 2006(68)	1. Outpatients with psychosis (schizophrenia) with PDs	19	PB attribution score for negative events (self ratings) (IPSAQ)	Australia	35.2 (11.2)	Entire sample of psychosis patients: 22/34 (65%)
	2. Outpatients with psychosis (schizophrenia) without PDs	15			37.7 (9.7)	
	3. Healthy controls	21			39.3 (11.7)	Not reported
Langdon, 2010(69)	1. Outpatients with psychosis (schizophrenia) of whom most have current PDs	35	PB attribution score for negative events (IPSAQ) Paranoia score (PS)	Australia	35.9 (10.4)	23/35 (66%)
	2. Healthy controls	34			32 (12.9)	26/34 (76%)
Langdon, 2013(70)	1. Patients with early psychosis (mostly paranoid schizophrenia) of whom most had current PDs	23	External-personal attribution score for negative events (IPSAQ)	Australia	20.91 (1.83)	22/23 (96%)
	2. Healthy controls	19	Paranoia score (BPRS suspiciousness item)		20.79 (1.81)	17/19 (89%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Lee, 2004(71)	1. Inpatients and outpatients with psychosis (paranoid schizophrenia, schizoaffective disorder or delusional disorder) with PDs	12	External-personal attribution score for negative events (interview transcripts were rated using CAVE and the 'core' attribution dataset was chosen)	UK	46.82 (12.69)	9/12 (75%)
	2. Healthy controls	12			43.17 (13.82)	9/12 (75%)
Lincoln, 2010(72)	1. Inpatients and outpatients with psychosis (schizophrenia, schizoaffective disorder or delusional disorder) with PDs	25	External-personal attribution score for negative events (IPSAQ) Explicit self-esteem score (RSES)	Germany	35.4 (11.8)	14/25 (56%)
	2. Inpatients and outpatients with psychosis (as above) with remitted PDs	25			32.2 (9.7)	15/25 (60%)
	3. Healthy controls with high levels of subclinical paranoia	25			33.4 (11.7)	18/25 (72%)
	4. Healthy controls with low levels of subclinical paranoia	25			37.8 (12)	10/25 (40%)
Lyon, 1994(73)	1. Inpatients and outpatients with psychosis (paranoid schizophrenia or delusional disorder of the paranoid type) with PDs	14	Internality attribution score for negative events (ASQpf) Explicit self-esteem score (RSES)	UK	35.6 (9.89)	12/14 (86%)
	2. Inpatients and outpatients with depression (major depressive episode or depressive disorder)	14			40.9 (9.65)	12/14 (86%)
	3. Healthy controls	14			35.7 (9.66)	12/14 (86%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
MacKinnon, 2011(74)	1. Outpatients with psychosis (mostly schizophrenia) with PDs	16	Explicit self-esteem score (RSES)	UK	41.69 (11.09)	14/16 (88%)
	2. Healthy controls	20	Implicit self-esteem score (IAT D-measure, improved algorithm)		29.5 (11.42)	8/20 (40%)
Martin, 2002(75)	1. Outpatients with psychosis (schizophrenia) with PDs	15	External-personal attribution score for negative events (self ratings) (IPSAQ)	USA	39.1 (8.7)	8/15 (53%)
	2. Outpatients with psychosis (schizophrenia) without PDs	15			34.3 (10.2)	7/15 (47%)
	3. Healthy controls	16			36.8 (9.6)	7/16 47%)
McCulloch, 2006(76)	1. Older patients with late-onset psychosis with delusions (all but one of these patients had delusions that were primarily persecutory)	13	Explicit self-esteem score (RSES)	UK	74.9 (5.26)	4/13 (31%)
	2. Older patients with depression (affective disorder)	15	Negative implicit self-esteem score (EST 'depression interference' index, calculated by subtracting response time to neutral words from response time to depression-related words)		77.6 (6.94)	4/15 (27%)
	3. Age-matched healthy controls	15			75 (7.37)	4/15 (27%)
McKay, 2005(77)	1. Outpatients with psychosis (mostly schizophrenia) with PDs	13	External-personal attribution score for negative events (self ratings) (IPSAQ)	Australia	42.23 (9.78)	7/13 (54%)
	2. Outpatients with psychosis (as above) with remitted PDs	12	Paranoia score (SAPS persecution item)		37.58 (10.98)	3/12 (25%)
	3. Healthy controls	19			35.89 (11.71)	7/19 (37%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
McKay, 2007(31)	1. Outpatients with psychosis (mostly schizophrenia) with PDs	10	Explicit self-esteem score (raw mean) (RSES)	Australia	41.6 (9.49)	7/10 (70%)
	2. Outpatients with psychosis (as above) with remitted PDs	10	Implicit self-esteem score (raw mean) (IAT index)		35.8 (10.8)	2/10 (20%)
	3. Healthy controls	19			35.89 (11.71)	7/19 (37%)
Mehl, 2010(78)	1. Inpatients and outpatients with psychosis (schizophrenia spectrum disorder) with PDs	23	External-personal attribution score for negative events (IPSAQ)	Germany	34.61 (10.81)	12/23 (52%)
	2. Inpatients and outpatients with psychosis (as above) with remitted PDs	18			32.17 (10.68)	11/18 (61%)
	3. Healthy controls	22			33.73 (10.28)	11/22 (50%)
Mehl, 2014(79)	1. Inpatients and outpatients with psychosis (schizophrenia spectrum disorder)	258	External-personal attribution score for negative events (IPSAQ-R)	Germany	37.44 (9.54)	151/258 (58.5%)
	2. Subgroup of these patients with PDs	142	Paranoia score (PANSS P6)		37.75 (9.6)	84/142 (59.15%)
	3. Healthy controls	51			35.77 (9.47)	30/51 (59%)
Melo, 2006(80)	1. Inpatients with psychosis (delusional disorder, schizophrenia or schizoaffective disorder) with ‘poor me’ PDs	26	Internality attribution score for negative events (ASQ)	UK	34.84 (8.93)	17/26 (65%)
	2. Inpatients with psychosis (as above) with ‘bad me’ PDs	18			34 (14.35)	16/18 (89%)
	3. Healthy controls	21			40.1 (14.2)	16/21 (76%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Melo, 2013(81)	1. Inpatients with psychosis (delusional disorder, schizophrenia or schizoaffective disorder) with 'poor me' PDs	32	Internality attribution score for the most negative event (SDEI) Explicit self-esteem score (RSES)	UK	38.78 (10.06)	23/32 (72%)
	2. Inpatients with psychosis (as above) with 'bad me' PDs	12			33.58 (8.46)	8/12 (67%)
	3. Healthy controls	25			36.52 (11.21)	20/25 (80%)
Menon, 2013(82)	1. Outpatients with psychosis (schizophrenia or schizoaffective disorder) with delusions of reference of whom 50% had mixed referential and persecutory delusions	18	PB attribution score for negative events (IPSAQ)	Canada	39.6 (12.4)	11/18 (61%)
	2. Healthy controls	17			35.7 (6.8)	10/17 (59%)
Merrin, 2007(83)	1. Inpatients and outpatients with psychosis (mostly schizophrenia or schizoaffective disorder) with PDs	24	External-personal attribution score for negative events (modified inductive reasoning task using items from IPSAQ)	UK	38.21 (11.21)	17/24 (71%)
	2. Inpatients and outpatients with depression (major depressive disorder)	24			44.79 (11.12)	17/24 (71%)
	3. Healthy controls	24			38.13 (10.61)	14/24 (58%)
Mizrahi, 2008(84)	1. Inpatients and outpatients with psychosis (schizophrenia, schizophreniform or schizoaffective disorder)	86	PB attribution score for negative events (IPSAQ) Paranoia score (PANSS P6)	Canada	31.9 (11.5)	71/86 (83%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Moritz, 2006(85)	1. Inpatients with psychosis (schizophrenia) with PDs	13	Explicit self-esteem score (RSES)	Germany	34.15 (12.29)	7/13 (54%)
	2. Inpatients with psychosis (schizophrenia) without PDs	10	Implicit self-esteem score (IAT D-measure)		34.1 (8.8)	6/10 (60%)
	3. Inpatients with depression (major depressive disorder)	14			31.71 (11.28)	7/14 (50%)
	4. Healthy controls	41			23.37 (6.93)	13/41 (32%)
Moritz, 2007(86)	1. Inpatients with psychosis (schizophrenia or schizoaffective disorder) of whom more than 50% had current PDs	35	Internality attribution score for negative events (self ratings) (ASQ-B)	Germany	34.23 (9.29)	19/35 (54%)
	2. Inpatients with depression (major depressive disorder)	18			39.83 (8.73)	10/18 (56%)
	3. Healthy controls	28			33.5 (10.23)	10/28 (36%)
Palmier-Claus, 2011(87)	1. Inpatients and outpatients with first-episode psychosis	256	Negative self-esteem instability score (SD of negative scores of RSES across time points) Positive self-esteem instability score (SD of positive scores of RSES across time points) Paranoia score (mean of PANSS P6 across time points)	UK	Not reported	177/256 (69.14%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Randall, 2003(88)	1. Patients with psychosis (schizophrenia or schizoaffective disorder) with PDs	18	External-personal attribution score for negative events (self ratings) (IPSAQ)	UK	34.89 (11.15)	14/18 (78%)
	2. Patients with psychosis (as above) with remitted PDs	14			34.71 (10.28)	8/14 (57%)
	3. Healthy controls	18			31.89 (8.53)	11/18 (61%)
Randjbar, 2011(89)	1. Patients with psychosis (schizophrenia) with PDs	10	Explicit self-esteem score (RSES)	Germany	40 (15.33)	8/10 (80%)
	2. Patients with psychosis (schizophrenia) without PDs	19			39.47 (10.43)	9/19 (47%)
	3. Healthy controls	33			33.97 (11.1)	10/33 (30%)
Ringer, 2014(90)	1. Outpatients with psychosis (schizophrenia or schizoaffective disorder)	88	Explicit self-esteem score (MSEI) Paranoia score (PANSS P6)	USA	46.64 (9.15)	74/88 (84%)
Romm, 2011(91)	1. Patients with first-episode psychosis (mostly schizophrenia spectrum disorder)	113	Explicit self-esteem score (RSES) Paranoia score (PANSS P6)	Norway	25.79 (7.7)	76/113 (67.26%)
Sharp, 1997(92)	1. Outpatients with psychosis (delusional disorder) with persecutory (N = 14) or grandiose delusions (N = 5)	19	Internality attribution score for negative events (ASQ)	UK	52.89 (14.33)	8/19 (42%)
	2. Outpatients with psychosis (delusional disorder) with non-persecutory or non-grandiose delusions	12			44 (16.46)	7/12 (58%)
	3. Healthy controls	24			42.88 (13.12)	10/24 (42%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Smith, 2005(93)	1. Inpatients and outpatients with psychosis (mostly schizophrenia or schizoaffective disorder) with grandiose delusions of which more than half have current PDs	20	Explicit self-esteem score (RSCQ) Negative implicit self-esteem score (EST 'depression interference' index)	UK	37.1 (10.1)	14/20 (70%)
	2. Healthy controls	21			33.1 (10.8)	12/21 (57%)
Sundag, 2015(94)	1. Inpatients with psychosis (schizophrenia, delusional or schizoaffective disorder) with PDs	33	Explicit self-esteem score (RSES)	Germany	35.8 (11)	19/33 (58%)
	2. Inpatients with psychosis (as above) with remitted PDs	10			31.3 (8.4)	6/10 (60%)
	3. Healthy controls	33			34.5 (15.6)	15/33 (45%)
Thewissen, 2008(95)	1. Patients with psychosis (schizophrenia or schizoaffective disorder) with PDs	30	Explicit self-esteem score (mean of the ESM momentary self-esteem reports for each person)	Netherlands	38.1 (10.7)	26/30 (87%)
	2. Patients with psychosis (as above) with other positive symptoms	34	Self-esteem instability score (SD of ESM momentary self-esteem reports for each person)		36 (11.6)	26/34 (76%)
	3. Patients with psychosis (as above) with remitted psychotic symptoms	15			32.5 (12.3)	14/15 (93%)
	4. High schizotypy non-psychiatric controls	38	Paranoia score (PS)		47.3 (10.3)	13/38 (34%)
	5. Healthy controls	37			48.7 (9.2)	14/37 (38%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Udachina, 2012(96)	1. Inpatients and outpatients with psychosis (schizophrenia, schizoaffective or delusional disorder) with 'poor me' PDs	14	Explicit self-esteem score (ESM self-esteem) Self-esteem instability score (mean moment-to-moment change in ESM self-esteem reports for each person)	UK	39.36 (15.37)	7/14 (50%)
	2. Inpatients and outpatients with psychosis (as above) with 'bad me' PDs	15			39.93 (11.84)	9/15 (60%)
	3. Inpatients and outpatients with psychosis (as above) with remitted PDs	12			41.67 (12.2)	8/12 (67%)
	4. Healthy controls	23			37.78 (15.21)	13/23 (57%)
Valiente, 2011(97)	1. Inpatients with psychosis (mostly schizophrenia spectrum disorder) with PDs	35	Explicit self-esteem score (E-SEI) Implicit self-esteem score (GNAT index)	Spain	34.9 (12)	19/35 (55%)
	2. Mostly outpatients with depression (depressive disorder)	35			43.5 (11.4)	8/35 (23%)
	3. Healthy controls	44			37.4 (13.1)	20/44 (46%)
Vass, 2015(98)	1. Patients with psychosis (schizophrenia spectrum disorder)	80	Explicit self-esteem (SERS) Paranoia score (PANSS P6)	UK	39.15 (11.56)	49/80 (61%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Vazquez, 2008(30)	1. Patients with psychosis (mostly schizophrenia spectrum disorder) with PDs	40	Explicit self-esteem score (RSES) Implicit self-esteem score (indicated by the recall of positive versus negative words on the SRIRT)	Spain	33.3 (8.4)	27/40 (68%)
	2. Inpatients and outpatients with psychosis (as above) with remitted PDs	25			31.1 (4.9)	21/25 (84%)
	3. Inpatients and outpatients with depression (major depressive disorder or dysthymia)	35			39.6 (12.2)	9/35 (26%)
	4. Healthy controls	36			30.4 (7.4)	21/36 (58%)
Vorontsova, 2013(99)	1. Outpatients with psychosis (schizophrenia, schizoaffective disorder or delusional disorder) with PDs and no comorbid depression	30	Negative explicit self-esteem score (BCSS 'negative self' subscale)	UK	40.1 (10.7)	19/30 (63%)
	2. Outpatients with depression (major depressive episode) and no PDs	30			42.5 (13.1)	14/30 (47%)
	3. Healthy controls	30			40.4 (13.1)	13/30 (43%)
Warman, 2011(100)	1. Outpatients with psychosis (schizophrenia or schizoaffective disorder)	30	Explicit self-esteem score (MSEI) Paranoia score (PANSS P6)	USA	48.93 (5.11)	30/30 (100%)
Wickham, 2015(101)	1. Inpatients and outpatients with psychosis (mostly schizophrenia spectrum disorder)	176	Negative explicit self-esteem (SERS negative subscale) Paranoia score (PANSS P6)	UK	Not reported	123/176 (69.87%)

Study Ref (First Author, Year)	Group/s Included in Review	N Participants	Variable/s Used in Analysis	Country	Age, Mean (SD)	N (%) Male
Wittorf, 2012(102)	1. Inpatients and outpatients with psychosis (paranoid schizophrenia) with PDs	20	PB attribution score for negative events (IPSAQ-R)	Germany	35.3 (9)	13/20 (65%)
	2. Inpatients and outpatients with depression (major depressive episode)	20	Paranoia score (PANSS P6)		36.3 (9.7)	8/20 (40%)
	3. Healthy controls	55			31.7 (10.6)	21/55 (38%)

Abbreviations: ARAT, Attributional style: Achievement and Relationships Attributions Task; ASQ, Attributional Style Questionnaire; ASQ-B, ASQ modified by Brunstein; ASQpf, ASQ parallel form; BCSS, Brief Core Schema Scale; BAI-R, Gudjonsson Blame Attribution Inventory-Revised; BPRS, Brief Psychiatric Rating Scale; CAVE, Content Analysis of Verbatim Explanations; CPRS, Comprehensive Psychopathological Rating Scale; CSEI, Coopersmith Self-Esteem Inventory; DCC, distinctiveness, consistency and consensus. EB, Externalising Bias; EBS, Evaluative Beliefs Scale; E-SEI, Composite of self-worth subscale of World Assumption Scale and Spanish version of self-acceptance subscale of the Scales of Psychological Wellbeing; ESM, Experience Sampling Method; EST, Emotional Stroop Task; FPS, Feningstein Paranoia Scale; GNAT, Go/No-go Association Task; IAT, Implicit Association Task; IPSAQ, Internal, Personal, and Situational Attributions Questionnaire; IPSAQ-R, IPSAQ-Revised; LACS, Leeds Attributional Coding System; MMPI, Minnesota Multiphasic Personality Inventory; MSEI, Multidimensional Self-Esteem Inventory; PANSS P6, Positive and Negative Syndrome Scales 'suspiciousness/persecution' item; PB, Personalizing bias; PDs, persecutory delusions; PPQ, Personal Profile Questionnaire; PS, Paranoia Scale; PSE, Present State Examination; RSCQ, Robson Self-Concept Questionnaire; RSES, Rosenberg Self-Esteem Scale; SAPS, Scale for the Assessment of Positive Symptoms; SAQ, Social Attributions Questionnaire; SCC, Self-Concept Checklist; SCQ, Self-Concept Questionnaire; SDEI, Significant Daily Events Interview; SESS-sv NES, Self-Evaluation and Social Support interview-schizophrenia version Negative Evaluation of Self (dimension); SERS, Self-Esteem Rating Scale; SERS-SF, SERS-Short Form; SRIRT, Self-Referent Incidental Recall Task.

