# STUDY CHARACTERISTICS

## Meta-Analysis (Continuous Outcome)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Auth | Year | Country | Measure | Type | N | DV | Cohen’s d | Direction | Diagnosis | Hofstede |
| Bassitt | 2007 | Brazil | SUMD | Clinician | 50 | Age | -0.10 | Younger age | Schizophrenia | 38 |
| Beland | 2017 | Canada | SAI-E | Clinician | 139 | Age | 0.01 | Older age | Schizophrenia | 80 |
| Bivona | 2008 | Italy | AQ-D | Discrepancy | 37 | Age | 0.28 | Older age | Brain injury | 76 |
| Chapman, Beschin | 2019 | UK | VATAmem | Discrepancy | 51 | Age | -0.02 | Younger age | Brain injury | 89 |
| Chesnel | 2018 | France | BICoQ | Discrepancy | 90 | Age | -0.63 | Younger age | Brain injury | 71 |
| Cines | 2015 | USA | ARS | Clinician | 103 | Age | -0.56 | Younger age | Alzheimer's | 91 |
| Ciurli | 2010 | Italy | PCRS | Discrepancy | 52 | Age | 0.02 | Older age | Brain injury | 76 |
| Clare, Whitaker | 2010 | UK | MARS | SRAny | 80 | Age | -0.13 | Younger age | Alzheimer's | 89 |
| Cuffel | 1996 | USA | AII | Clinician | 89 | Age | -0.16 | Younger age | Schizophrenia | 91 |
| Danki | 2007 | Turkey | SATCI | Clinician | 66 | Age | -0.18 | Younger age | Schizophrenia | 37 |
| DeFeis | 2019 | USA | Complaint interview | Discrepancy | 192 | Age | -0.19 | Younger age | Alzheimer’s | 91 |
| Depp | 2014 | USA | MDIS | SRClinical | 106 | Age | 0.02 | Older age | Bipolar disorder | 91 |
| Derouesne | 1999 | France | CDS | Discrepancy | 88 | Age | -0.45 | Younger age | Alzheimer's | 71 |
| Diez-Martin | 2014 | Spain | SUMD | Clinician | 161 | Age | -0.13 | Younger age | Schizophrenia | 51 |
| Donohoe, Donnell | 2004 | Ireland | SAI | Clinician | 38 | Age | -0.32 | Younger age | Schizophrenia | 70 |
| Dourado, Laks | 2019 | Brazil | ASPIDD | Discrepancy | 201 | Age | 0.30 | Younger age | Alzheimer’s | 38 |
| Dourado, Marinho | 2007 | Brazil | ASPIDD | Discrepancy | 52 | Age | -0.71 | Younger age | Alzheimer's | 38 |
| Elvish | 2010 | UK | OVIS | SRClinical | 94 | Age | 0.24 | Older age | OCD | 89 |
| Feher | 1991 | USA | MAC-S | Discrepancy | 38 | Age | -0.14 | Younger age | Alzheimer's | 91 |
| Fujimoto | 2017 | Japan | SRSMF | Discrepancy | 49 | Age | -0.44 | Younger age | Alzheimer's | 46 |
| Gerretsen, Chakravarty | 2013 | Canada | PANSS G12 | Clinician | 52 | Age | -0.24 | Younger age | Schizophrenia | 80 |
| Gerretsen, Chung | 2017 | Various | Ecog | SRAny | 191 | Age | -0.26 | Younger age | Alzheimer's |  |
| Gerretsen, Chung | 2017 | Various | Ecog | SRAny | 398 | Age | -0.20 | Younger age | MCI |  |
| Gerretsen, Chung | 2017 | Various | Ecog | SRAny | 101 | Age | 0.18 | Older age | MCI |  |
| Ghaemi, Stoll | 1995 | USA | ITAQ | Clinician | 28 | Age | 0.37 | Older age | Bipolar disorder | 91 |
| Gilleen | 2012 | UK | *Multiple* |  | 27 | Age | -0.58 | Younger age | Schizophrenia | 89 |
| Hamann | 2010 | Germany | BIS | SRClinical | 300 | Age | -0.07 | Younger age | Schizophrenia | 67 |
| Hannesdottir | 2007 | Iceland | BAS | Clinician | 92 | Age | -0.08 | Younger age | Alzheimer's | 60 |
| Kalbe | 2005 | Germany | Complaint interview | Discrepancy | 79 | Age | -0.52 | Younger age | MCI | 67 |
| Kalbe | 2005 | Germany | Complaint interview | Discrepancy | 82 | Age | -0.30 | Younger age | Alzheimer's | 67 |
| Kao | 2010 | Taiwan | SAIQ | SRClinical | 104 | Age | -0.40 | Younger age | Schizophrenia | 17 |
| Kashyap | 2012 | India | BABS | SRClinical | 150 | Age | -0.02 | Younger age | OCD | 48 |
| Kazui | 2006 | Japan | EMC | SRAny | 103 | Age | -0.39 | Younger age | Alzheimer's | 46 |
| Kelly | 2004 | Ireland | PANSS G12 | Clinician | 78 | Age | -0.41 | Younger age | Schizophrenia | 70 |
| Kleim | 2008 | Various | ITAQ | Clinician | 127 | Age | -0.10 | Younger age | Schizophrenia |  |
| Konstantakopoulos, Ploumpidis | 2013 | Greece | SAI-E | Clinician | 72 | Age | -0.30 | Younger age | Schizophrenia | 35 |
| Lacerda, Belfort | 2018 | Brazil | ASPIDD | Discrepancy | 54 | Age | -0.43 | Younger age | Alzheimer's | 38 |
| Lacerda, Belfort | 2018 | Brazil | ASPIDD | Discrepancy | 74 | Age | -0.30 | Younger age | Alzheimer's | 38 |
| Lacerda, Neto | 2017 | Brazil | ASPIDD | Discrepancy | 89 | Age | -0.28 | Younger age | Alzheimer's | 38 |
| Macpherson | 1996 | UK | SAI | Clinician | 64 | Age | -0.39 | Younger age | Schizophrenia | 89 |
| Martyr, Nelis | 2014 | UK | FAQ | Discrepancy | 100 | Age | -0.48 | Younger age | Mixed (AD+ Other Dementia) | 89 |
| Mayelle | 1996 | France | ASDA | SRClinical | 28 | Age | .10 | Older age | Alzheimer’s | 71 |
| McEvoy | 2006 | USA | ITAQ | Clinician | 251 | Age | 0.32 | Older age | Schizophrenia | 91 |
| Michel | 2013 | France | SUMD | Clinician | 531 | Age | -0.31 | Younger age | Schizophrenia | 71 |
| Mohamed | 2009 | USA | ITAQ | Clinician | 1432 | Age | 0.14 | Older age | Schizophrenia | 91 |