I. Data Used for Each Meta-Analysis

Table I.1. Difference in Externalising Attributional Bias: Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

	Psychosis With PDs			Healthy Controls			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Aakre, 2009	18	33.98	16.44	29	21.82	12.32	47
Bentall, 1991	17	4.65	1.97	17	2.47	2.43	34
Bentall, 2005	16	-35.37	8.38	16	-50	4.64	32
Berry, 2015	22	4.05	2.13	25	2.36	2.16	47
Combs, 2009	32	0.75	0.19	50	0.55	0.24	82
Diez-Alegria, 2006	40	7.35	3.65	36	4.75	2.58	76
Fear, 1996	20	-20.5	6	20	-24.6	2.9	40
Fornells-Ambrojo, 2009	20	2.45	1	32	1.71	1.07	52
Kinderman, 1997	20	7.55	2.93	20	4.25	2.73	40
Langdon, 2006	19	0.64	0.23	21	0.67	0.24	40
Langdon, 2010	35	70	30	34	57	26	69
Langdon, 2013	23	28.33	8.01	19	29.17	7.28	42
Lee, 2004	12	3.33	2.23	12	1.33	1.23	24
Lincoln, 2010	25	6.56	5.62	50	3.62	3.1	75
Lyon, 1994	14	-15.07	4.48	14	-23	8.97	28
Martin, 2002	15	6.7	2.9	16	6.5	4.2	31
McKay, 2005	13	6.08	1.8	19	6.58	3.4	32
Mehl, 2010	20	4.89	3.97	21	3.33	3.18	41
Mehl, 2014	142	37.65	14.18	51	43.68	15.63	193
Melo, 2006	35	-19.28	8.56	20	-23.65	6.1	55
Melo, 2013	40	-3.73	2.39	25	-2.92	2.33	65
Menon, 2013	18	0.63	0.37	17	0.68	0.26	35
Merrin, 2007	24	1.71	1.37	24	1.63	0.65	48

	Psychosis With PDs			Healthy Controls			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Moritz, 2007	35	-3.89	0.68	28	-3.49	0.8	63
Randall, 2003	18	5.28	3.43	18	5.33	2.74	36
Sharp, 1997	19	-16.21	3.9	24	-24.41	2.6	43
Wittorf, 2012	20	0.58	0.2	52	0.62	0.18	72

Table I.2. Difference in Externalising Attributional Bias: Psychosis With Persecutory Delusions (PDs) vs Depression

	Psychosis With PDs			Depression			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Bentall, 1991	17	4.65	1.97	17	3	2	34
Bentall, 2005	16	-35.37	8.38	16	-65.75	6.1	32
Candido, 1990	15	-3.95	1.12	15	-5.91	0.57	30
Diez-Alegria, 2006	40	7.35	3.65	35	5.22	2.34	75
Fornells-Ambrojo, 2009	20	2.45	1	21	1.76	1.26	41
Kinderman, 1997	20	7.55	2.93	20	2.45	2.42	40
Lyon, 1994	14	-15.07	4.48	14	-23.33	6.66	28
Merrin, 2007	24	1.71	1.37	24	1.58	1.18	48
Moritz, 2007	35	-3.89	0.68	18	-4.22	1.14	53
Wittorf, 2012	20	0.58	0.2	20	0.65	0.20	40

Table I.3. Difference in Externalising Attributional Bias: Psychosis with Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

	Psychosis With PDs			Psychosis Without PDs			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Aakre, 2009	18	33.98	16.44	47	23.65	14.96	65
Carlin, 2005	31	6.13	4.05	34	6.14	3.57	65
Diez-Alegria, 2006	40	7.35	3.65	25	5.12	3.27	65
Jolley, 2006	14	-3.85	1.00	34	-4.8	1.3	48
Langdon, 2006	19	0.64	0.23	15	0.68	0.27	34
Lincoln, 2010	25	6.56	5.62	25	4.08	3.82	50
Martin, 2002	15	6.7	2.9	15	6.5	3.1	30
McKay, 2005	13	6.08	1.8	11	6.45	3.24	24
Mehl, 2010	20	4.89	3.97	16	3.06	3.02	36
Randall, 2003	18	5.28	3.43	14	5.21	3.81	32
Sharp, 1997	19	-16.21	3.9	12	-26.08	7.4	31

Table I.4. Correlation between Externalising Attributional Bias and Paranoia Severity in People With Psychosis

Study Ref (First Author, Year)	Total N	R
Aakre, 2009	65	0.29
Candido, 1990	45	0.51
Carlin, 2005	65	0
Combs, 2009	60	0.37
Diez-Alegria, 2006	65	0.3
Fear, 1996	29	-0.01
Humphreys, 2006	35	0.11
Janssen, 2006	23	0.39
Jolley, 2006	48	0.33
Langdon, 2006	34	-0.08
Langdon, 2010	69	0.27
Langdon, 2013	23	-0.19
Lincoln, 2010	50	0.25
Martin, 2002	30	0.03
McKay, 2005	24	-0.08
Mehl, 2010	36	0.25
Mehl, 2014	258	0.1
Mizrahi, 2008	86	-0.17
Randall, 2003	32	0.01
Sharp, 1997	31	0.66
Wittorf, 2012	20	0.01

Table I.5. Difference in Explicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

	Psychosis With PDs			Healthy Controls			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Bentall, 2008	39	-72.53	25.78	33	-45.88	10.72	72
Collett, 2016	21	11.95	5.63	21	21.1	4.49	42
Combs, 2009	32	30.9	4.4	50	35	4.5	82
Espinosa, 2014	79	-2.51	3.46	52	-0.17	0.73	131
Fornells-Ambrojo, 2009	20	30.15	5.06	32	30.72	4.39	52
Kesting, 2011	28	18.93	5.21	59	25.12	3.53	87
Kinderman, 1994	16	-70.44	18.19	16	-50.81	14.67	32
Kinderman, 2003	13	25.77	28.64	13	41.54	12.53	26
Lincoln, 2010	25	18.4	7	50	24.05	4.23	75
Lyon, 1994	14	12.54	5.39	14	11.21	4.26	28
MacKinnon, 2011	16	16.31	5.97	20	23.05	4.38	36
McCulloch, 2006	13	-17.85	4.95	15	-17.8	4.43	28
McKay, 2007	9	-0.8	1.24	19	0.15	0.87	28
Melo, 2013	41	26.17	6.35	25	31.12	4.3	66
Moritz, 2006	13	17.58	5.16	41	22.65	4.14	54
Randjbar, 2011	10	15.7	5.1	33	22.72	5.71	43
Smith, 2005	20	136.3	28.1	21	132.7	26.9	41
Sundag, 2015	33	32.5	8.6	33	42.6	4.1	66
Udachina, 2012	29	4.67	1.5	23	6.21	0.69	52
Valiente, 2011	35	0.17	0.94	44	0.31	0.71	79
Vazquez, 2008	40	31.5	4.8	36	35.6	3.9	76
Vorontsova, 2013	30	-4.83	3.57	30	-1.67	1.49	60

Table I.6. Difference in Explicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Depression

	Psychosis With PDs			Depression			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Bentall, 2008	39	-72.53	25.78	27	-81.81	21.28	66
Candido, 1990	15	77.33	11.97	15	27.2	16.37	30
Espinosa, 2014	79	-2.51	3.46	38	-3.56	3.57	117
Fornells-Ambrojo, 2009	20	30.15	5.06	21	21.29	4.46	41
Kesting, 2011	28	18.93	5.21	21	17.57	6.47	49
Kinderman, 1994	16	-70.44	18.19	16	-67.88	15.95	32
Kinderman, 2003	13	25.77	28.64	11	24.09	19.39	24
Lyon, 1994	14	12.54	5.39	14	5.57	3.06	28
McCulloch, 2006	13	-17.85	4.95	15	-26.33	5.92	28
Moritz, 2006	13	17.58	5.16	14	14.86	5.97	27
Valiente, 2011	35	0.17	0.94	35	-0.63	0.67	70
Vazquez, 2008	40	31.5	4.8	35	24.5	6.02	75
Vorontsova, 2013	30	-4.83	3.57	30	-8.37	4.57	60

Table I.7. Difference in Explicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

	Psychosis With PDs			Psychosis Without PDs			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Bentall, 2008	39	-72.53	25.78	29	-65.3	22.46	68
Garety, 2013	170	-24.47	6.15	43	-23.72	6.4	213
Humphreys, 2006	15	-1.07	1	20	0	1	35
Kesting, 2011	28	18.93	5.21	31	18.29	5.98	59
Lincoln, 2010	25	18.4	7	25	20	6.08	50
McKay, 2007	9	-0.8	1.24	9	0.47	0.51	18
Moritz, 2006	13	17.58	5.16	10	12.56	5.85	23
Randjbar, 2011	10	15.7	5.1	19	17.56	7.77	29
Sundag, 2015	33	32.5	8.6	10	37.3	8.1	43
Udachina, 2012	29	4.67	1.5	12	5.79	0.98	41
Vazquez, 2008	40	31.5	4.8	25	30.5	4.7	65

Table I.8. Correlation between Explicit Self-Esteem and Paranoia Severity in People With Psychosis

Study Ref (First Author, Year)	Total N	r
Bentall, 2008	68	-0.43
Ben-Zeev, 2009	194	-0.5
Combs, 2009	60	-0.17
Erickson, 2012	57	-0.57
Freeman, 1998	53	0
Freeman, 2013	130	-0.25
Garety, 2013	213	-0.05
Humphreys, 2006	35	-0.4
Jones, 2010	87	-0.23
Kesting, 2011	59	0.06
Lincoln, 2010	50	-0.12
McKay, 2007	18	-0.55
Moritz, 2006	23	0.41
Randjbar, 2011	29	-0.13
Ringer, 2014	88	-0.23
Romm, 2011	113	-0.3
Sundag, 2015	43	-0.23
Thewissen, 2008	154	-0.32
Udachina, 2012	41	-0.35
Vass, 2015	80	-0.35
Vazquez, 2008	65	0.1
Warman, 2011	30	-0.37
Wickham, 2015	176	-0.51

Table I.9. Difference in Implicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

	Psychosis With PDs			Healthy Controls			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Besnier, 2011	30	-0.19	6.43	60	-0.31	3	90
Espinosa, 2014	79	9.88	95.48	52	42.57	49.9	131
Kesting, 2011	28	0.5	0.33	59	0.6	0.4	87
Kinderman, 1994	16	-7.69	8.5	16	0.19	8.5	32
MacKinnon, 2011	16	0.93	1.01	20	0.48	0.45	36
McCulloch, 2006	13	-2.9	30.58	15	-3.2	16.23	28
McKay, 2007	10	-0.75	0.78	19	0.15	0.99	29
Moritz, 2006	13	-0.03	0.72	41	0.84	0.67	54
Smith, 2005	20	-12	95	21	-32	49	41
Valiente, 2011	35	-3.25	81.35	44	40.48	57.6	79
Vazquez, 2008	40	0.65	2.17	36	2.08	2.09	76

Table I.10. Difference in Implicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Depression

	Psychosis With PDs			Depression			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Espinosa, 2014	79	9.88	95.48	38	18.47	72.8	117
Kesting, 2011	28	0.5	0.33	21	0.64	0.29	49
Kinderman, 1994	16	-7.69	8.5	16	-4.63	5.25	32
McCulloch, 2006	13	-2.9	30.58	15	-5.7	19.93	28
Moritz, 2006	13	-0.03	0.72	14	0.61	0.67	27
Valiente, 2011	35	-3.25	81.35	35	18.46	75.65	70
Vazquez, 2008	40	0.65	2.17	35	0.05	2.01	75

Table I.11. Difference in Implicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

	Psychosis With PDs			Psychosis Without PDs			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Kesting, 2011	28	0.5	0.33	31	0.45	0.44	59
McKay, 2007	10	-0.75	0.78	10	0.47	0.85	20
Moritz, 2006	13	-0.03	0.72	10	0.1	0.84	23
Vazquez, 2008	40	0.65	2.17	25	0.64	1.83	65

Table I.12. Correlation between Implicit Self-Esteem and Paranoia Severity in People With Psychosis

Study Ref (First Author, Year)	Total N	R
Kesting, 2011	59	0.06
McKay, 2007	20	-0.6
Moritz, 2006	23	-0.08
Vazquez, 2008	65	0

Table I.13. Difference in Discrepancy Scores:[a] Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

	Psychosis With PDs			Healthy Controls			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Espinosa, 2014	79	-2.91	4.71	52	-1.88	2.01	131
Kesting, 2011	28	-0.24	1.21	59	0.55	1.17	87
Kinderman, 1994	16	-53.11	24.07	16	-51.24	22.06	32
MacKinnon, 2011	16	8.94	9.91	20	19.25	4.73	36
McCulloch, 2006	13	-17	9.47	15	-16.86	5.92	28
McKay, 2007	9	-0.05	1.41	19	0.01	1.3	29
Moritz, 2006	13	17.83	5.85	41	15.73	5.2	54
Smith, 2005	20	140.67	40.68	21	144.35	29.64	41
Valiente, 2011	35	0.21	1.38	44	-0.17	1.01	79
Vazquez, 2008	40	29.6	7.27	36	29.52	6.66	76

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Table I.14. Difference in Discrepancy Scores:[a] Psychosis With Persecutory Delusions (PDs) vs Depression

	Psychosis With PDs			Depression			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Espinosa, 2014	79	-2.91	4.71	38	-4.3	4.21	117
Kesting, 2011	28	-0.24	1.21	21	-0.84	1.12	49
Kinderman, 1994	16	-53.11	24.07	16	-57.45	18.17	32
McCulloch, 2006	13	-17	9.47	15	-24.66	7.58	28
Moritz, 2006	13	17.83	5.85	14	9.84	6.04	27
Valiente, 2011	35	0.21	1.38	35	-0.85	1.15	70
Vazquez, 2008	40	29.6	7.27	35	24.35	7.66	75

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Table I.15. Difference in Discrepancy Scores: Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions)

	Psychosis With PDs			Psychosis Without PDs			
Study Ref (First Author, Year)	**N1**	**Mean**	**SD**	**N2**	**Mean**	**SD**	**Total N**
Kesting, 2011	28	-0.24	1.21	31	-0.23	1.47	59
McKay, 2007	9	-0.05	1.41	9	0.09	0.99	18
Moritz, 2006	13	17.83	5.85	10	11.74	6.76	23
Vazquez, 2008	40	29.6	7.27	25	28.63	6.51	65

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Table I.16. Correlation between Paranoia Severity and Discrepancy Scores[a] in People With Psychosis

Study Ref (First Author, Year)	Total N	R
Kesting, 2011	59	0
McKay, 2007	18	-0.06
Moritz, 2006	23	0.43
Vazquez, 2008	65	0.07

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Table I.17. Correlation between Paranoia Severity and Self-Esteem Instability in People With Psychosis

Study Ref (First Author, Year)	Total N	R
Erickson, 2012	57	0.21
Palmier-Claus, 2011	256	0.14[a]
Thewissen, 2008	154	0.35
Udachina, 2012	41	0.19

[a]r represents the mean of (a) the correlation between paranoia severity and negative self-esteem instability and (b) the correlation between paranoia severity and positive self-esteem instability.

J. Study Quality Assessment Tool

We adapted a tool for assessing the methodological quality of observational studies that has been successfully employed in prior research undertaken by the Agency for Healthcare Research and Quality (AHRQ).(14) The main methodological quality criteria were retained but the underlying factors related to each study quality criterion were adapted in some instances for this specific context. Each study is assessed on a number of methodological quality criteria (for example, unbiased selection of groups, sample-size calculations, and so on) that are rated as being met, not met, partially met, or being unclear.