| Molina-Andreu | 2014 | Brazil | SUMD | Clinician | 64 | Age | -0.71 | Younger age | Schizophrenia | 38 |
| Orfei, Varsi | 2010 | Italy | AQ-D | Discrepancy | 38 | Age | -1.01 | Younger age | Alzheimer's | 76 |
| Ozzoude | 2019 | Canada | PANSS G12 | Clinician | 373 | Age | 0.12 | Older age | Schizophrenia | 80 |
| Schennach | 2012 | Germany | PANSS G12 | Clinician | 399 | Age | -0.03 | Younger age | Schizophrenia | 67 |
| Silva | 2016 | Austria | FAI | Discrepancy | 34 | Age | -0.24 | Younger age | Mixed (MCI + AD) | 55 |
| Sitman | 2012 | Israel | PANSS G12 | Clinician | 66 | Age | -0.68 | Younger age | Mixed (Scz + Bipolar) | 54 |
| Sousa | 2015 | Brazil | ASPIDD | Discrepancy | 69 | Age | -0.19 | Younger age | Alzheimer's | 38 |
| Spalletta | 2012 | Italy | AQ-D | Discrepancy | 103 | Age | -0.60 | Younger age | Alzheimer's | 76 |
| Spalletta | 2012 | Italy | AQ-D | Discrepancy | 54 | Age | -0.16 | Younger age | MCI | 76 |
| Spalletta | 2012 | Italy | AQ-D | Discrepancy | 52 | Age | -0.12 | Younger age | MCI | 76 |
| Szepietowska | 2019 | Poland | DEX | Discrepancy | 41 | Age | -0.50 | Younger age | Mixed (Dementia) |  |
| Tolin | 2010 | USA | Y-BOCS | SRClinical | 558 | Age | -0.37 | Younger age | OCD | 91 |
| Tumkaya | 2018 | Turkey | SAI | Clinician | 48 | Age | -0.08 | Younger age | Schizophrenia | 37 |
| Turksoy | 2002 | Turkey | Unspecified Clinical interview |  | 94 | Age | -0.32 | Younger age | OCD | 37 |
| Vallat-Azouvi | 2017 | France | BICoQ | Discrepancy | 286 | Age | -0.14 | Younger age | Brain injury | 71 |
| Vasterling, Seltzer, Carpenter | 1997 | USA | PCRS | Discrepancy | 55 | Age | -0.75 | Younger age | Alzheimer’s | 91 |
| Vasterling, Seltzer, Carpenter | 1997 | USA | PCRS | Discrepancy | 55 | Education | 0.65 | Better educated | Alzheimer’s | 91 |
| Vasterling, Seltzer, Foss | 1995 | USA | EMQ | Discrepancy | 43 | Age | -0.26 | Younger age | Alzheimer's | 91 |
| Verhey | 1993 | Netherlands | Unspecified Clinical interview |  | 170 | Age | -0.70 | Younger age |  | 80 |
| Verhulsdonk | 2013 | Germany | AQ-D | Discrepancy | 47 | Age | 0.10 | Older age | Alzheimer's | 67 |
| Weiler | 2000 | USA | ITAQ | Clinician | 40 | Age | -0.75 | Younger age | Bipolar disorder | 91 |
| Xiang | 2012 | China | ITAQ | Clinician | 139 | Age | -0.02 | Younger age | Schizophrenia | 20 |
| Yen, Cheng | 2008 | Taiwan | SAI-E | Clinician | 96 | Age | -0.07 | Younger age | Bipolar disorder | 17 |
| Bassitt | 2007 | Brazil | SUMD | Clinician | 50 | Education | -0.02 | Less educated | Schizophrenia | 38 |
| Bladzinski | 2019 | Poland | MTAF | SRClinical | 51 | Education | -0.47 | Less educated | Schizophrenia | 60 |
| Cernovsky | 2004 | Canada | Unspecified Clinical interview | Clinician | 111 | Education | 0.70 | Better educated | Schizophrenia | 80 |
| Chapman, Beschin | 2019 | UK | VATAmem | Discrepancy | 51 | Education | -0.06 | Less educated | Brain injury | 89 |
| Danki | 2007 | Turkey | SATCI | Clinician | 66 | Education | 0.66 | Better educated | Schizophrenia | 37 |
| DeFeis | 2019 | USA | Complaint interview | Discrepancy | 192 | Education | -0.05 | Less educated | Alzheimer’s | 91 |
| Depp | 2014 | USA | MDIS | SRClinical | 106 | Education | 0.30 | Better educated | Bipolar disorder | 91 |
| Diez-Martin | 2014 | Spain | SUMD | Clinician | 161 | Education | 0.42 | Better educated | Schizophrenia | 51 |
| Dourado, Laks | 2019 | Brazil | ASPIDD | Discrepancy | 201 | Education | 0.26 | Less educated | Alzheimer’s | 38 |
| Elvish | 2010 | UK | OVIS | SRClinical | 94 | Education | 0.33 | Better educated | OCD | 89 |
| Feher | 1991 | USA | MAC-S | Discrepancy | 38 | Education | 0.39 | Better educated | Alzheimer's | 91 |
| Fujimoto | 2017 | Japan | SRSMF | Discrepancy | 49 | Education | 0.34 | Better educated | Alzheimer's | 46 |
| Gerretsen, Chung | 2017 | Various | Ecog | SRAny | 101 | Education | -0.22 | Less educated | MCI |  |
| Gerretsen, Chung | 2017 | Various | Ecog | SRAny | 398 | Education | 0.14 | Better educated | MCI |  |
| Gerretsen, Chung | 2017 | Various | Ecog | SRAny | 191 | Education | 0.49 | Better educated | Alzheimer's |  |
| Gilleen | 2012 | UK | *Multiple* |  | 27 | Education | 0.30 | Better educated | Schizophrenia | 89 |
| Hamann | 2010 | Germany | BIS | SRClinical | 300 | Education | 0.01 | Better educated | Schizophrenia | 67 |
| Kalbe | 2005 | Germany | Complaint interview | Discrepancy | 79 | Education | 0.20 | Better educated | MCI | 67 |
| Kalbe | 2005 | Germany | Complaint interview | Discrepancy | 82 | Education | -0.26 | Better educated | Alzheimer's | 67 |
| Kao | 2010 | Taiwan | SAIQ | SRClinical | 104 | Education | 0.04 | Better educated | Schizophrenia | 17 |
| Kashyap | 2012 | India | BABS | SRClinical | 147 | Education | -0.03 | Less educated | OCD | 48 |