Following the guidance of experts in the field of meta-analysis, we will avoid scale-based or aggregated study quality rating. Quality assessments were presented descriptively to guide the interpretation of findings, rather than used as a means to weight or adjust aggregated effect sizes. However, as noted, we planned to test whether specific aspects of methodology were moderators of effect sizes. These included blinding and the matching of participants on demographics.

The tool we used is reproduced below.
General instructions: Grade each criterion as 'Yes', 'No', 'Partially', or 'Can't tell'. Factors to consider when making an assessment are listed under each criterion. Where appropriate (particularly when assigning a 'No', 'Partially', or 'Can't tell' score), please provide a brief rationale for your decision (in parentheses) in the evidence table.

1. Unbiased selection of the cohort?
Factors that help reduce selection bias:
○ Inclusion/exclusion criteria:
○ Recruitment strategy:
- Clearly described
- Relatively free from bias (selection bias might be introduced, for example, by recruitment via advertisement).

2. Selection minimizes baseline differences in prognostic factors?
Factors to consider:
○ Was selection of the comparison group appropriate?
○ Is the comparison group matched with the clinical group on key demographics [age, gender, education (or IQ or a measure of intelligence if education is not reported), ethnicity]?
No = a standardised mean difference (d) of ≥ 0.3 on at least 2; Partial = d of ≥ 0.3 on 1; Yes = d of < 0.3 on 4 or 3 excluding ethnicity

3. Sample size calculated?
Factors to consider:
○ Did the authors report conducting a power analysis or describe some other basis for determining the adequacy of study group sizes for the primary outcome(s) of interest to us?
○ Where a power calculation is presented, do the final numbers obtained match up to this (for example, within 10% of required numbers)?

4. Adequate description of the cohort?
Consider whether the cohort is well-characterized in terms of baseline:
○ Age
○ Sex

○ Education
○ Ethnicity
○ Diagnosis/clinical status
No = reported 1 of the above or less; Partial = reported 2 to 4; Yes = reported all 5 or 4 excluding ethnicity

5. Validated method for ascertaining psychotic disorder?
Factors to consider:
○ Was the method used to ascertain exposure clearly described (details should be sufficient to permit replication in new studies)?
○ Was a valid and reliable measure used to ascertain exposure (subjective measures based on self-report tend to have lower reliability and validity than objective measures such as clinical interview)? Likewise, relying on medical notes is likely to introduce bias due to variation in how assessment is undertaken.

6. Validated method for ascertaining persecutory delusions or measuring paranoia/persecutory ideation?
Factors to consider:
○ Was the method used to ascertain exposure clearly described (details should be sufficient to permit replication in new studies)?
○ Was a valid and reliable measure used to ascertain exposure (subjective measures based on self-report tend to have lower reliability and validity than objective measures such as clinical interview)? Likewise, relying on medical notes is likely to introduce bias due to variation in how assessment is undertaken.
○ If appropriate, was the measure implemented consistently across all study participants?

7. Validated method for ascertaining depression (if relevant)?
○ Was the method used to ascertain exposure clearly described (details should be sufficient to permit replication in new studies)?
○ Was a valid and reliable measure used to ascertain exposure (subjective measures based on self-report tend to have lower reliability and validity than objective measures such as clinical interview)? Likewise, relying on medical notes is likely to introduce bias due to variation in how assessment is undertaken.

8. Validated method for ascertaining absence of diagnosis (if relevant)?
○ Was the method used to determine absence of diagnosis clearly described (details should be sufficient to permit replication in new studies)?
○ Was a valid and reliable measure used to ascertain exposure (subjective measures based on self-report tend to have lower reliability and validity than objective measures such as clinical interview)?

9. Validated method for measuring externalising attributional bias (if relevant)?
Factors to consider:
○ The IPSAQ, the ASQ or a conceptually equivalent variant should be used.
○ Was the measure implemented consistently across all study participants?
○ Did the measure meet minimal criteria for reliability/validity?
Partial = index C or D in the 'data extraction hierarchy' (assuming the factors above); Yes = index A or B in the 'data extraction hierarchy' (assuming the factors above)

10. Validated method for measuring explicit self-esteem (if relevant)?
Factors to consider:
○ The RSES or a conceptually equivalent variant should be used.
○ Was the measure implemented consistently across all study participants?
○ Did the measure meet minimal criteria for reliability/validity?

11. Validated method for measuring implicit self-esteem (if relevant)?
Factors to consider:
○ The IAT, EST, GNAT or a conceptually equivalent variant should be used.
○ Was the measure implemented consistently across all study participants?
○ Did the measure meet minimal criteria for reliability/validity?

12. Validated method for measuring self-esteem instability (if relevant)?
Factors to consider:
○ ESM, the repeated application of a self-esteem measure or a conceptually equivalent longitudinal method should be used.
○ Was the measure implemented consistently across all study participants?
○ Did the measure meet minimal criteria for reliability/validity?

13. Outcome assessment blind to exposure?
Factors to consider:
○ Were the study investigators who assessed outcomes blind to whether participants had persecutory delusions and/or a psychotic disorder (this criterion will not apply in the case of Internet-based or automated designs where a researcher is not present)?

14. Adequate handling of missing data?
Factors to consider:
○ Are the details of missing data clearly reported, including how missing data was handled in the analyses? If not, is there any reason to believe missing data was present (for example, lower N in analysis than initially reported in the participants section).
○ Did missing data from any group exceed 20%?
○ If missing data was present and substantial, were steps taken to minimize bias (for example, sensitivity analysis or imputation).

K. Table K.1. Overview of Assessment of Study Methodological Quality

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining Persecutory Delusions or Measuring Paranoia/ Persecutory Ideation?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Ascertaining Depression?	Validated Method of Measuring Externalising Attributional Bias or Explicit Self-Esteem?	Validated Method of Measuring Implicit Self-Esteem or Self-Esteem Instability	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Studies Containing Externalising Attributional Bias												
Aakre, 2009	Yes	Partial	No	Yes	Yes	Yes	Yes	—	Yes	—	Yes	Yes
Bentall, 1991	Unclear	Partial[b]	No	Yes	Yes	Yes	Partial	Yes	Unclear	—	No	Yes
Bentall, 2005	Yes	Partial[b]	No	Yes	Yes	Yes	Partial	Yes	Partial	—	No	Yes
Berry, 2015	Yes	Partial	No	Yes	Yes	Yes	Unclear	—	Yes	—	No	Yes
Candido, 1990	Yes	No	No	Partial	Partial	Yes	—	Yes	Partial	—	No	Yes
Carlin, 2005	Partial	Unclear	No	No	Partial	Partial	—	—	Partial	—	No	Yes
Combs, 2009	Partial	No	No	Yes	Yes	Yes	Partial	—	Yes	—	No	Yes
Diez-Alegria, 2006	Partial	Partial[b]	No	Partial	Partial	Yes	Yes	Partial	Yes	—	No	Yes
Fear, 1996	Unclear	Unclear	No	No	Partial	Partial	Partial	—	Yes	—	No	Yes
Fornells-Ambrojo, 2009	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
Humphreys, 2006	Yes	Unclear	No	Partial	Partial	Yes	—	—	Partial	—	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining Persecutory Delusions or Measuring Paranoia/ Persecutory Ideation?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Ascertaining Depression?	Validated Method of Measuring Externalising Attributional Bias or Explicit Self-Esteem?	Validated Method of Measuring Implicit Self-Esteem or Self-Esteem Instability	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Janssen, 2006	Yes	—	No	Yes	Yes	Yes	—	—	Partial	—	No	Yes
Jolley, 2006	Yes	Unclear	No	No	Yes	Yes	—	—	Partial	—	Partial[d]	Yes
Kinderman, 1997	Partial	Unclear	No	Partial	Partial	Yes	Partial	Partial	Yes	—	No	Yes
Langdon, 2006	Yes	Partial[b]	No	Partial	Yes	Yes	Yes	—	Yes	—	No[e]	Yes
Langdon, 2010	Yes	No	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Langdon, 2013	Yes	Partial	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Lee, 2004	Yes	Partial	No	Partial	Yes	Yes	Partial	—	Yes	—	No	Yes
Lincoln, 2010	Yes	Yes	No	Yes	Yes	Yes	Partial	—	Yes	—	No	Yes
Lyon, 1994	Partial	Partial[b]	No	Yes	Yes	Yes	Partial	Yes	Partial	—	No	Yes
Martin, 2002	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	—	Yes	—	No[e]	Yes
McKay, 2005	Yes	No	No	Yes	Yes	Yes	Yes	—	Yes	—	No[e]	Yes
Mehl, 2010	Yes	Yes	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Unclear
Mehl, 2014	Yes	Yes	No	Yes	Yes	Yes	Yes	—	Partial	—	Partial[d]	Yes
Melo, 2006	Yes	No	No	Yes	Yes	Yes	Yes	—	Partial	—	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining Persecutory Delusions or Measuring Paranoia/ Persecutory Ideation?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Ascertaining Depression?	Validated Method of Measuring Externalising Attributional Bias or Explicit Self-Esteem?	Validated Method of Measuring Implicit Self-Esteem or Self-Esteem Instability	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Melo, 2013	Yes	Yes	No	Yes	Yes	Yes	Yes	—	Unclear	—	No	Yes
Menon, 2013	Yes	No	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Merrin, 2007	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	Partial	—	No	Yes
Mizrahi, 2008	Yes	—	No	Yes	Yes	Yes	—	—	Yes	—	No	Yes
Moritz, 2007	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Partial	—	No[e]	Yes
Randall, 2003	Unclear	No	No	Yes	Partial	Yes	Unclear	—	Yes	—	No[e]	Yes
Sharp, 1997	Partial	Partial[b]	No	Partial	Yes	Yes	Partial	—	Partial	—	No	Yes
Wittorf, 2012	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Partial	—	No	Yes
Studies Containing Explicit Self-Esteem												
Bentall, 2008	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
Ben-Zeev, 2009	Yes	—	No	No	Partial	Yes	—	—	Yes	—	No	Yes
Candido, 1990	Yes	No	No	Partial	Partial	Yes	—	Yes	Yes	—	No	Yes
Collett, 2016	Yes	Partial	Yes	Partial	Partial	Yes	Partial	—	Yes	—	No	Yes
Combs, 2009	Partial	No	No	Yes	Yes	Yes	Partial	—	Yes	—	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining Persecutory Delusions or Measuring Paranoia/ Persecutory Ideation?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Ascertaining Depression?	Validated Method of Measuring Externalising Attributional Bias or Explicit Self-Esteem?	Validated Method of Measuring Implicit Self-Esteem or Self-Esteem Instability	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Erickson, 2012	Yes	—	No	Yes	Yes	Yes	—	—	Yes	—	No	Yes
Espinosa, 2014	Partial	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
Fornells-Ambrojo, 2009	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
Freeman, 1998	Yes	—	No	Yes	Yes	Yes	—	—	Yes	—	No	Yes
Freeman, 2013	Yes	—	No	Partial	Yes	Yes	—	—	Yes	—	No	Yes
Garety, 2013	Yes	Partial	No	Partial	Yes	Yes	—	—	Yes	—	Partial[d]	Yes
Humphreys, 2006	Yes	Unclear	No	Partial	Partial	Yes	—	—	Yes	—	No	Yes
Jones, 2010	Yes	—	No[c]	Partial	Yes	Yes	—	—	Yes	—	Partial[d]	Yes
Kesting, 2011	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Partial	Yes	Unclear	—	No	Yes
Kinderman, 2003	Yes	Unclear	No	Partial	Unclear	Yes	Partial	Partial	Partial	—	No	Yes
Lincoln, 2010	Yes	Yes	No	Yes	Yes	Yes	Partial	—	Yes	—	No	Yes
Lyon, 1994	Partial	Partial[b]	No	Yes	Yes	Yes	Partial	Yes	Yes	—	No	Yes
MacKinnon, 2011	Yes	No	Yes	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining Persecutory Delusions or Measuring Paranoia/ Persecutory Ideation?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Ascertaining Depression?	Validated Method of Measuring Externalising Attributional Bias or Explicit Self-Esteem?	Validated Method of Measuring Implicit Self-Esteem or Self-Esteem Instability	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Melo, 2013	Yes	Yes	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Moritz, 2006	Yes	Partial[b]	No	Partial	Yes	Yes	Partial	Partial	Yes	—	No	Yes
Randjbar, 2011	Partial	Partial	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Ringer, 2014	Yes	—	No	Yes	Yes	Yes	—	—	Yes	—	No	Yes
Romm, 2011	Yes	—	No	Yes	Yes	Yes	—	—	Yes	—	No	Yes
Smith, 2005	Yes	No	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Sundag, 2015	Partial	Partial[b]	No	Yes	Yes	Yes	Yes	—	Yes	—	No	Yes
Thewissen, 2008	Yes	—	No	Yes	Yes	Yes	—	—	Yes	—	No	Yes
Udachina, 2012	Yes	Partial	No	Yes	Partial	Yes	Partial	—	Yes	—	No	Yes
Valiente, 2011	Partial	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
Vass, 2015	Yes	—	No	Yes	Yes	Yes	—	—	Yes	—	No	Yes
Vazquez, 2008	Partial	Partial[b]	No	Partial	Partial	Yes	Yes	Partial	Yes	—	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining Persecutory Delusions or Measuring Paranoia/ Persecutory Ideation?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Ascertaining Depression?	Validated Method of Measuring Externalising Attributional Bias or Explicit Self-Esteem?	Validated Method of Measuring Implicit Self-Esteem or Self-Esteem Instability	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Vorontsova, 2013	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	—	No	Yes
Warman, 2011	Yes	—	No	Partial	Yes	Yes	—	—	Yes	—	No	Yes
Wickham, 2015	Yes	—	No	Partial	Yes	Yes	—	—	Yes	—	No	Yes
Studies Containing Implicit and Explicit Self-Esteem												
Espinosa, 2014	Partial	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Kesting, 2011	Yes	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Partial	Yes	Unclear	Partial	No	Yes
MacKinnon, 2011	Yes	No	Yes	Yes	Yes	Yes	Yes	—	Yes	Yes	No	Yes
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Partial	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	—	Yes	Yes	No	Yes
Moritz, 2006	Yes	Partial[b]	No	Partial	Yes	Yes	Partial	Partial	Yes	Yes	No	Yes
Smith, 2005	Yes	No	No	Yes	Yes	Yes	Yes	—	Yes	Yes	No	Yes
Valiente, 2011	Partial	Partial[b]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	Partial[b]	No	Partial	Partial	Yes	Yes	Partial	Yes	Yes	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining Persecutory Delusions or Measuring Paranoia/ Persecutory Ideation?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Ascertaining Depression?	Validated Method of Measuring Externalising Attributional Bias or Explicit Self-Esteem?	Validated Method of Measuring Implicit Self-Esteem or Self-Esteem Instability	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Study Containing Implicit Self-Esteem Alone												
Besnier, 2011	Unclear	No	No	Yes	Yes	Yes	Yes	—	—	Partial	No	Yes
Studies Containing Self-Esteem Instability												
Erickson, 2012	Yes	—	No	Yes	Yes	Yes	—	—	—	Yes	No	Yes
Palmier-Claus, 2011	Yes	—	No	Yes	Yes	Yes	—	—	—	Yes	Partial[d]	Yes
Thewissen, 2008	Yes	—	No	Yes	Yes	Yes	—	—	—	Yes	No	Yes
Udachina, 2012	Yes	Partial	No	Yes	Partial	Yes	Partial	—	—	Yes	No	Yes

[a]Group comparison studies only.
[b]An overall 'partial' rating was assigned when different group comparisons in the study received different ratings but when at least one of these group comparisons received a 'partial' or 'yes' rating (outcome-specific study quality tables are presented in Table L.1 to Table L.17 in Supplement).
[c]Explicit self-esteem was a secondary outcome so a power calculation would not be expected.
[d]Raters were blind to treatment allocation, but not clinical status.
[e]Independent judges' ratings of the participants' responses on the attributional style measure were blind to clinical status, but these were not applicable (self-ratings were our primary outcome).