| Kazui | 2006 | Japan | EMC | SRAny | 103 | Education | 0.22 | Better educated | Alzheimer's | 46 |
| Konstantakopoulos, Ploumpidis | 2013 | Greece | SAI-E | Clinician | 72 | Education | 0.43 | Better educated | Schizophrenia | 35 |
| Lacerda, Belfort | 2018 | Brazil | ASPIDD | Discrepancy | 74 | Education | -0.30 | Less educated | Alzheimer's | 38 |
| Lacerda, Belfort | 2018 | Brazil | ASPIDD | Discrepancy | 54 | Education | 0.62 | Better educated | Alzheimer's | 38 |
| Lacerda, Neto | 2017 | Brazil | ASPIDD | Discrepancy | 89 | Education | 0.14 | Better educated | Alzheimer's | 38 |
| Macpherson | 1996 | UK | SAI | Clinician | 64 | Education | 0.75 | Better educated | Schizophrenia | 89 |
| Mohamed | 2009 | USA | ITAQ | Clinician | 1432 | Education | 0.08 | Better educated | Schizophrenia | 91 |
| Ozzoude | 2019 | Canada | PANSS G12 | Clinician | 373 | Education | 0.22 | Better educated | Schizophrenia | 80 |
| Rossell | 2003 | UK | SAI-E | Clinician | 78 | Education | 0.63 | Better educated | Schizophrenia | 89 |
| Silva | 2016 | Austria | FAI | Discrepancy | 34 | Education | -0.16 | Less educated | Mixed (MCI + AD) | 55 |
| Sousa | 2015 | Brazil | ASPIDD | Discrepancy | 69 | Education | 0.14 | Better educated | Alzheimer's | 38 |
| Spalletta | 2012 | Italy | AQ-D | Discrepancy | 54 | Education | -0.51 | Less educated | MCI | 76 |
| Spalletta | 2012 | Italy | AQ-D | Discrepancy | 103 | Education | -0.05 | Less educated | Alzheimer's | 76 |
| Spalletta | 2012 | Italy | AQ-D | Discrepancy | 52 | Education | 0.01 | Better educated | MCI | 76 |
| Tumkaya | 2018 | Turkey | SAI | Clinician | 48 | Education | -.40 | Less educated | Schizophrenia | 37 |
| Vallat-Azouvi | 2017 | France | BICoQ | Discrepancy | 286 | Education | 0.16 | Better educated | Brain injury | 71 |
| Vasterling, Seltzer, Foss | 1995 | USA | EMQ | Discrepancy | 43 | Education | 0.37 | Better educated | Alzheimer's | 91 |
| Verhulsdonk | 2013 | Germany | AQ-D | Discrepancy | 47 | Education | 0.61 | Better educated | Alzheimer's | 67 |
| Xiang | 2012 | China | ITAQ | Clinician | 139 | Education | -0.06 | Less educated | Schizophrenia | 20 |
| Yeh | 2014 | Taiwan | DDS | Discrepancy | 36 | Education | 0.43 | Better educated | Alzheimer's | 17 |
| Yen, Cheng | 2008 | Taiwan | SAI-E | Clinician | 96 | Education | 0.42 | Better educated | Bipolar disorder | 17 |
| Bellino | 2005 | Italy | OVIS | SRClinical | 74 | Employment | 0.62 | Employed | OCD | 76 |
| Bladzinski | 2019 | Poland | *Multiple* |  | 51 | Employment | 0.71 | Employed | Schizophrenia | 60 |
| Elvish | 2010 | UK | OVIS | SRClinical | 94 | Employment | 0.28 | Employed | OCD | 89 |
| Ghaemi, Stoll | 1995 | USA | ITAQ | Clinician | 28 | Employment | 0.04 | Employed | Bipolar disorder | 91 |
| Othman, Huri | 2017 | Malaysia | ITAQ | Clinician | 42 | Employment | -0.25 | Unemployed | Schizophrenia | 46 |
| Schennach | 2012 | Germany | PANSS G12 | Clinician | 399 | Employment | 0.15 | Employed | Schizophrenia | 67 |
| Xiang | 2012 | China | ITAQ | Clinician | 139 | Employment | 0.12 | Employed | Schizophrenia | 20 |
| Elvish | 2010 | UK | OVIS | SRClinical | 94 | Ethnicity | 0.23 | White British | OCD | 89 |
| McEvoy | 2006 | USA | ITAQ | Clinician | 226 | Ethnicity | 0.27 | White ethnicity (vs. black) | Schizophrenia | 91 |
| Rathod | 2005 | UK | SAI | Clinician | 42 | Ethnicity | 0.20 | White (vs. African-Caribbean) | Schizophrenia | 89 |
| Bellino | 2005 | Italy | OVIS | SRClinical | 74 | Marital Status | 0.22 | Married | OCD | 76 |
| Depp | 2014 | USA | MDIS | SRClinical | 106 | Marital Status | -0.68 | Unmarried | Bipolar disorder | 91 |
| Elvish | 2010 | UK | OVIS | SRClinical | 94 | Marital Status | 0.03 | Married/Partnership | OCD | 89 |
| Garg | 2018 | India | IP | SRClinical | 53 | Marital Status | -0.48 | Single | Schizophrenia | 48 |
| Karow | 2008 | Germany | SUMD | Clinician | 59 | Marital Status | 0.68 | Married/Relationship | Schizophrenia | 67 |
| Kelly | 2004 | Ireland | PANSS G12 | Clinician | 78 | Marital Status | 0.61 | Married | Schizophrenia | 70 |
| Mohamed | 2009 | USA | ITAQ | Clinician | 1432 | Marital Status | 0.17 | Married/Partnership | Schizophrenia | 91 |
| Othman, Huri | 2017 | Malaysia | ITAQ | Clinician | 57 | Marital Status | 0.27 | Married | Schizophrenia | 26 |
| Rathod | 2005 | UK | SAI | Clinician | 358 | Marital Status | 0.12 | Married | Schizophrenia | 89 |
| Schennach | 2012 | Germany | PANSS G12 | Clinician | 399 | Marital Status | -0.09 | Unmarried | Schizophrenia | 67 |
| Shimshoni | 2011 | Israel | DSM-IV Scale |  | 60 | Marital Status | 0.79 | Married/Relationship | OCD | 54 |
| Xiang | 2012 | China | ITAQ | Clinician | 139 | Marital Status | 0.28 | Married | Schizophrenia | 20 |
| Ampalam | 2012 | India | SAI | Clinician | 60 | Sex | 0.12 | Males | Schizophrenia | 48 |