L. Outcome-Specific Study Quality Tables

Table L.1. Assessment of Study Methodological Quality – Difference in Externalising Attributional Bias: Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prog-nostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for As-certaining PDs?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Measuring Externalizing Attributional Bias?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Aakre, 2009	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bentall, 1991	Unclear	Yes	No	Yes	Yes	Yes	Partial	Unclear	No	Yes
Bentall, 2005	Yes	Yes	No	Yes	Yes	Yes	Partial	Partial	No	Yes
Berry, 2015	Yes	Partial	No	Yes	Yes	Yes	Unclear	Yes	No	Yes
Combs, 2009	Partial	No	No	Yes	Yes	Yes	Partial	Yes	No	Yes
Diez-Alegria, 2006	Partial	Partial	No	Partial	Partial	Yes	Yes	Yes	No	Yes
Fear, 1996	Unclear	Unclear	No	No	Partial	Partial	Partial	Yes	No	Yes
Fornells-Ambrojo, 2009	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1997	Partial	Unclear	No	Partial	Partial	Yes	Partial	Yes	No	Yes
Langdon, 2006	Yes	No	No	Partial	Yes	Yes	Yes	Yes	No[b]	Yes
Langdon, 2010	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Langdon, 2013	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Measuring Externalizing Attributional Bias?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Lee, 2004	Yes	Partial	No	Partial	Yes	Yes	Partial	Yes	No	Yes
Lincoln, 2010	Yes	Yes	No	Yes	Yes	Yes	Partial	Yes	No	Yes
Lyon, 1994	Partial	Yes	No	Yes	Yes	Yes	Partial	Partial	No	Yes
Martin, 2002	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No[b]	Yes
McKay, 2005	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No[b]	Yes
Mehl, 2010	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Unclear
Mehl, 2014	Yes	Yes	No	Yes	Yes	Yes	Yes	Partial	No	Yes
Melo, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Partial	No	Yes
Melo, 2013	Yes	Yes	No	Yes	Yes	Yes	Yes	Unclear	No	Yes
Menon, 2013	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Merrin, 2007	Partial	Partial	No	Yes	Yes	Yes	Yes	Partial	Yes	Yes
Moritz, 2007	Yes	Partial	No	Yes	Yes	Yes	Yes	Partial	No[b]	Yes
Randall, 2003	Unclear	No	No	Yes	Partial	Yes	Unclear	Yes	No[b]	Yes
Sharp, 1997	Partial	Partial	No	Partial	Yes	Yes	Partial	Partial	No	Yes
Wittorf, 2012	Yes	No	No	Yes	Yes	Yes	Yes	Partial	No	Yes

[a]Group comparison studies only. [b]Independent judges' ratings of the participants' responses on the attributional style measure were blind to clinical status, but these were not applicable (self-ratings were our primary outcome).

Table L.2. Assessment of Study Methodological Quality – Difference in Externalising Attributional Bias: Psychosis With Persecutory Delusions (PDs) vs Depression

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Depression?	Validated Method for Measuring Externalizing Attributional Bias?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Bentall, 1991	Unclear	Partial	No	Yes	Yes	Yes	Yes	Unclear	No	Yes
Bentall, 2005	Yes	No	No	Yes	Yes	Yes	Yes	Partial	No	Yes
Candido, 1990	Yes	No	No	Partial	Partial	Yes	Yes	Partial	No	Yes
Diez-Alegria, 2006	Partial	No	No	Partial	Partial	Yes	Partial	Yes	No	Yes
Fornells-Ambrojo, 2009	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1997	Partial	Unclear	No	Partial	Partial	Yes	Partial	Yes	No	Yes
Lyon, 1994	Partial	Partial	No	Yes	Yes	Yes	Yes	Partial	No	Yes
Merrin, 2007	Partial	Partial	No	Yes	Yes	Yes	Yes	Partial	Yes	Yes
Moritz, 2007	Yes	Partial	No	Yes	Yes	Yes	Yes	Partial	No[b]	Yes
Wittorf, 2012	Yes	Partial	No	Yes	Yes	Yes	Yes	Partial	No	Yes

[a]Group comparison studies only. [b]Independent judges' ratings of the participants' responses on the attributional style measure were blind to clinical status, but these were not applicable (self-ratings were our primary outcome).

Table L.3. Assessment of Study Methodological Quality – Difference in Externalising Attributional Bias: Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Measuring Externalizing Attributional bias?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Aakre, 2009	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	Yes
Carlin, 2005	Partial	Unclear	No	No	Partial	Partial	Partial	No	Yes
Diez-Alegria, 2006	Partial	Partial	No	Partial	Partial	Yes	Yes	No	Yes
Jolley, 2006	Yes	Unclear	No	No	Yes	Yes	Partial	Partial[b]	Yes
Langdon, 2006	Yes	Partial	No	Partial	Yes	Yes	Yes	No[c]	Yes
Lincoln, 2010	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Martin, 2002	Yes	Partial	No	Yes	Yes	Yes	Yes	No[c]	Yes
McKay, 2005	Yes	No	No	Yes	Yes	Yes	Yes	No[c]	Yes
Mehl, 2010	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Unclear
Randall, 2003	Unclear	No	No	Yes	Partial	Yes	Yes	No[c]	Yes
Sharp, 1997	Partial	No	No	Partial	Yes	Yes	Partial	No	Yes

[a]Group comparison studies only. [b]Raters were blind to treatment allocation, but not clinical status. [c]Independent judges' ratings of the participants' responses on the attributional style measure were blind to clinical status, but these were not applicable (self-ratings were our primary outcome).

Table L.4. Assessment of Study Methodological Quality – Correlation between Externalising Attributional Bias and Paranoia Severity in People With Psychosis

Study Ref(First Author, Year)	Unbiased Selection of Cohort?	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs or Measuring Paranoia/Persecutory Ideation?	Validated Method for Measuring Ex-ternalizing Attributional Bias?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Aakre, 2009	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Candido, 1990	Yes	No	Partial	Partial	Yes	Partial	No	Yes
Carlin, 2005	Partial	No	No	Partial	Partial	Partial	No	Yes
Combs, 2009	Partial	No	Yes	Yes	Yes	Yes	No	No
Diez-Alegria, 2006	Partial	No	Partial	Partial	Yes	Yes	No	Yes
Fear, 1996	Unclear	No	No	Partial	Partial	Yes	No	Yes
Humphreys, 2006	Yes	No	Partial	Partial	Yes	Partial	No	Yes
Janssen, 2006	Yes	No	Yes	Yes	Yes	Partial	No	Yes
Jolley, 2006	Yes	No	No	Yes	Yes	Partial	Partial[a]	Yes
Langdon, 2006	Yes	No	Partial	Yes	Yes	Yes	No[b]	Yes
Langdon, 2010	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Langdon, 2013	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Lincoln, 2010	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Martin, 2002	Yes	No	Yes	Yes	Yes	Yes	No[b]	Yes
McKay, 2005	Yes	No	Yes	Yes	Yes	Yes	No[b]	Yes
Mehl, 2010	Yes	No	Yes	Yes	Yes	Yes	No	Unclear
Mehl, 2014	Yes	No	Yes	Yes	Yes	Partial	Partial[a]	Yes
Mizrahi, 2008	Yes	No	Yes	Yes	Yes	Yes	No	Yes

Study Ref(First Author, Year)	Unbiased Selection of Cohort?	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs or Measuring Paranoia/Persecutory Ideation?	Validated Method for Measuring Ex-ternalizing Attributional Bias?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Randall, 2003	Unclear	No	Yes	Partial	Yes	Yes	No[b]	Yes
Sharp, 1997	Partial	No	Partial	Yes	Yes	Partial	No	Yes
Wittorf, 2012	Yes	No	Yes	Yes	Yes	Partial	No	Yes

[a]Raters were blind to treatment allocation, but not clinical status. [b]Independent judges' ratings of the participants' responses on the attributional style measure were blind to clinical status, but these were not applicable (self-ratings were our primary outcome).

Table L.5. Assessment of Study Methodological Quality – Difference in Explicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Measuring Explicit Self-esteem?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Bentall, 2008	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Collett, 2016	Yes	Partial	Yes	Partial	Partial	Yes	Partial	Yes	No	Yes
Combs, 2009	Partial	No	No	Yes	Yes	Yes	Partial	Yes	No	Yes
Espinosa, 2014	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Fornells-Ambrojo, 2009	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kesting, 2011	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Partial	Unclear	No	Yes
Kinderman, 2003	Yes	Unclear	No	Partial	Unclear	Yes	Partial	Partial	No	Yes
Lincoln, 2010	Yes	Yes	No	Yes	Yes	Yes	Partial	Yes	No	Yes
Lyon, 1994	Partial	Yes	No	Yes	Yes	Yes	Partial	Yes	No	Yes
MacKinnon, 2011	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Melo, 2013	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	No	No	Partial	Yes	Yes	Partial	Yes	No	Yes
Randjbar, 2011	Partial	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Smith, 2005	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Sundag, 2015	Partial	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Measuring Explicit Self-esteem?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Udachina, 2012	Yes	Partial	No	Yes	Partial	Yes	Partial	Yes	No	Yes
Valiente, 2011	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	Partial	No	Partial	Partial	Yes	Yes	Yes	No	Yes
Vorontsova, 2013	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes

[a]Group comparison studies only.

Table L.6. Assessment of Study Methodological Quality – Difference in Explicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Depression

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Depression?	Validated Method for Measuring Explicit Self-Esteem?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Bentall, 2008	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Candido, 1990	Yes	No	No	Partial	Yes	Partial	Yes	Yes	No	Yes
Espinosa, 2014	Partial	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Fornells-Ambrojo, 2009	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kesting, 2011	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Yes	Unclear	No	Yes
Kinderman, 2003	Yes	Unclear	No	Partial	Unclear	Yes	Partial	Partial	No	Yes
Lyon, 1994	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	Partial	No	Partial	Yes	Yes	Partial	Yes	No	Yes
Valiente, 2011	Partial	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	No	No	Partial	Partial	Yes	Partial	Yes	No	Yes
Vorontsova, 2013	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes

[a]Group comparison studies only.

Table L.7. Assessment of Study Methodological Quality – Difference in Explicit Self-Esteem: Psychosis with Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prog-nostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Measuring Explicit Self-Esteem?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Bentall, 2008	Yes	Partial	No	Yes	Yes	Yes	Yes	No	Yes
Garety, 2013	Yes	Partial	No	Partial	Yes	Yes	Yes	Partial[b]	Yes
Humphreys, 2006	Yes	Unclear	No	Partial	Partial	Yes	Yes	No	Yes
Kesting, 2011	Yes	Partial	No	Yes	Yes	Yes	Yes	No	Yes
Lincoln, 2010	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	Partial	No	Partial	Yes	Yes	Yes	No	Yes
Randjbar, 2011	Partial	Partial	No	Yes	Yes	Yes	Yes	No	Yes
Sundag, 2015	Partial	Partial	No	Yes	Yes	Yes	Yes	No	Yes
Udachina, 2012	Yes	Partial	No	Yes	Partial	Yes	Yes	No	Yes
Vazquez, 2008	Partial	Partial	No	Partial	Partial	Yes	Yes	No	Yes

[a]Group comparison studies only. [b]Raters were blind to treatment allocation, but not clinical status.

Table L.8. Assessment of Study Methodological Quality – Correlation between Explicit Self-Esteem and Paranoia Severity in People with Psychosis

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs or Measuring Paranoia/Persecutory Ideation?	Validated Method for Measuring Explicit Self-Esteem?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Bentall, 2008	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Ben-Zeev, 2009	Yes	No	No	Partial	Yes	Yes	No	Yes
Combs, 2009	Partial	No	Yes	Yes	Yes	Yes	No	No
Erickson, 2012	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Freeman, 1998	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Freeman, 2013	Yes	No	Partial	Yes	Yes	Yes	No	Yes
Garety, 2013	Yes	No	Partial	Yes	Yes	Yes	Partial[b]	Yes
Humphreys, 2006	Yes	No	Partial	Partial	Yes	Yes	No	Yes
Jones, 2010	Yes	No[a]	Partial	Yes	Yes	Yes	Partial[b]	Yes
Kesting, 2011	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Lincoln, 2010	Yes	No	Yes	Yes	Yes	Yes	No	Yes
McKay, 2007	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	No	Partial	Yes	Yes	Yes	No	Yes
Randjbar, 2011	Partial	No	Yes	Yes	Yes	Yes	No	Yes
Ringer, 2014	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Romm, 2011	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Sundag, 2015	Partial	No	Yes	Yes	Yes	Yes	No	Yes
Thewissen, 2008	Yes	No	Yes	Yes	Yes	Yes	No	Yes

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs or Measuring Paranoia/Persecutory Ideation?	Validated Method for Measuring Explicit Self-Esteem?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Udachina, 2012	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Vass, 2015	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	No	No	Partial	Yes	Yes	No	Yes
Warman, 2011	Yes	No	Partial	Yes	Yes	Yes	No	Yes
Wickham, 2015	Yes	No	Partial	Yes	Yes	Yes	No	Yes

[a]Explicit self-esteem was a secondary outcome so a power calculation would not be expected. [b]Raters were blind to treatment allocation, but not clinical status.

Table L.9. Assessment of Study Methodological Quality – Difference in Implicit Self-Esteem: Psychosis with Persecutory Delusions (PDs) vs Healthy Controls

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Measuring Implicit Self-Esteem?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Besnier, 2011	Unclear	No	No	Yes	Yes	Yes	Yes	Partial	No	Yes
Espinosa, 2014	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kesting, 2011	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Partial	Partial	No	Yes
MacKinnon, 2011	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Partial	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	No	No	Partial	Yes	Yes	Partial	Yes	No	Yes
Smith, 2005	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Valiente, 2011	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	Partial	No	Partial	Partial	Yes	Yes	Yes	No	Yes

[a]Group comparison studies only.

Table L.10. Assessment of Study Methodological Quality – Difference in Implicit Self-esteem: Psychosis with Persecutory Delusions (PDs) vs Depression

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prog-nostic Factors?[a]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Depression?	Validated Method for Measuring Implicit self-esteem?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Espinosa, 2014	Partial	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kesting, 2011	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Yes	Partial	No	Yes
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Partial	No	Yes
Moritz, 2006	Yes	Partial	No	Partial	Yes	Yes	Partial	Yes	No	Yes
Valiente, 2011	Partial	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	No	No	Partial	Partial	Yes	Partial	Yes	No	Yes

[a]Group comparison studies only.

Table L.11. Assessment of Study Methodological Quality – Difference in Implicit Self-Esteem: Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[a]	Sample Size Cal-culation?	Adequate Description of the Cohort?	Validated Method for As-certaining Psychotic Disorder?	Validated Method for As-certaining PDs?	Validated Method for measuring implicit self-esteem?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Kesting, 2011	Yes	Partial	No	Yes	Yes	Yes	Yes	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	Partial	No	Partial	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	Partial	No	Partial	Partial	Yes	Yes	No	Yes

[a]Group comparison studies only.

Table L.12. Assessment of Study Methodological Quality – Correlation between Paranoia Severity and Implicit Self-Esteem in People With Psychosis

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs or Measuring Paranoia/Persecutory Ideation?	Validated Method for Measuring Implicit Self-Esteem?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Kesting, 2011	Yes	No	Yes	Yes	Yes	Yes	No	Yes
McKay, 2007	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	No	Partial	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	No	No	Partial	Yes	Yes	No	Yes

Table L.13. Assessment of Study Methodological Quality – Difference in Discrepancy Scores:[a] Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

Study Ref(First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[b]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Absence of Diagnosis?	Validated Method for Measuring Explicit Self-Esteem?	Validated Method for Measuring Implicit Self-Esteem?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Espinosa, 2014	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Kesting, 2011	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Partial	Unclear	Partial	No	Yes
MacKinnon, 2011	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Partial	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	No	No	Partial	Yes	Yes	Partial	Yes	Yes	No	Yes
Smith, 2005	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Valiente, 2011	Partial	Partial	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	Partial	No	Partial	Partial	Yes	Yes	Yes	Yes	No	Yes

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem. [b]Group comparison studies only.

Table L.14. Assessment of Study Methodological Quality – Difference in Discrepancy Scores:[a] Psychosis With Persecutory Delusions (PDs) vs Depression

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[b]	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs?	Validated Method for Ascertaining Depression?	Validated Method for Measuring Explicit Self-Esteem?	Validated Method for Measuring Implicit Self-Esteem?	Outcome Assessments Blind to Clinical Status?	Missing Data Low or Adequately Handled?
Espinosa, 2014	Partial	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Kesting, 2011	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Kinderman, 1994	Partial	Partial	No	Partial	Yes	Yes	Yes	Unclear	Partial	No	Yes
McCulloch, 2006	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Partial	No	Yes
Moritz, 2006	Yes	Partial	No	Partial	Yes	Yes	Partial	Yes	Yes	No	Yes
Valiente, 2011	Partial	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	No	No	Partial	Partial	Yes	Partial	Yes	Yes	No	Yes

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem. [b]Group comparison studies only.