| Bassitt | 2007 | Brazil | SUMD | Clinician | 50 | Sex | -0.05 | Females | Schizophrenia | 38 |
| Bellino | 2005 | Italy | OVIS | SRClinical | 74 | Sex | 0.12 | Males | OCD | 76 |
| Chapman, Cosentino | 2020 | UK | VATAmem | Discrepancy | 35 | Sex | -0.67 | Females | Stroke | 89 |
| Chesnel | 2018 | France | BICoQ | Discrepancy | 90 | Sex | -0.40 | Females | Brain injury | 71 |
| Cobo | 2020 | Spain | SUMD | Clinician | 516 | Sex | 0.14 | Males | Schizophrenia | 51 |
| Cuffel | 1996 | USA | AII | Clinician | 89 | Sex | 0.63 | Males | Schizophrenia | 91 |
| Derouesne | 1999 | France | CDS | Discrepancy | 88 | Sex | -0.17 | Females | Alzheimer's | 71 |
| Elvish | 2010 | UK | OVIS | SRClinical | 94 | Sex | -0.28 | Married/Partnership | OCD | 89 |
| Fujimoto | 2017 | Japan | SRSMF | Discrepancy | 49 | Sex | 0.08 | Males | Alzheimer's | 46 |
| Garg | 2018 | India | IP | SRClinical | 53 | Sex | 0.34 | Males | Schizophrenia | 48 |
| Gerretsen, Chakravarty | 2013 | Canada | PANSS G12 | Clinician | 52 | Sex | 0.30 | Males | Schizophrenia | 80 |
| Ghaemi, Stoll | 1995 | USA | ITAQ | Clinician | 28 | Sex | -0.35 | Females | Bipolar disorder | 91 |
| Hamann | 2010 | Germany | BIS | SRClinical | 300 | Sex | -0.02 | Females | Schizophrenia | 67 |
| Jeong | 2017 | South Korea | PANSS G12 | Clinician | 41 | Sex | -0.57 | Females | Schizophrenia | 18 |
| Kao | 2010 | Taiwan | SAIQ | SRClinical | 104 | Sex | -0.30 | Females | Schizophrenia | 17 |
| Kelly | 2004 | Ireland | PANSS G12 | Clinician | 78 | Sex | -0.25 | Females | Schizophrenia | 70 |
| McEvoy | 2006 | USA | ITAQ | Clinician | 251 | Sex | -0.34 | Females | Schizophrenia | 91 |
| Michel | 2013 | France | SUMD | Clinician | 531 | Sex | -0.07 | Females | Schizophrenia | 71 |
| Othman, Huri | 2017 | Malaysia | ITAQ | Clinician | 70 | Sex | 0.39 | Males | Schizophrenia | 26 |
| Ozzoude | 2019 | Canada | PANSS G12 | Clinician | 373 | Sex | 0.20 | Males | Schizophrenia | 80 |
| Prus | 2012 | Germany | SUMD | Clinician | 111 | Sex | -0.56 | Females | Schizophrenia | 67 |
| Rathod | 2005 | UK | SAI | Clinician | 422 | Sex | 0.04 | Males | Schizophrenia | 89 |
| Schennach | 2012 | Germany | PANSS G12 | Clinician | 399 | Sex | 0.05 | Males | Schizophrenia | 67 |
| Shimshoni | 2011 | Israel | DSM-IV Scale | Clinician | 60 | Sex | -0.67 | Females | OCD | 54 |
| Xiang | 2012 | China | ITAQ | Clinician | 139 | Sex | 0.14 | Males | Schizophrenia | 20 |
| Yen, Cheng | 2008 | Taiwan | SAI-E | Clinician | 96 | Sex | 0.20 | Males | Bipolar disorder | 17 |

**Table A.1.** Study characteristics of all continuous effect sizes included in the meta-analysis

## Meta-Analysis (Dichotomous Outcome)

| Auth | Year | Country | Measure | Type | N | DV | Cohen’s d | Variance | Odds | Hofstede | Direction | Diagnosis |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Amanzio | 2011 | Italy | AQ-D | Discrepancy | 29 | Age | -0.35 | 0.38 | -0.63 | 76 | Younger age | Alzheimer's |
| Ayesa-Arriola | 2014 | Spain | SUMD | Clinician | 224 | Age | -0.19 | 0.05 | -0.35 | 51 | Younger age | Schizophrenia |
| Chapman, Colvin | 2018 | USA | CRA | Clinician | 35 | Age | -0.93 | 0.33 | -1.68 | 91 | Younger age | Alzheimer's |
| Cherian | 2012 | India | Y-BOCS | SRClinical | 545 | Age | 0.12 | 0.06 | 0.23 | 48 | Older age | OCD |
| Conde-Sala | 2013 | Spain | AQ-D | Discrepancy | 164 | Age | -0.63 | 0.07 | -1.15 | 51 | Younger age | Alzheimer's |
| Contador | 2020 | Spain | FAQ | Discrepancy | 325 | Age | 0.07 | 0.04 | 0.13 | 51 | Older age | Mixed (AD + Other Dementia) |
| Cosentino | 2007 | USA | ARS | Clinician | 24 | Age | -0.05 | 0.48 | -0.10 | 91 | Younger age | Alzheimer's |
| Cosentino | 2011 | USA | ARS | Clinician | 42 | Age | -0.26 | 0.26 | -0.46 | 91 | Younger age | Alzheimer's |
| De Berardis | 2005 | Italy | Y-BOCS | SRClinical | 112 | Age | 0.28 | 0.12 | 0.51 | 76 | Older age | OCD |
| De Berardis | 2008 | Italy | Y-BOCS | SRClinical | 75 | Age | 0.02 | 0.17 | 0.05 | 76 | Older age | OCD |
| Dias, Brissos, Carita | 2007 | Portugal | SUMD | Clinician | 50 | Age | -0.54 | 0.23 | -0.98 | 27 | Younger age | Bipolar disorder |
| Dias, Brissos, Frey | 2008 | Portugal | SUMD | Clinician | 70 | Age | -0.40 | 0.17 | -0.72 | 27 | Younger age | Bipolar disorder |
| Emami | 2016 | Canada | SAI-E | Clinician | 66 | Age | -0.25 | 0.17 | -0.46 | 80 | Younger age | Schizophrenia |
| Faget | 2012 | France | SUMD | Clinician | 27 | Age | 0.17 | 0.40 | 0.31 | 71 | Older age | Schizophrenia |
| Fu | 2017 | China | ITAQ | Clinician | 278 | Age | -0.42 | 0.06 | -0.76 | 20 | Younger age | Mixed (Psychiatric) |
| Gambina | 2014 | Italy | AQ-D | Discrepancy | 79 | Age | -0.71 | 0.16 | -1.29 | 76 | Younger age | Alzheimer's |
| Hanyu | 2008 | Japan | EMC | SRAny | 38 | Age | -0.13 | 0.29 | -0.23 | 46 | Younger age | Alzheimer's |