Table L.15. Assessment of Study Methodological Quality – Difference in Discrepancy Scores:[a] Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if specified, Grandiose Delusions; GDs)

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Selection Minimizes Baseline Differences in Prognostic Factors?[b]	Sample Size Cal-culation?	Adequate Description of the Cohort?	Validated Method for As-certaining Psychotic Disorder?	Validated Method for As-certaining PDs?	Validated Method for Measuring Explicit Self-Esteem?	Validated Method for Measuring Implicit Self-Esteem?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Kesting, 2011	Yes	Partial	No	Yes	Yes	Yes	Yes	Yes	No	Yes
McKay, 2007	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	Partial	No	Partial	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	Partial	No	Partial	Partial	Yes	Yes	Yes	No	Yes

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem. [b]Group comparison studies only.

Table L.16. Assessment of Study Methodological Quality – Correlation between Paranoia Severity and Discrepancy Scores[a] in People With Psychosis

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated method for Ascertaining PDs or Measuring Paranoia/Persecutory Ideation?	Validated Method for Measuring Explicit Self-Esteem?	Validated Method for Measuring Implicit Self-Esteem?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Kesting, 2011	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
McKay, 2007	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes
Moritz, 2006	Yes	No	Partial	Yes	Yes	Yes	Yes	No	Yes
Vazquez, 2008	Partial	No	No	Partial	Yes	Yes	Yes	No	Yes

[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Table L.17. Assessment of Study Methodological Quality – Correlation between Paranoia Severity and Self-Esteem Instability in People With Psychosis

Study Ref (First Author, Year)	Unbiased Selection of Cohort?	Sample Size Calculation?	Adequate Description of the Cohort?	Validated Method for Ascertaining Psychotic Disorder?	Validated Method for Ascertaining PDs or Measuring Paranoia/Persecutory Ideation?	Validated Method for Measuring Self-Esteem Instability?	Outcome Assess-ments Blind to Clinical Status?	Missing Data Low or Ad-equately Handled?
Erickson, 2012	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Palmier-Claus, 2011	Yes	No	Yes	Yes	Yes	Yes	Partial[a]	Yes
Thewissen, 2008	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Udachina, 2012	Yes	No	Yes	Yes	Yes	Yes	No	Yes

[a]Raters were blind to treatment allocation, but not clinical status.

M. GRADE Assessment Criteria

All assessments were conducted by PM and checked by PH. We applied the following criteria for downgrading to each outcome.

Study Limitations
Individual studies were rated for risk of bias/methodological quality using an adapted version of the Agency for Healthcare Research and Quality assessment tool (AHRQ).(14) We downgraded an outcome by 1 point if three of the parameters in our risk of bias assessment had ≥50% studies with at least one 'no' or 'unclear' rating, and 2 points if four or more parameters had ≥50% studies with ratings of 'no or unclear'.

Imprecision
We downgraded an outcome for imprecision by 1 point if *"a recommendation or clinical course of action would differ if the upper versus the lower boundary of the CI represented the truth"* and/or the number of events and sample size meant the optimal information size was not reached.(103)

Inconsistency
We downgraded an outcome for inconsistency by 1 point if the I^2 statistic was ≥40% in the context of an unclear direction of effect or ≥75% in the context of a clear direction of effect. We downgraded by 2 points if the I^2 statistic was ≥75% in the context of an unclear direction of effect.

Publication Bias
We downgraded an outcome for publication bias by 1 point when, for outcomes with at least 10 studies,(32) the Doi plot and LFK index suggested major asymmetry (i.e., LFK index >2) and this was not better explained by selective reporting bias or some other factor. However, if the 'trim and fill' method indicated that any publication bias was not likely to affect the overall magnitude of the effect size, we did not downgrade.

Rating Up the Quality of Evidence
In the context of a large effect size, we upgraded by 1 point where the effect size calculated was large. Using Cohen's criteria,(104) an effect size of $r \geq 0.50$ or $d \geq 0.80$ was considered large.

N. Forest Plots of Meta-Analyses

Fig. N.1. Difference in Externalising Attributional Bias (EAB): Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

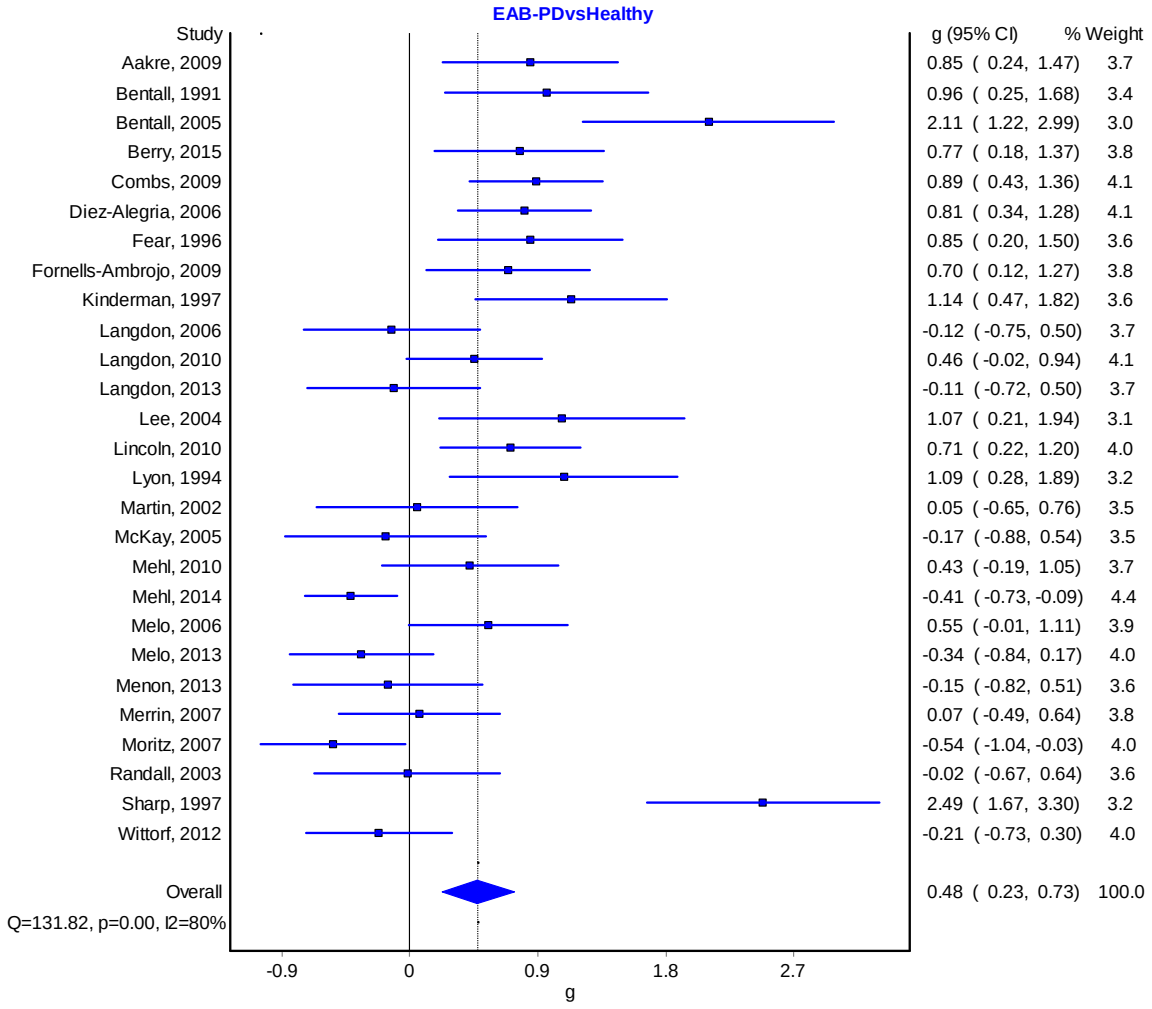


Fig. N.2. Difference in Externalising Attributional Bias (EAB): Psychosis With Persecutory Delusions (PDs) vs Depression (D)

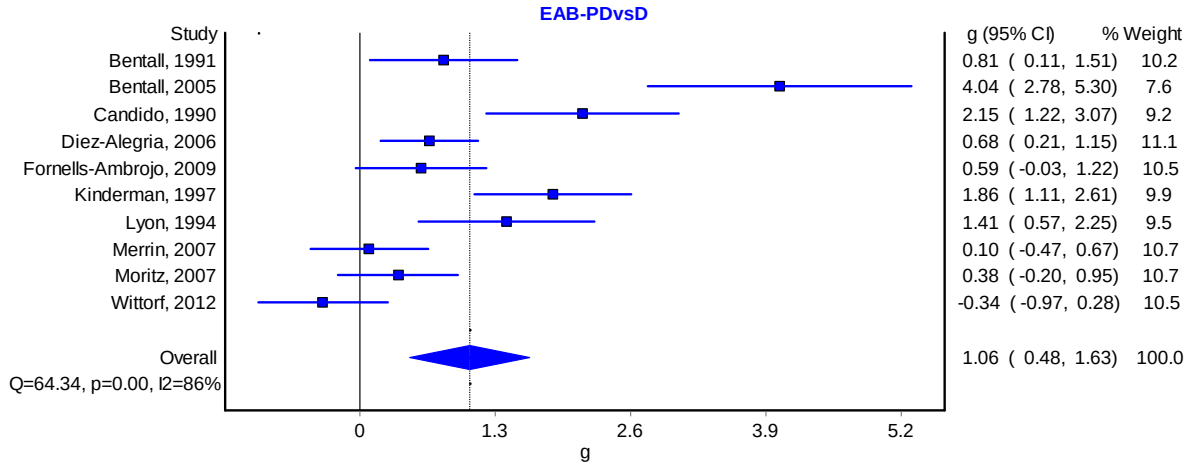


Fig. N.3. Difference in Externalising Attributional Bias (EAB): Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

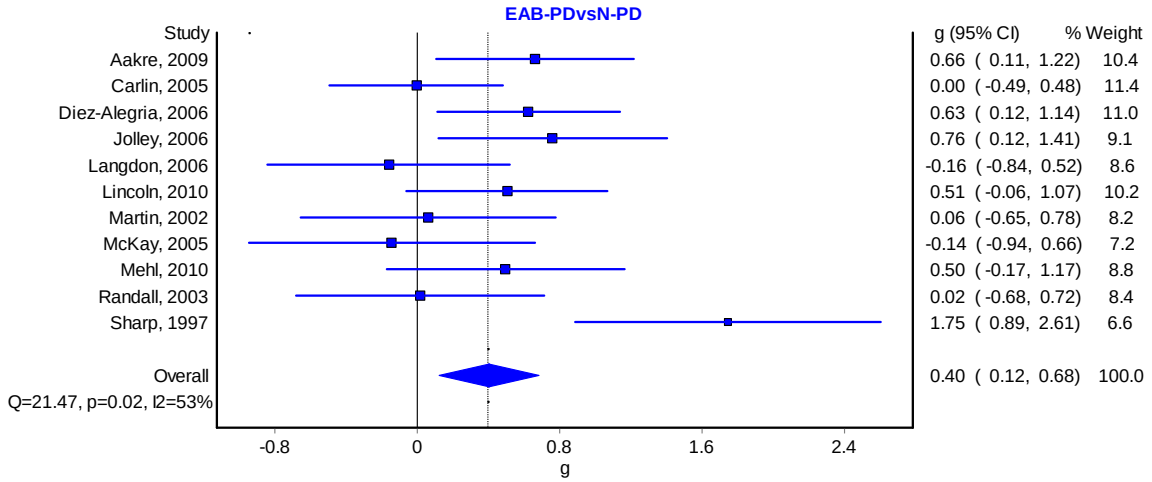


Fig. N.4. Correlation between Externalising Attributional Bias (EAB) and Paranoia Severity in People With Psychosis

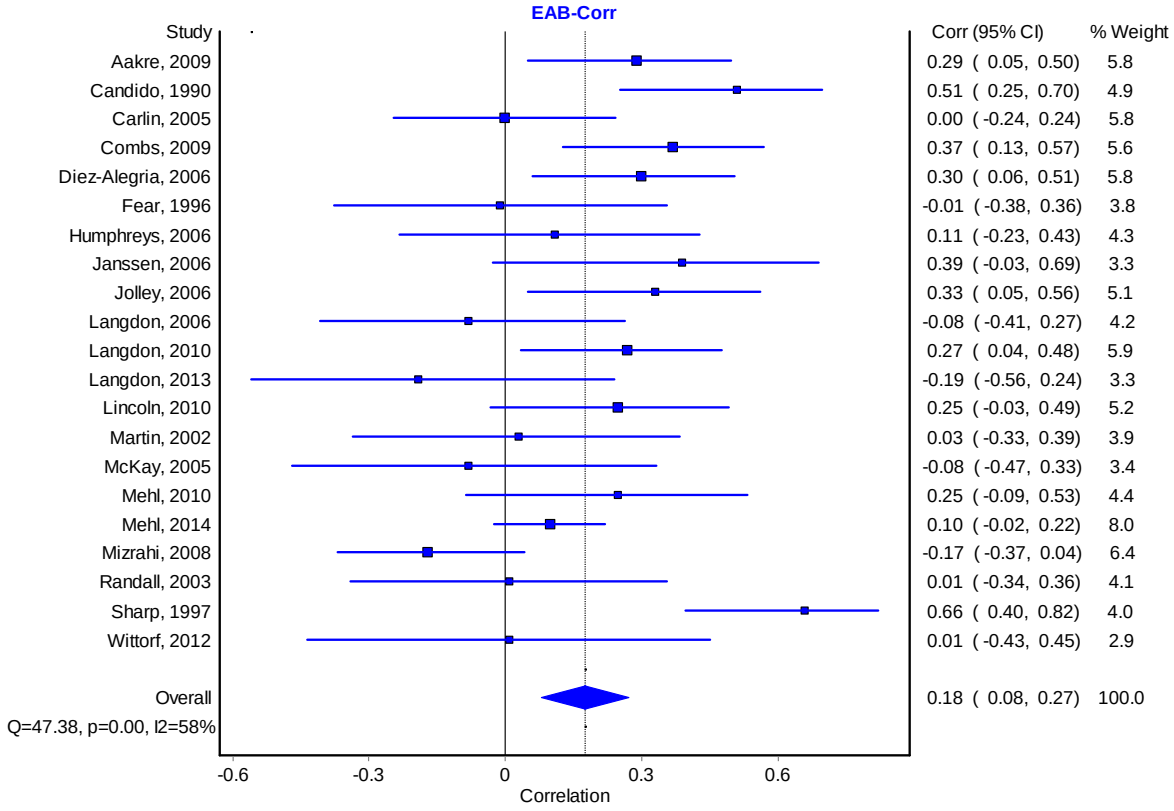


Fig. N.5. Difference in Explicit Self-Esteem (ESE): Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

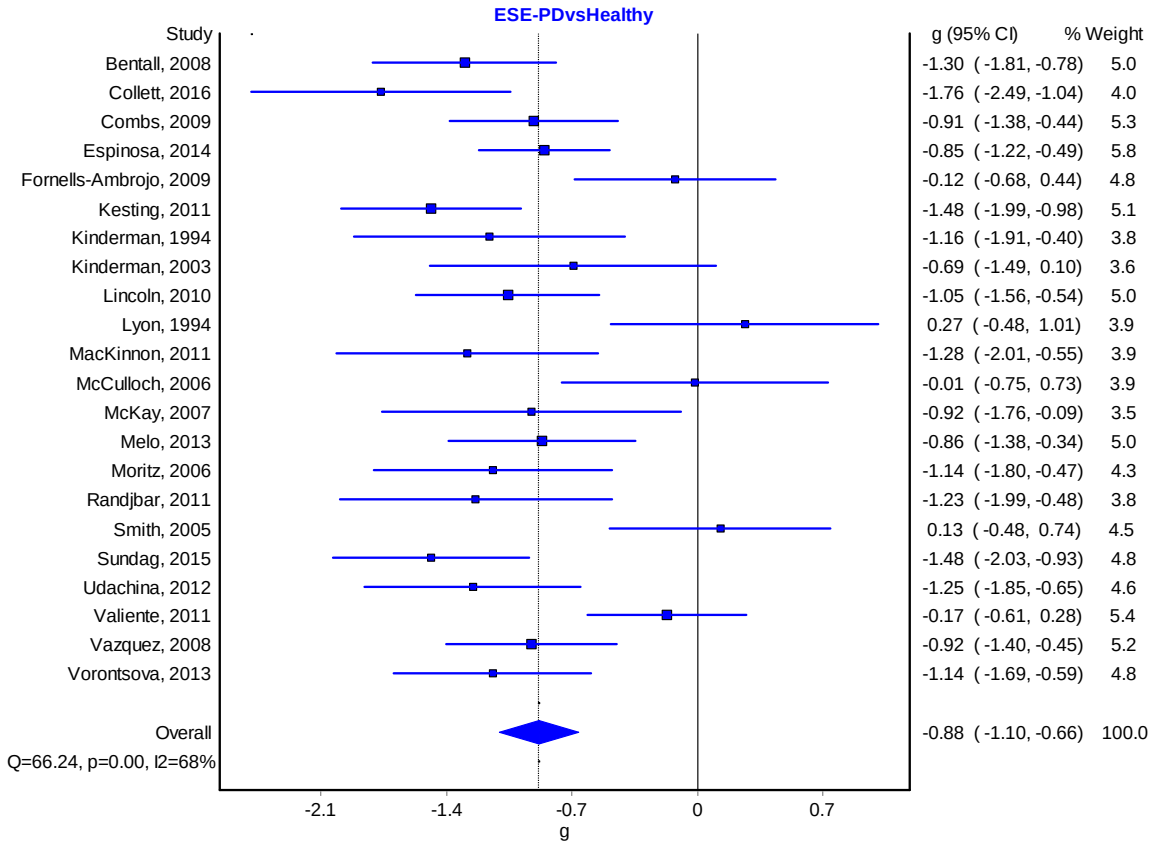


Fig. N.6. Difference in Explicit Self-Esteem (ESE): Psychosis With Persecutory Delusions (PDs) vs Depression (D)