| Himle | 2006 | USA | Y-BOCS | SRClinical | 69 | Age | -0.10 | 0.20 | -0.18 | 91 | Younger age | OCD |
| Jacob | 2014 | USA | Y-BOCS | SRClinical | 130 | Age | -0.26 | 0.14 | -0.47 | 91 | Younger age | OCD |
| Karadag | 2011 | Turkey | OVIS | SRClinical | 64 | Age | -0.20 | 0.18 | -0.36 | 37 | Younger age | OCD |
| Kishore | 2004 | India | BABS | SRClinical | 100 | Age | 0.19 | 0.15 | 0.34 | 48 | Older age | OCD |
| Kortte | 2015 | USA | BAS | Clinician | 35 | Age | -2.63 | 0.54 | -4.76 | 91 | Younger age | Stroke |
| Lamar | 2002 | USA | AQ-D | Discrepancy | 32 | Age | -0.42 | 0.35 | -0.76 | 91 | Younger age | Mixed (AD + Other Dementia) |
| Loebel | 1990 | USA | Unspecified Clinical interview | *NA* | 32 | Age | -0.43 | 0.34 | -0.79 | 91 | Younger age | Alzheimer's |
| Lopez, Becker | 1994 | USA | Unspecified Clinical interview | *NA* | 177 | Age | -0.36 | 0.08 | -0.65 | 91 | Younger age | Alzheimer's |
| Lysaker, Bryson | 1998 | USA | SUMD | Clinician | 101 | Age | -0.27 | 0.11 | -0.50 | 91 | Younger age | Schizophrenia |
| Maeshima | 1997 | Japan | Unspecified Clinical interview | *NA* | 50 | Age | 0.75 | 0.30 | 1.36 | 46 | Older age | Brain injury |
| Moro | 2016 | Various | BAS | Clinician | 63 | Age | -0.55 | 0.21 | -0.99 | *NA* | Younger age | Stroke |
| Noe | 2005 | Spain | PCRS | Discrepancy | 62 | Age | 0.00 | 0.18 | 0.00 | 51 | Equal | Brain injury |
| Onen | 2013 | Turkey | Y-BOCS | SRClinical | 100 | Age | 0.36 | 0.11 | 0.66 | 37 | Older age | OCD |
| Ozkiris | 2015 | Turkey | OVIS | SRClinical | 63 | Age | -0.23 | 0.20 | -0.41 | 37 | Younger age | OCD |
| Sedaghat | 2010 | Greece | Unspecified Clinical interview | *NA* | 21 | Age | 0.27 | 0.53 | 0.50 | 35 | Older age | Alzheimer's |
| Sedaghat | 2010 | Greece | Unspecified Clinical interview | *NA* | 21 | Age | -0.71 | 0.56 | -1.29 | 35 | Younger age | Alzheimer's |
| Senturk | 2017 | Turkey | CIRS | Clinician | 26 | Age | -1.70 | 0.48 | -3.08 | 37 | Younger age | MCI |
| Senturk | 2017 | Turkey | CIRS | Clinician | 21 | Age | -0.26 | 0.52 | -0.48 | 37 | Younger age | Alzheimer's |
| Shad | 2004 | USA | BPRS | Clinician | 35 | Age | -.017 | 0.31 | -0.32 | 91 | Younger age | Schizophrenia |
| Starkstein, Brockman | 2010 | Argentina | AQ-D | Discrepancy | 77 | Age | 0.02 | 0.15 | 0.04 | 46 | Older age | Alzheimer's |
| Starkstein, Jorge | 2006 | Argentina | AQ-D | Discrepancy | 173 | Age | 0.02 | 0.19 | 0.04 | 46 | Older age | Alzheimer's |
| Therriault | 2018 | Various | Ecog | SRAny | 468 | Age | -0.34 | 0.02 | -0.61 | *NA* | Younger age | MCI |
| Tordesillas | 2018 | Spain | SUMD | Clinician | 108 | Age | 0.27 | 0.11 | 0.49 | 51 | Older age | Schizophrenia |
| Tremont | 2011 | USA | Unspecified Clinical interview | *NA* | 65 | Age | -0.51 | 0.17 | -0.93 | 91 | Younger age | MCI |
| Turro-Garriga | 2013 | Spain | ERS | Clinician | 124 | Age | 0.09 | 0.12 | 0.17 | 51 | Older age | Alzheimer's |
| Turro-Garriga | 2016 | Spain | AQ-D | Discrepancy | 177 | Age | -0.64 | 0.07 | -1.16 | 51 | Younger age | Alzheimer's |
| Valiente | 2011 | Spain | PANSS G12 | Clinician | 40 | Age | -0.33 | 0.27 | -0.60 | 51 | Younger age | Schizophrenia |
| Wang | 2011 | China | ITAQ | Clinician | 139 | Age | -0.14 | 0.11 | -0.24 | 20 | Younger age | Schizophrenia |
| Woon | 2020 | India | MDIS | SRClinical | 99 | Age | -0.55 | 0.22 | -1.00 | 48 | Younger age | Depression |
| Yoon | 2017 | South Korea | Unspecified Clinical interview | *NA* | 616 | Age | -0.24 | 0.04 | -0.43 | 18 | Younger age | Alzheimer's |
| Zhang | 2016 | China | PANSS G12 | Clinician | 56 | Age | -1.48 | 0.21 | -2.69 | 20 | Younger age | Schizophrenia |
| Amanzio | 2011 | Italy | AQ-D | Discrepancy | 29 | Education | 0.51 | 0.38 | 0.93 | 76 | Better educated | Alzheimer's |
| Ayesa-Arriola | 2014 | Spain | SUMD | Clinician | 198 | Education | 0.23 | 0.06 | 0.41 | 51 | Better educated | Schizophrenia |
| Bota | 2006 | USA | SUMD | Clinician | 24 | Education | 1.14 | 0.49 | 2.07 | 91 | Better educated | Schizophrenia |
| Chapman, Colvin | 2018 | USA | CRA | Clinician | 35 | Education | 0.42 | 0.32 | 0.76 | 91 | Better educated | Alzheimer's |
| Cosentino | 2007 | USA | ARS | Clinician | 24 | Education | -1.07 | 0.51 | -1.95 | 91 | Less educated | Alzheimer's |
| Cosentino | 2011 | USA | ARS | Clinician | 42 | Education | 1.07 | 0.28 | 1.93 | 91 | Better educated | Alzheimer's |
| Dias, Brissos, Carita | 2007 | Portugal | SUMD | Clinician | 50 | Education | 0.66 | 0.23 | 1.20 | 27 | Better educated | Bipolar disorder |
| Dias, Brissos, Frey | 2008 | Portugal | SUMD | Clinician | 70 | Education | 0.44 | 0.17 | 0.79 | 27 | Better educated | Bipolar disorder |
| Emami | 2016 | Canada | SAI-E | Clinician | 66 | Education | 0.06 | 0.17 | 0.10 | 80 | Better educated | Schizophrenia |
| Fu | 2017 | China | ITAQ | Clinician | 278 | Education | 0.19 | 0.06 | 0.35 | 20 | Better educated | Mixed (Psychiatric) |
| Hanyu | 2008 | Japan | EMC | SRAny | 38 | Education | 0.42 | 0.29 | 0.76 | 46 | Better educated | Alzheimer's |
| Karadag | 2011 | Turkey | OVIS | SRClinical | 64 | Education | -0.33 | 0.18 | -0.60 | 37 | Less educated | OCD |
| Kishore | 2004 | India | BABS | SRClinical | 100 | Education | -0.05 | 0.15 | -0.10 | 48 | Less educated | OCD |
| Kortte | 2015 | USA | BAS | Clinician | 31 | Education | 0.04 | 0.44 | 0.07 | 91 | Better educated | Stroke |
| Lamar | 2002 | USA | AQ-D | Discrepancy | 32 | Education | 0.63 | 0.35 | 1.14 | 91 | Better educated | Mixed (AD + Other Dementia) |
| Loebel | 1990 | USA | Unspecified Clinical interview | *NA* | 32 | Education | 0.81 | 0.35 | 1.47 | 91 | Better educated | Alzheimer's |
| Lopez, Becker | 1994 | USA | Unspecified Clinical interview | *NA* | 177 | Education | 0.57 | 0.09 | 1.03 | 91 | Better educated | Alzheimer's |
| Lysaker, Bryson | 1998 | USA | SUMD | Clinician | 101 | Education | -0.09 | 0.11 | -0.16 | 91 | Less educated | Schizophrenia |
| Noe | 2005 | Spain | PCRS | Discrepancy | 62 | Education | 0.04 | 0.18 | 0.08 | 51 | Better educated | Brain injury |
| Ozkiris | 2015 | Turkey | OVIS | SRClinical | 63 | Education | -0.36 | 0.20 | -0.66 | 37 | Less educated | OCD |
| Senturk | 2017 | Turkey | CIRS | Clinician | 26 | Education | 0.23 | 0.42 | 0.42 | 37 | Better educated | MCI |
| Senturk | 2017 | Turkey | CIRS | Clinician | 21 | Education | 0.57 | 0.53 | 1.03 | 37 | Better educated | Alzheimer's |
| Starkstein, Brockman | 2010 | Argentina | AQ-D | Discrepancy | 77 | Education | 0.05 | 0.15 | 0.10 | 46 | Better educated | Alzheimer's |
| Starkstein, Jorge | 2006 | Argentina | AQ-D | Discrepancy | 173 | Education | 0.11 | 0.19 | 0.21 | 46 | Better educated | Alzheimer's |
| Therriault | 2018 | Various | Ecog | SRAny | 468 | Education | 0.04 | 0.02 | 0.08 | *NA* | Better educated | MCI |
| Tordesillas | 2018 | Spain | SUMD | Clinician | 108 | Education | 0.59 | 0.11 | 1.07 | 51 | Better educated | Schizophrenia |
| Tremont | 2011 | USA | Unspecified Clinical interview | *NA* | 65 | Education | -0.25 | 0.17 | -0.46 | 91 | Less educated | MCI |
| Wang | 2011 | China | ITAQ | Clinician | 139 | Education | -0.30 | 0.11 | -0.55 | 20 | Less educated | Schizophrenia |
| Yoon | 2017 | South Korea | Unspecified Clinical interview | *NA* | 616 | Education | 0.33 | 0.04 | 0.59 | 18 | Better educated | Alzheimer's |
| Zhang | 2016 | China | PANSS G12 | Clinician | 56 | Education | -0.48 | 0.20 | -0.88 | 20 | Less educated | Schizophrenia |
| Visser | 2017 | Netherlands | OVIS | SRClinical | 140 | Employment | 0.55 | 0.09 | 1.00 | 80 | Employed | OCD |
| Wang | 2011 | China | ITAQ | Clinician | 139 | Employment | 0.23 | 0.10 | 0.41 | 20 | Employed | Schizophrenia |
| Woon | 2020 | India | MDIS | SRClinical | 99 | Employment | -0.38 | 0.26 | -0.69 | 48 | Unemployed | Depression |
| Heinrichs | 1985 | USA | Clinical judgement | *NA* | 37 | Ethnicity | 0.66 | 0.42 | 1.19 | 81 | White | Schizophrenia |
| Kortte | 2015 | USA | BAS | Clinician | 35 | Ethnicity | -0.65 | 0.45 | -1.17 | 81 | African American | Stroke |
| Lysaker, Bryson | 1998 | USA | SUMD | Clinician | 96 | Ethnicity | 0.29 | 0.11 | 0.52 | 81 | White | Schizophrenia |
| Cherian | 2012 | India | Y-BOCS (item 11) | SRClinical | 536 | Marital Status | 0.02 | 0.05 | 0.04 | 48 | Married | OCD |
| Fennig | 1996 | USA | HDS | Clinician | 229 | Marital Status | 0.86 | 0.08 | 1.56 | 81 | Married | Schizophrenia (+ other psychoses) |
| Fu | 2017 | China | ITAQ | Clinician | 278 | Marital Status | 0.43 | 0.06 | 0.78 | 20 | Married | Mixed (Psychiatric) |
| Karadag | 2011 | Turkey | OVIS | SRClinical | 62 | Marital Status | 0.24 | 0.15 | 0.43 | 37 | Married | OCD |
| Kishore | 2004 | India | BABS | Clinician | 100 | Marital Status | -0.48 | 0.14 | -0.86 | 48 | Unmarried | OCD |
| Turksoy | 2002 | Turkey | DSM-IV | *NA* | 88 | Marital Status | 0.01 | 0.13 | 0.02 | 37 | Married | OCD |
| Woon | 2020 | India | MDIS | SRClinical | 99 | Marital Status | -0.61 | 0.26 | -1.10 | 48 | Unmarried | Depression |
| Amanzio | 2011 | Italy | AQ-D | Discrepancy | 29 | Sex | -0.01 | 0.31 | -0.01 | 76 | Female | Alzheimer's |
| Ayesa-Arriola | 2014 | Spain | SUMD | Clinician | 224 | Sex | -0.22 | 0.04 | -0.40 | 51 | Female | Schizophrenia |
| Baier | 2005 | Germany | BAS | Clinician | 128 | Sex | 0.06 | 0.10 | 0.11 | 67 | Male | Stroke |
| Castrillo Sanz | 2016 | Spain | CIR | Clinician | 127 | Sex | -0.36 | 0.13 | -0.66 | 51 | Female | Alzheimer's |
| Chapman | 2018 | USA | CRA | Clinician | 35 | Sex | 0.08 | 0.30 | 0.15 | 81 | Male | Alzheimer's |
| Cherian | 2012 | India | Y-BOCS | SRClinical | 545 | Sex | 0.14 | 0.05 | 0.25 | 48 | Male | OCD |