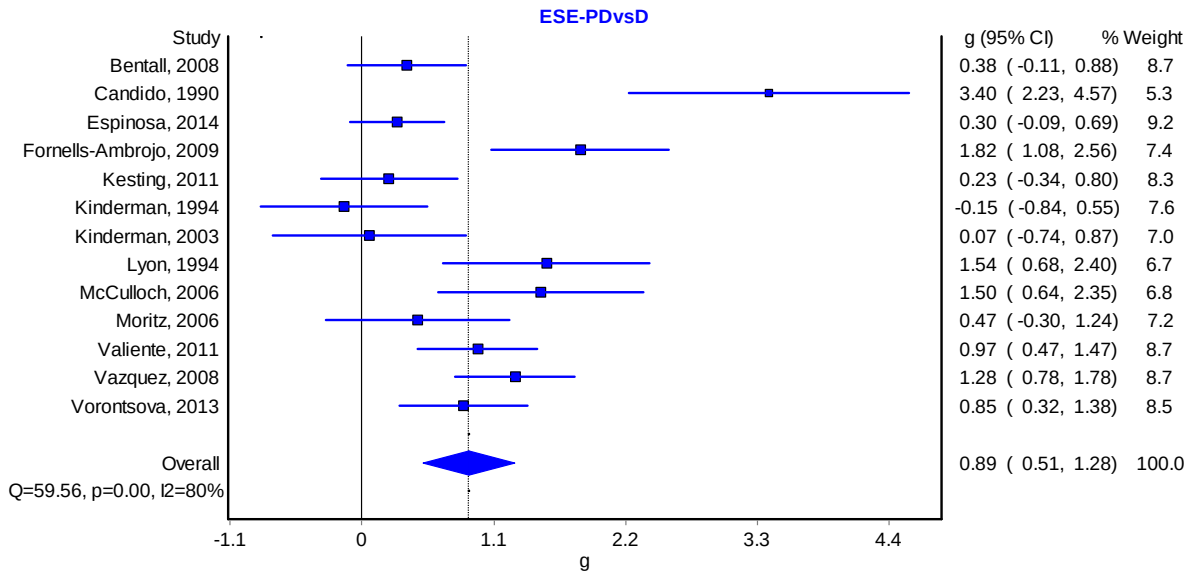


Fig. N.7. Difference in Explicit Self-Esteem (ESE): Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

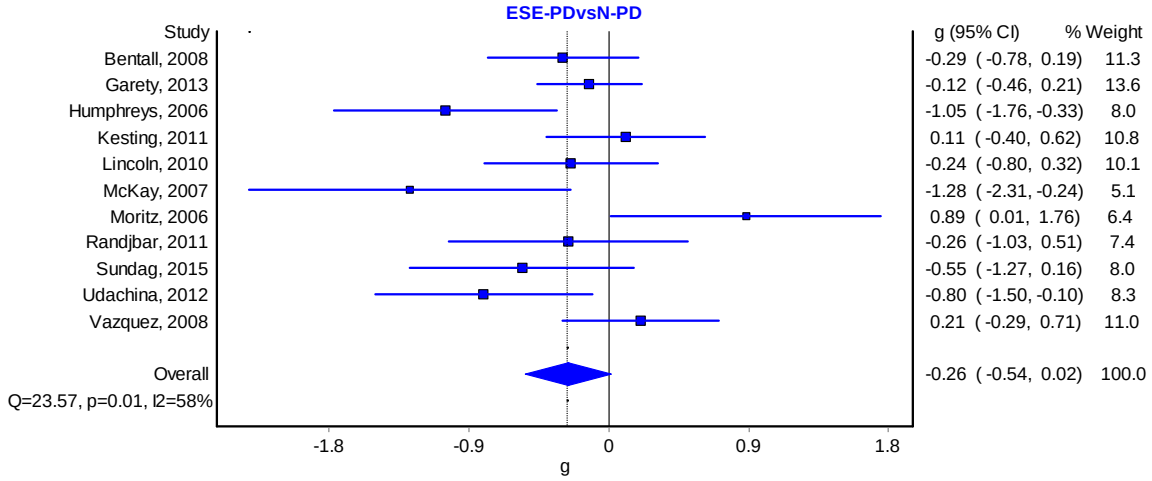


Fig. N.8. Correlation between Explicit Self-Esteem (ESE) and Paranoia Severity in People With Psychosis

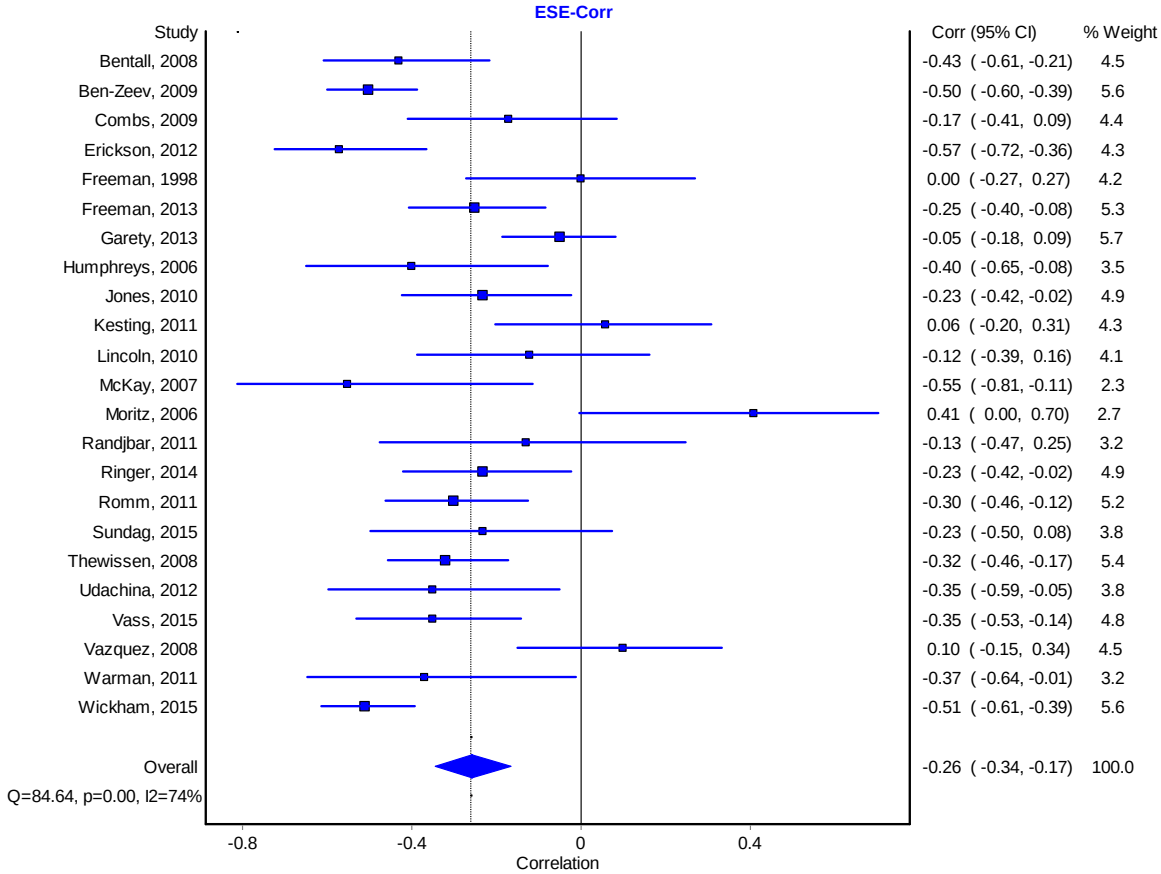


Fig. N.9. Difference in Implicit Self-Esteem (ISE): Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

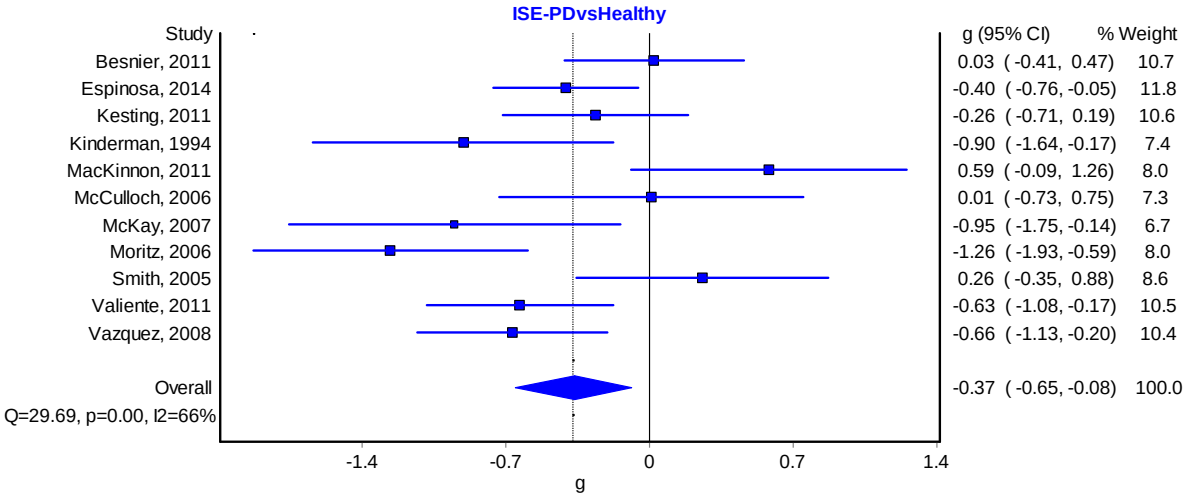


Fig. N.10. Difference in Implicit Self-Esteem (ISE): Psychosis With Persecutory Delusions (PDs) vs Depression (D)

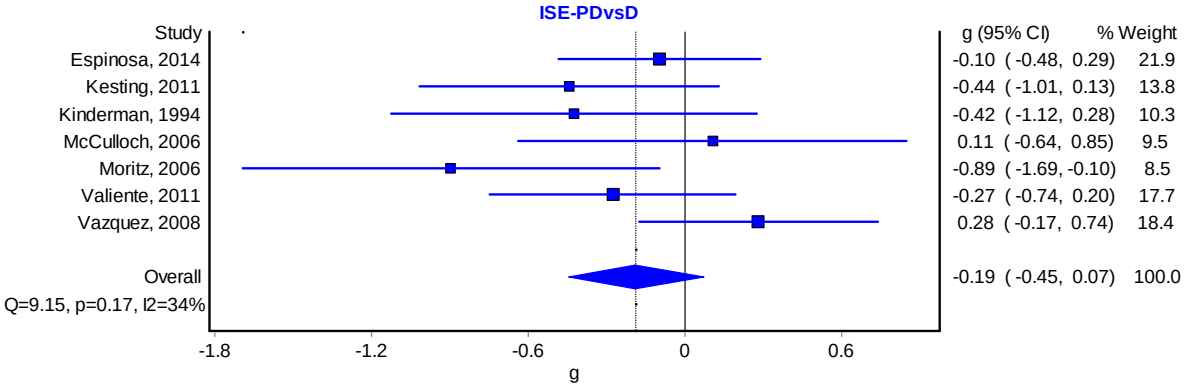


Fig. N.11. Difference in Implicit Self-Esteem (ISE): Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

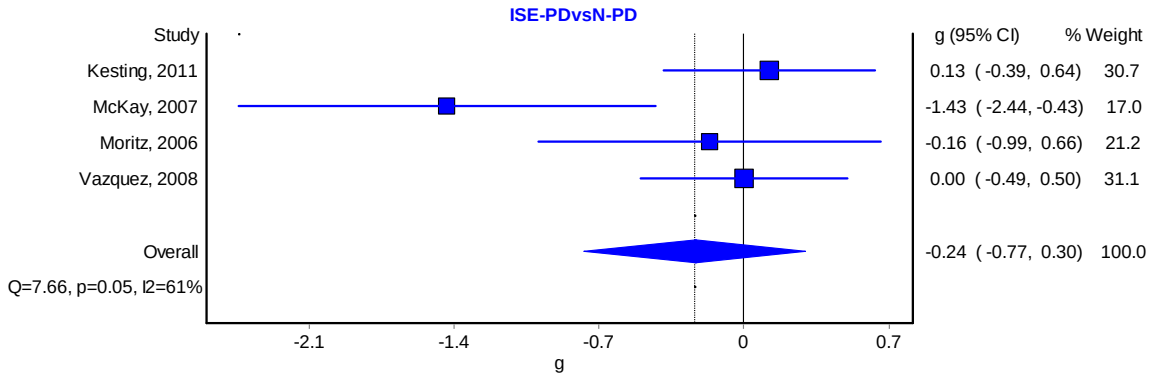


Fig. N.12. Correlation between Implicit Self-Esteem (ISE) and Paranoia Severity in People With Psychosis

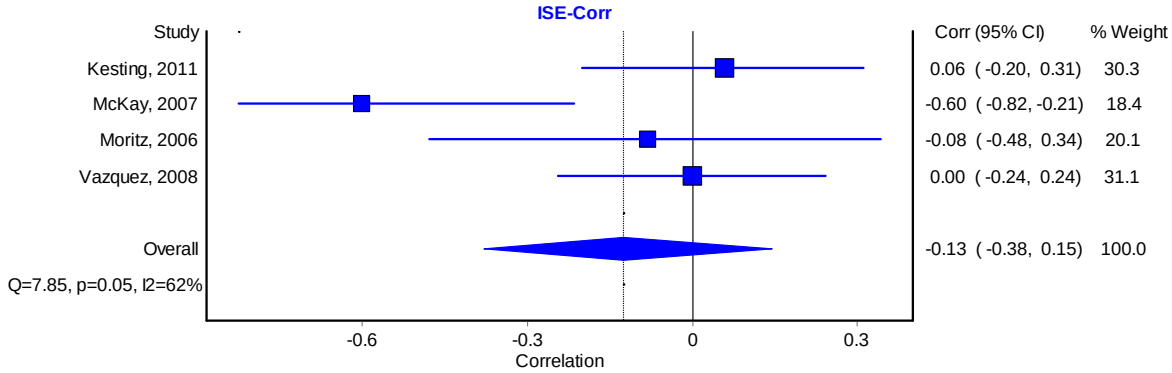
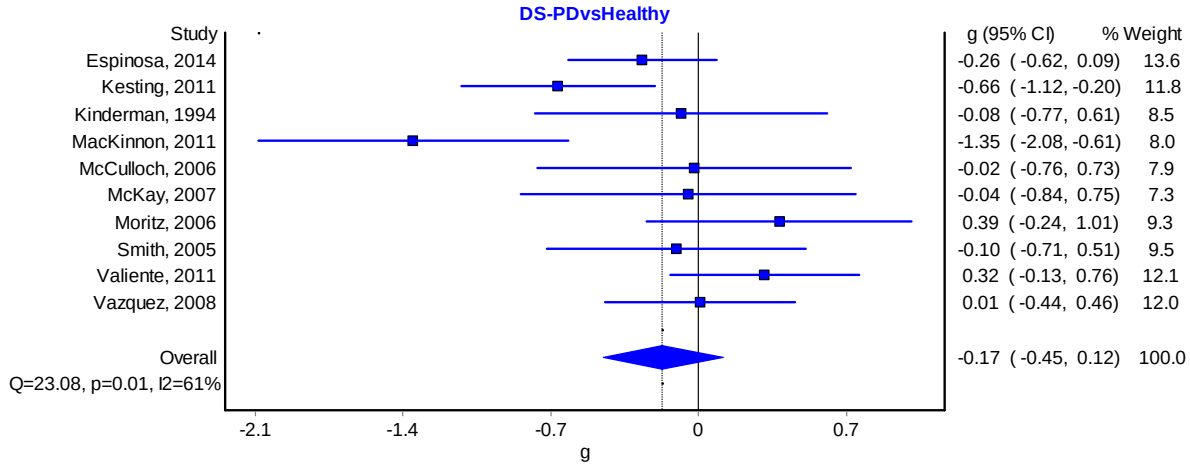
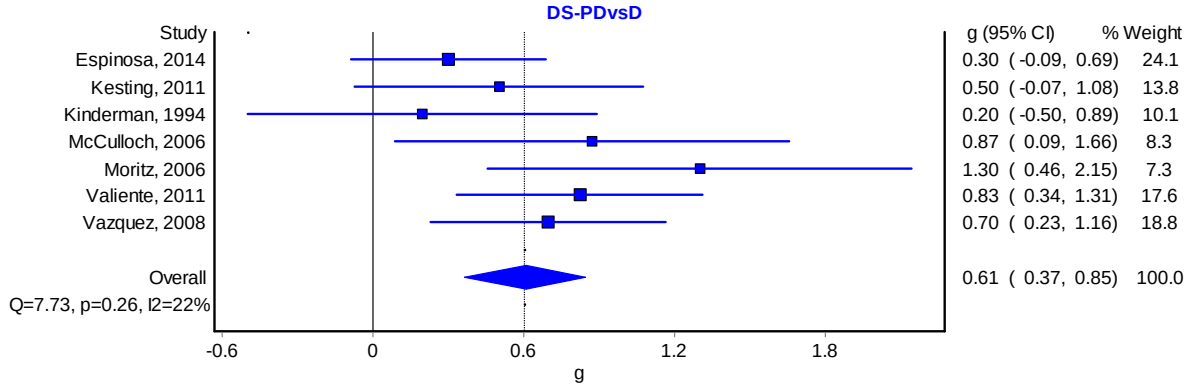


Fig. N.13. Difference in Discrepancy Scores (DS):[a] Psychosis With Persecutory Delusions (PDs) vs Healthy Controls



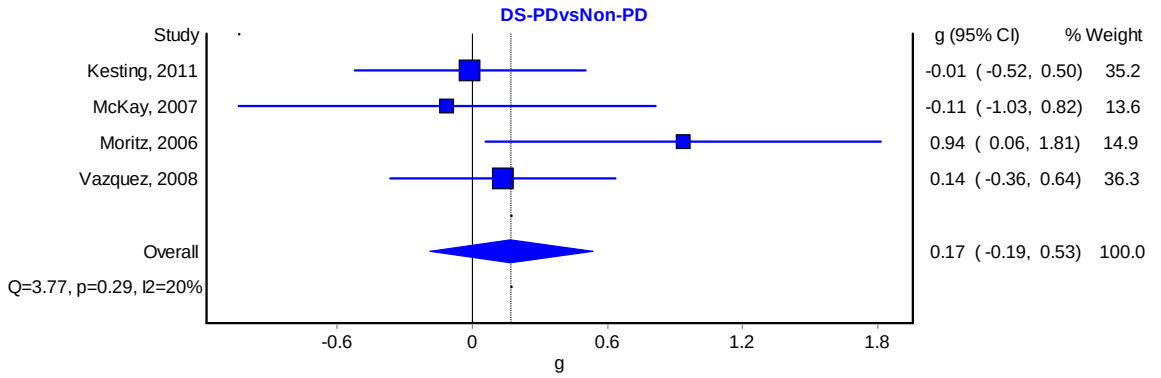
[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Fig. N.14. Difference in Discrepancy Scores (DS):[a] Psychosis With Persecutory Delusions (PDs) vs Depression (D)



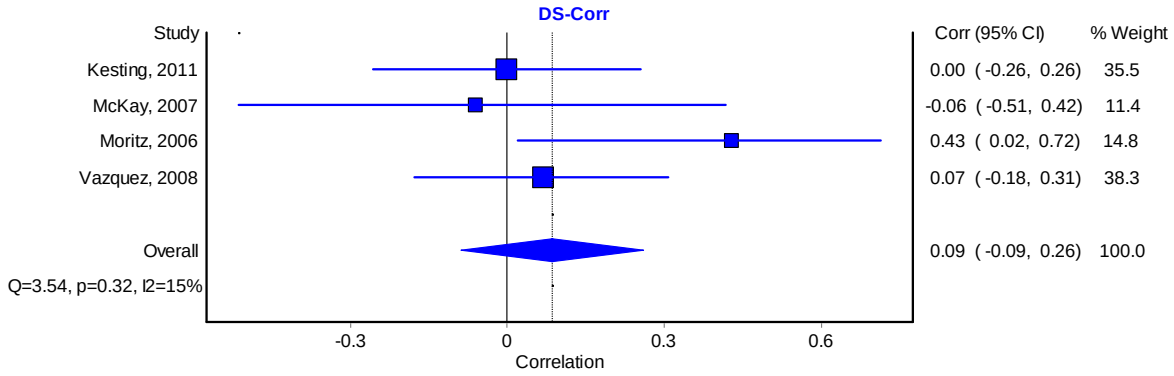
[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Fig. N.15. Difference in Discrepancy Scores (DS): Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)



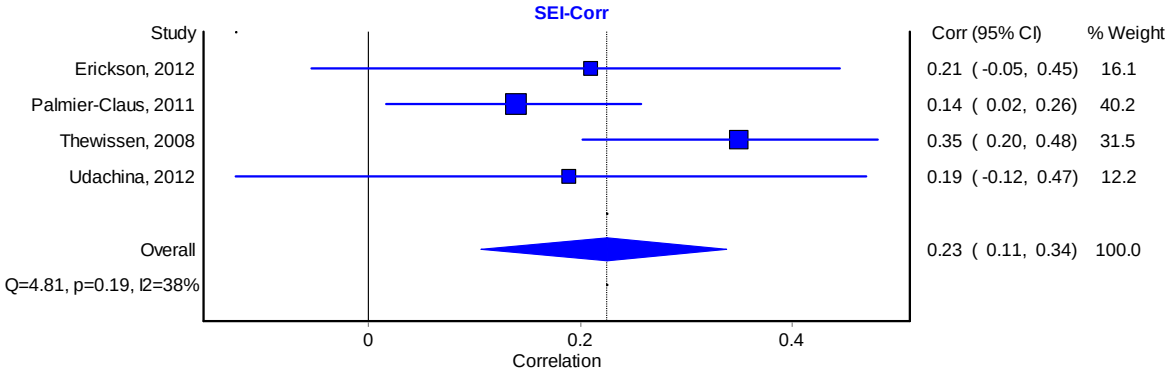
[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Fig. N.16. Correlation between Paranoia Severity and Discrepancy Scores (DS)[a] in People With Psychosis



[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

Fig. N.17. Correlation between Paranoia Severity and Self-Esteem Instability (SEI) in People With Psychosis



O. Funnel Plots of Meta-Analyses

Fig. O.1. Funnel Plot of Difference in Externalising Attributional Bias (EAB): Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

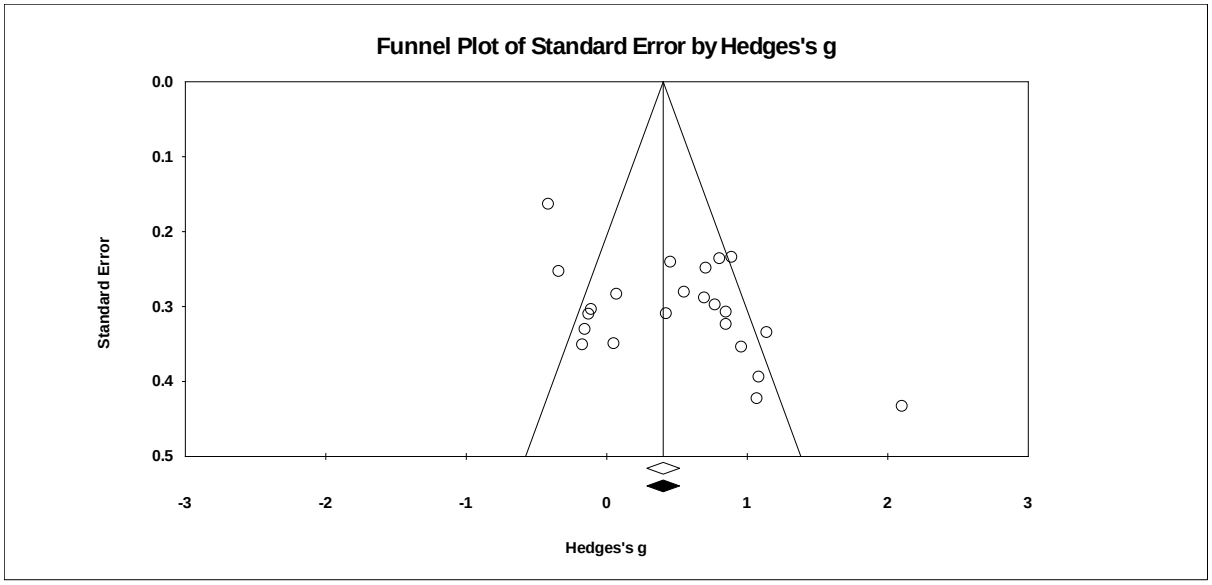


Fig. O.2. Funnel Plot of Difference in Externalising Attributional Bias (EAB): Psychosis With Persecutory Delusions (PDs) vs Depression (D)

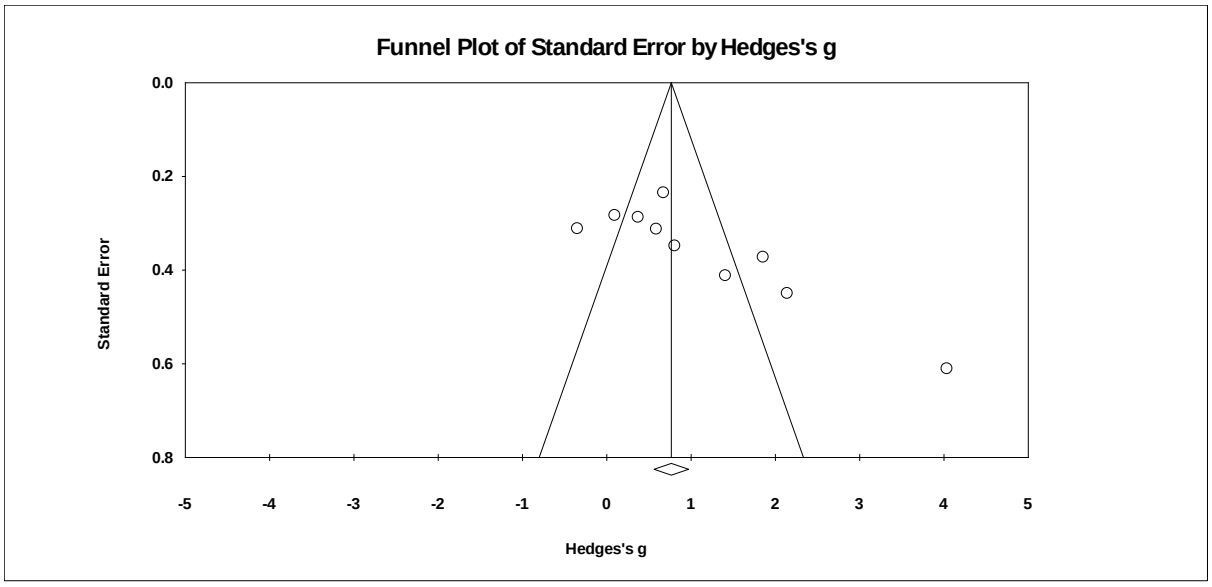


Fig. O.3. Funnel Plot of Difference in Externalising Attributional Bias (EAB): Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

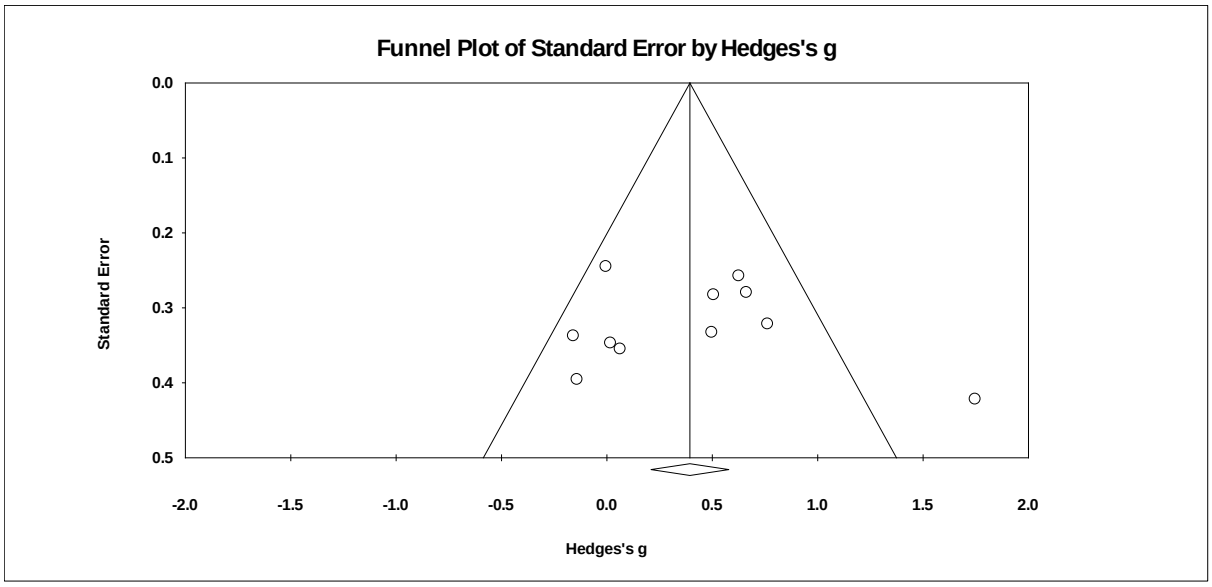


Fig. O.4. Funnel Plot of Correlation between Externalising Attributional Bias (EAB) and Paranoia Severity in People With Psychosis

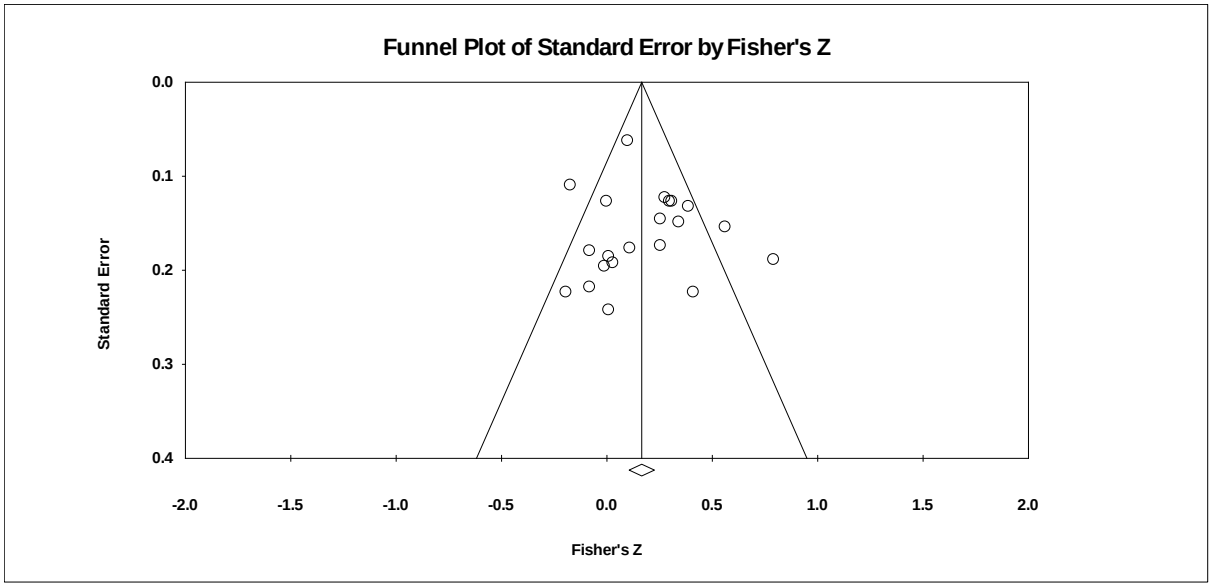


Fig. O.5. Funnel Plot of Difference in Explicit Self-Esteem (ESE): Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