| Conde-Sala | 2013 | Spain | AQ-D | Discrepancy | 164 | Sex | 0.02 | 0.06 | 0.04 | 51 | Male | Alzheimer's |
| Contador | 2020 | Spain | FAQ | Discrepancy | 325 | Sex | -0.26 | 0.03 | -0.47 | 51 | Female | Mixed (AD + Other Dementia) |
| Cosentino | 2007 | USA | ARS | Clinician | 24 | Sex | -0.61 | 0.43 | -1.10 | 81 | Female | Alzheimer's |
| Cosentino | 2011 | USA | CRA | Clinician | 42 | Sex | -0.01 | 0.21 | -0.02 | 91 | Female | Alzheimer's |
| De Berardis | 2005 | Italy | Y-BOCS (item 11) | Clinician | 123 | Sex | 0.03 | 0.10 | 0.06 | 76 | Male | OCD |
| De Berardis | 2008 | Italy | Y-BOCS (item 11) | Clinician | 75 | Sex | 0.06 | 0.14 | 0.11 | 76 | Male | OCD |
| De Carolis | 2015 | Italy | CIRS | Clinician | 108 | Sex | 0.01 | 0.13 | 0.03 | 76 | Male | MCI |
| Dias, Brissos, Frey | 2008 | Portugal | SUMD | Clinician | 70 | Sex | -0.51 | 0.17 | -0.93 | 27 | Female | Bipolar disorder |
| Emami | 2016 | Canada | SAI-E | Clinician | 66 | Sex | 0.18 | 0.18 | 0.33 | 80 | Male | Schizophrenia |
| Faget | 2012 | France | SUMD | Clinician | 31 | Sex | -0.94 | 0.72 | -1.71 | 71 | Female | Schizophrenia |
| Fu | 2017 | China | ITAQ | Clinician | 278 | Sex | 0.09 | 0.05 | 0.16 | 20 | Male | Mixed (Psychiatric) |
| Hanyu | 2008 | Japan | EMC | SRAny | 38 | Sex | 0.23 | 0.24 | 0.42 | 46 | Male | Alzheimer's |
| Heinrichs | 1985 | USA | Clinical judgement | *NA* | 38 | Sex | -0.07 | 0.25 | -0.12 | 81 | Female | Schizophrenia |
| Himle | 2006 | USA | Y-BOCS (item 11) | Clinician | 69 | Sex | -0.31 | 0.16 | -0.56 | 91 | Female | OCD |
| Jacob | 2014 | USA | Y-BOCS | SRClinical | 129 | Sex | -0.23 | 0.12 | -0.42 | 81 | Female | OCD |
| Karadag | 2011 | Turkey | OVIS | SRClinical | 64 | Sex | -0.50 | 0.16 | -0.90 | 37 | Female | OCD |
| Kishore | 2004 | India | BABS | Clinician | 100 | Sex | 0.28 | 0.12 | 0.51 | 48 | Male | OCD |
| Kortte | 2015 | USA | BAS | Clinician | 35 | Sex | -0.04 | 0.36 | -0.07 | 81 | Female | Stroke |
| Lamar | 2002 | USA | AQ-D | Discrepancy | 32 | Sex | -0.09 | 0.29 | -0.16 | 91 | Female | Mixed (AD + Other Dementia) |
| Loebel | 1990 | USA | Clinical interview | *NA* | 32 | Sex | 0.38 | 0.50 | 0.69 | 81 | Male | Alzheimer's |
| Lopez, Becker | 1994 | USA | Clinical judgement | *NA* | 181 | Sex | 0.07 | 0.08 | 0.13 | 81 | Male | Alzheimer's |
| Lysaker, Bryson | 1998 | USA | SUMD | Clinician | 101 | Sex | -0.39 | 0.48 | -0.70 | 81 | Female | Schizophrenia |
| Maeshima | 1997 | Japan | Clinical judgement | *NA* | 50 | Sex | -0.18 | 0.31 | -0.33 | 46 | Female | Brain injury |
| Moro | 2016 | Various | Structured interview (Berti, Ladavas & Della Corte, 1996) | *NA* | 63 | Sex | 0.36 | 0.19 | 0.65 | *NA* | Male | Stroke |
| Noe | 2005 | Spain | PCRS | Discrepancy | 62 | Sex | 0.30 | 0.18 | 0.54 | 51 | Male | Brain injury |
| Onen | 2013 | Turkey | Y-BOCS | SRClinical | 100 | Sex | -0.21 | 0.09 | -0.38 | 37 | Female | OCD |
| Ozkiris | 2015 | Turkey | OVIS | SRClinical | 63 | Sex | 0.07 | 0.19 | 0.12 | 37 | Male | OCD |
| Senturk | 2017 | Turkey | CIRS | Clinician | 47 | Sex | 0.05 | 0.19 | 0.09 | 37 | Male | Alzheimer's |
| Starkstein, Brockman | 2010 | Argentina | AQ-D | Discrepancy | 77 | Sex | 0.12 | 0.13 | 0.22 | 46 | Male | Alzheimer's |
| Starkstein, Sabe | 1996 | Argentina | AQ-D | Discrepancy | 55 | Sex | -0.14 | 0.20 | -0.26 | 46 | Female | Alzheimer's |
| Therriault | 2018 | Various | Ecog | SRAny | 468 | Sex | -0.30 | 0.02 | -0.55 | *NA* | Female | MCI |
| Tordesillas | 2018 | Spain | SUMD | Clinician | 108 | Sex | 0.06 | 0.10 | 0.11 | 51 | Male | Schizophrenia |
| Tremont | 2011 | USA | Clinical Judgement | *NA* | 65 | Sex | 0.01 | 0.14 | 0.02 | 81 | Male | MCI |
| Turksoy | 2002 | Turkey | DSM-IV | *NA* | 94 | Sex | -0.41 | 0.11 | -0.74 | 37 | Female | OCD |
| Turro-Garriga | 2013 | Spain | ERS | Discrepancy | 124 | Sex | 0.32 | 0.13 | 0.58 | 51 | Male | Alzheimer's |
| Turro-Garriga | 2016 | Spain | AQ-D | Clinician | 177 | Sex | -0.30 | 0.06 | -0.55 | 51 | Female | Alzheimer's |
| Valiente | 2011 | Spain | PANSS G12 | Clinician | 40 | Sex | -0.22 | 0.22 | -0.39 | 51 | Female | Schizophrenia |
| Visser | 2017 | Netherlands | OVIS | SRClinical | 140 | Sex | 0.21 | 0.08 | 0.37 | 80 | Male | OCD |
| Wang | 2011 | China | ITAQ | Clinician | 139 | Sex | -0.13 | 0.09 | -0.23 | 20 | Female | Schizophrenia |
| Wibawa | 2019 | Australia | AS | Discrepancy | 38 | Sex | 0.06 | 0.31 | 0.12 | 90 | Male | Huntington's |
| Woon | 2020 | India | MDIS | SRClinical | 99 | Sex | -0.10 | 0.18 | -0.18 | 48 | Female | Depression |
| Yoon | 2017 | South Korea | Clinician semi-structured interview | *NA* | 617 | Sex | -0.33 | 0.03 | -0.60 | 18 | Female | Alzheimer's |
| Zhang | 2016 | China | PANSS G12 | Clinician | 56 | Sex | 0.32 | 0.16 | 0.57 | 20 | Male | Schizophrenia |