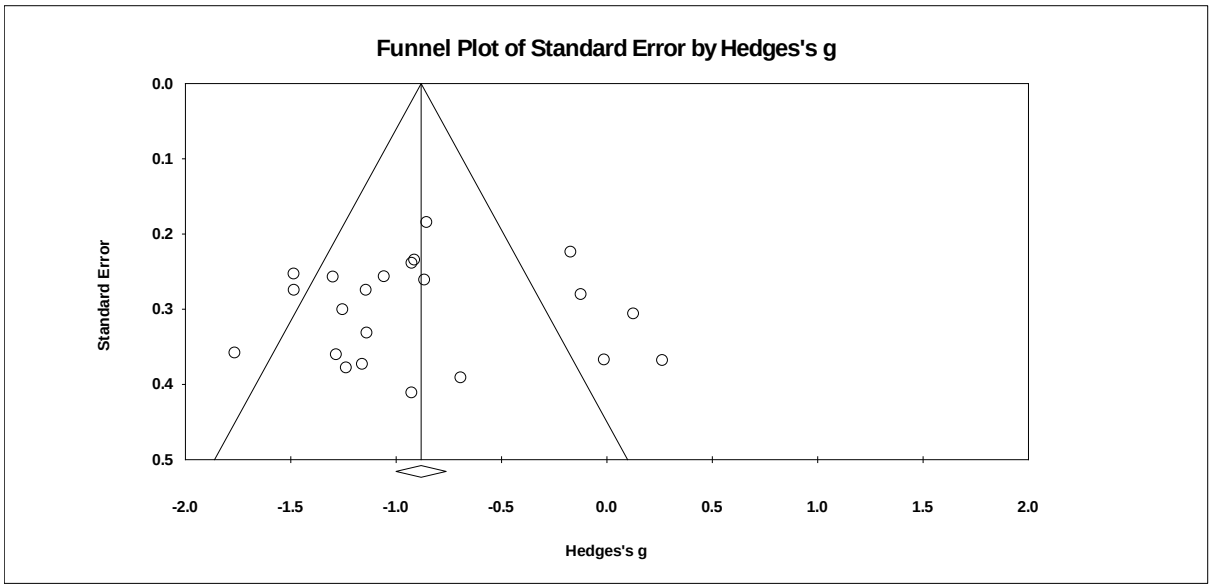


Fig. O.6. Funnel Plot of Difference in Explicit Self-Esteem (ESE): Psychosis With Persecutory Delusions (PDs) vs Depression (D)

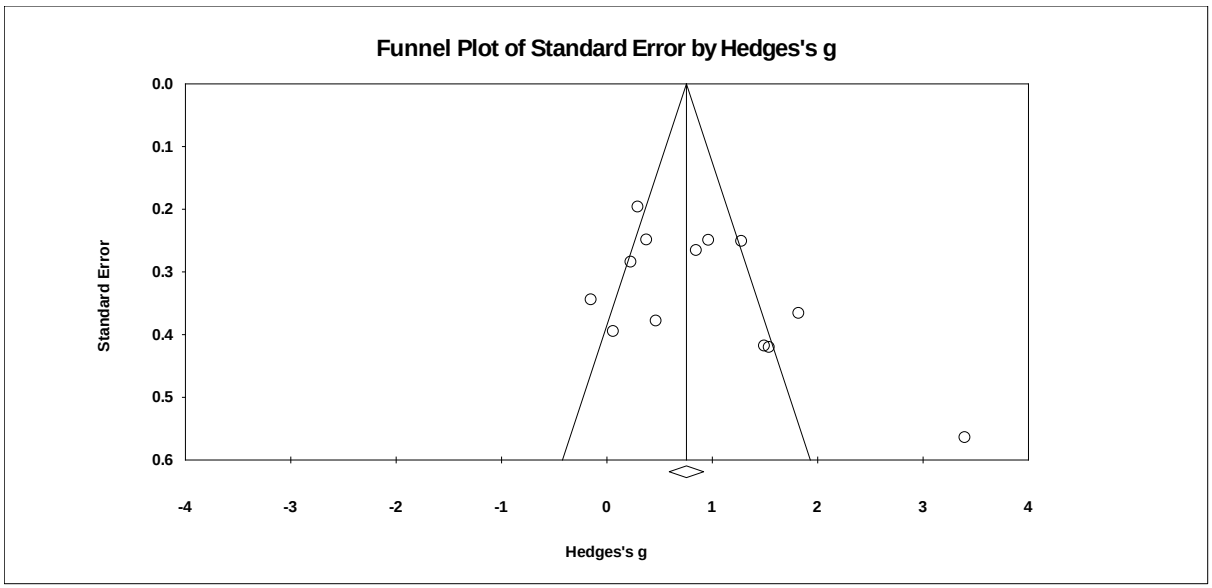


Fig. O.7. Funnel Plot of Difference in Explicit Self-Esteem (ESE): Psychosis With Persecutory Delusions (PDs) vs Psychosis Without PDs (and, if Specified, Grandiose Delusions; GDs)

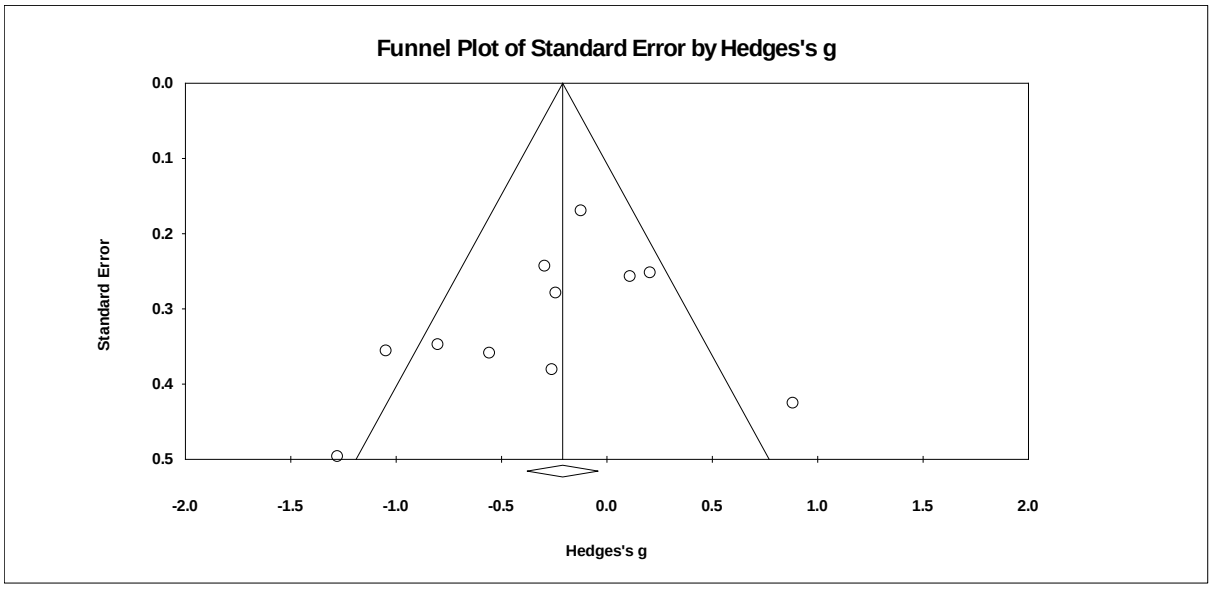


Fig. O.8. Funnel Plot of Correlation between Explicit Self-Esteem (ESE) and Paranoia Severity in People With Psychosis

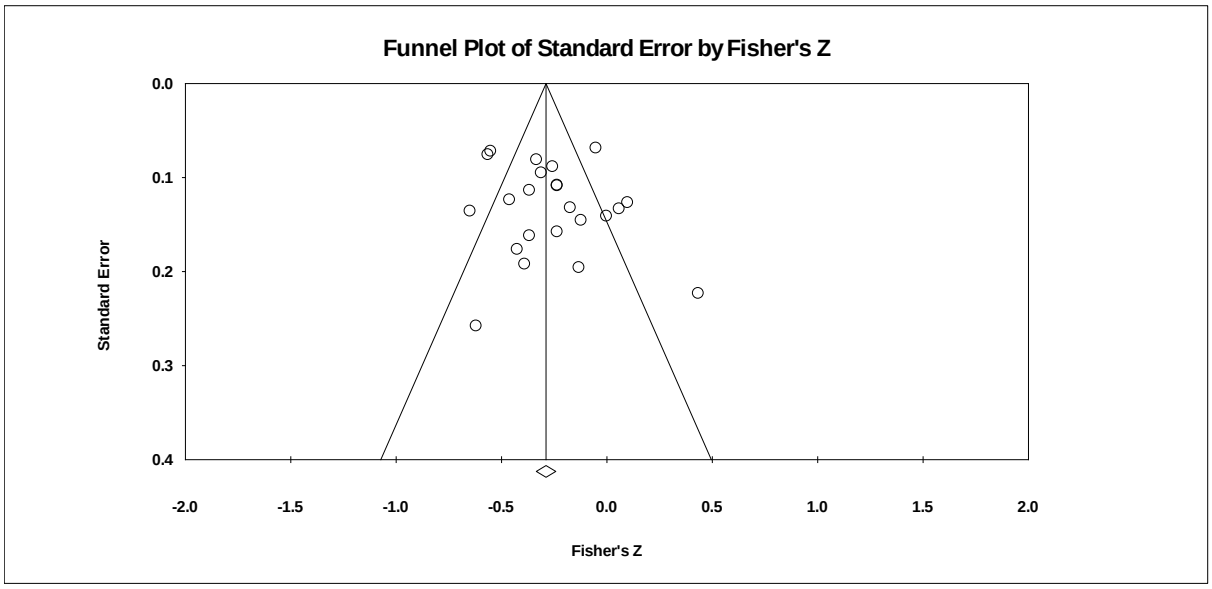


Fig. O.9. Funnel Plot of Difference in Implicit Self-Esteem (ISE): Psychosis With Persecutory Delusions (PDs) vs Healthy Controls

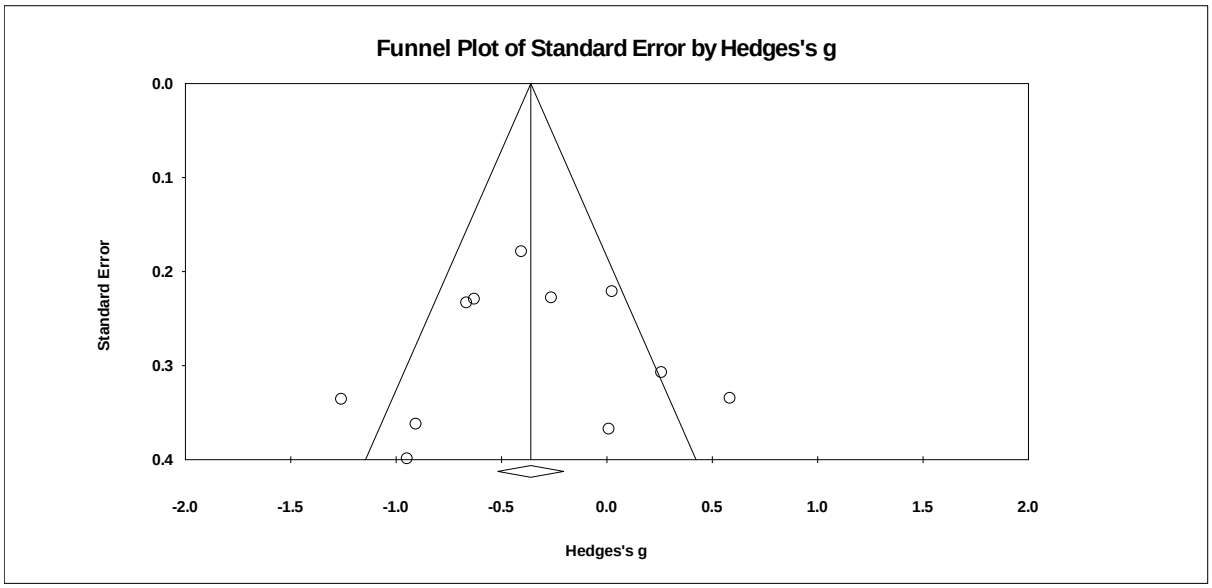
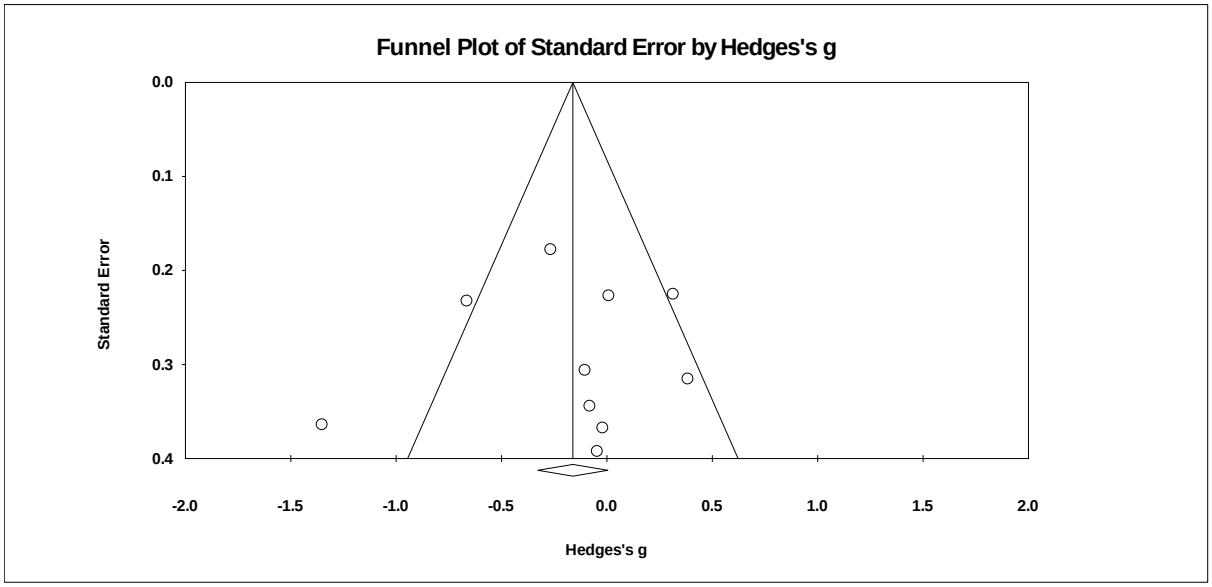


Fig. O.10. Funnel Plot of Difference in Discrepancy Scores (DS):[a] Psychosis With Persecutory Delusions (PDs) vs Healthy Controls



[a]Discrepancy scores = scores on discrepancies between implicit and explicit self-esteem.

P. PRISMA Checklist

Section/topic	#	Checklist item	Reported
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Yes
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.	Yes
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	Yes
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Yes
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.	Yes
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.	Yes
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.	Yes
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Yes
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).	Yes
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.	Yes
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Yes

Section/topic	#	Checklist item	Reported
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.	Yes
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	Yes
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	Yes

Section/topic	#	Checklist item	Reported
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	Yes
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	Yes
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.	Yes
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.	Yes
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	Yes
Results of individual studies	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.	Yes
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Yes
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Yes
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	Yes
DISCUSSION			

Section/topic	#	Checklist item	Reported
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).	Yes
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).	Yes
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	Yes
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	N/A

Q. Supplementary References *(References 29-31 and 42-102 refer to the studies included in the meta-analysis)*

1. Kinderman P, Bentall R. A new measure of causal locus: The Internal, Personal and Situational Attributions Questionnaire. Pers Individ Dif. 1996;20:261–4.
2. Peterson C, Semmel A, von Baeyer C, Abramson LY, Metalsky GI, Seligman MEP. The attributional Style Questionnaire. Cognit Ther Res [Internet]. 1982 Sep;6(3):287–99. Available from: http://link.springer.com/10.1007/BF01173577
3. Craig JS, Hatton C, Craig FB, Bentall RP. Persecutory beliefs, attributions and theory of mind: Comparison of patients with paranoid delusions, Asperger's syndrome and healthy controls. Schizophr Res. 2004;69(1):29–33.
4. Rosenberg M. Rosenberg self-esteem scale (RSE). Acceptance and commitment therapy. Measures package. 1965. 61 p.
5. O'Brien E, Epstein S. MSEI: the Multidimensional Self-Esteem Inventory professional manual. Lutz (Fla): Psychological Assessment Resources, Inc; 1998.
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