**Table A.2.** Study characteristics of all dichotomous effect sizes that were included in the meta-analysis.

## Qualitative Only Studies

| First Author | Year | Country | Insight Measure | Study Design | Participant No. | Sociodemographic variable | Journal | Reason for exclusion | Participant Group | Significant outcomes? |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Aalten | 2006 | Netherlands | GRAD | Prospective Cohort | 199 | Age, education, sex, socioeconomic status | International Psychogeriatrics | Ineligible analyses | Dementia | Yes (age, education, socioeconomic status, sex) |
| Almeida | 1996 | Brazil | SAI | Cross Sectional | 40 | Age, | International Journal of Geriatric Psychiatry | Absent statistics | Paraphrenia | No |
| Amador | 1994 | USA | SUMD | Cross Sectional | 412 | Age, education, sex | Archives of General Psychiatry | Absent statistics | Psychosis and Mood Disorder | No |
| Arbel | 2013 | Israel | SUMD | Cross Sectional | 25 | Age, , education | Psychiatry Research | Few population samples | Anorexia | No |
| Berg | 2018 | Norway | BIS | Cross Sectional | 80 | Immigration Status | Early Intervention in Psychiatry | Ineligible insight variable/demographic | Psychosis | Yes (immigration status) |
| Bianchini | 2014 | Italy | SAI | Prospective Cohort | 55 | Age, sex | Psychiatry Research | Absent statistics | Schizophrenia | No |
| Buchy | 2010 | Canada | SUMD | Prospective cohort | 165 | Age, education, sex | Early Intervention in Psychiatry | Longitudinal only | FEP | No |
| Burton | 2016 | USA | MIC-SR vs. neuropsychological test | Cross Sectional | 168 | Age, education, employment, ethnicity, marital status, sex | Schizophrenia Research | Neuropsychological test discrepancy | Schizophrenia Spectrum Disorders | No |
| Chan | 2014 | Hong Kong | SUMD | Prospective cohort | 71 | Age, education | Psychiatry Research | Longitudinal only | First Episode Schizophrenia | No |
| Chan | 2016 | Hong Kong | SUMD | Cross Sectional | 95 | Age, , education, employment, marital status, sex | Comprehensive Psychiatry | Absent statistics | Schizophrenia Spectrum Disorder | No |
| Chen | 2001 | Hong Kong | SUMD | Prospective Cohort | 70 | Age, education | The Journal of Nervous and Mental Disease | Longitudinal only | Psychiatric Inpatients | No |
| Chen | 2018 | Taiwan | PRMQ | Cross Sectional | 90 | Age, education, sex | Psychiatry Research | Ineligible analysis | Alcohol dependence | Yes (age, education) |
| Collins | 1997 | Canada | SAI | Cross Sectional | 58 | Age | Schizophrenia Research | Ineligible analysis | Schizophrenia | No |
| Comacchio | 2020 | Italy | SAI-E | Prospective cohort | 185 | Sex | Archives of Women’s Mental Health | Longitudinal only | FEP | Yes (gender) |
| Cuesta | 1994 | Spain | Lack of Insight Index | Cross Sectional | 40 | Age, education, sex | Schizophrenia Bulletin | Absent statistics | Schizophrenia | No |
| David | 1992 | UK | SAI | Cross Sectional | 91 | Age | British Journal of Psychiatry | Absent statistics | Psychosis | No |
| David | 1995 | UK | PSE Insight Item | Prospective Cohort | 150 | Age, , socioeconomic status, ethnicity, immigration, sex | British Journal of Psychiatry | Absent statistics | Psychosis | Yes (socioeconomic status) |
| De Assis | 2015 | Brazil | HAM-D & YMRS | Cross Sectional | 48 | Age | Psychiatric Quarterly | Ineligible insight variable/demographic | Bipolar disorder | Yes (age, sex) |
| de Castro Zilli | 2007 | Brazil | DIS | Cross Sectional | 21 | Age, education | Dementia & Neuropsychologia | Absent statistics | Alzheimer's disease | No |
| Duarte Gigante | 2004 | Brazil | SAI | Cross Sectional | 40 | Age, , education, sex | Sao Paulo Medical Journal | Absent statistics | Schizophrenia | No |
| Farias | 2005 | USA | DFQ | Cross Sectional | 111 | Age, education, ethnicity, sex | International Journal of Geriatric Psychiatry | Absent statistics | Older adults | No |
| Gilleen | 2011 | UK | DEX, MARS, PCRS, SUMD, SAI-E | Cross Sectional | 31 | Age, education | Schizophrenia Bulletin | Absent statistics | Schizophrenia | No |
| Goldberg | 2001 | USA | PANSS G12 | Cross Sectional | 211 | Age, education, ethnicity, sex | The Journal of Nervous and Mental Disease | Ineligible analysis | SMI | Yes (ethnicity) |
| Gomez-de-Regil | 2015 | Mexico | SUMD | Cross Sectional | 61 | Age, , marital status, sex | Schizophrenia Research: Cognition | Absent statistics | Psychosis | No |
| Greenfeld | 1990 | USA | Schedule for the Assessment of Insight in Illness (Greenfeld et al, 1989) | Prospective cohort | 40 | BMI | International Journal of Eating Disorders | Longitudinal only | Anorexia | No |
| Hanseeuw | 2020 | Various | ECog | Prospective cohort | 1070 | Age, education, sex | Annals of Neurology | Longitudinal only | Older adults (including MCI and AD) | Yes (age) |
| Hoth | 2007 | USA | PCRS | Cross Sectional | 66 | Age, education | Journal of Clinical and Experimental Neuropsychology | Absent statistics | Huntington's disease | No |
| Jong | 2007 | Korea | HAIS | Cross Sectional | 123 | Age, education, religion, occupation | Journal of Korean Medical Sciences | Few population samples | Alcohol use disorder | Yes (age) |
| Kemp, Lambert | 1995 | UK | SUMD | Cross Sectional | 29 | Age, marital status | Schizophrenia Research | Absent statistics | Schizophrenia | No |
| Keshavan | 2004 | USA | PANSS G12 | Cross Sectional | 535 | Age, , education, sex | Schizophrenia Research | Ineligible analysis | Schizophrenia Spectrum Disorder | No |
| Kim, Ozzoude | 2020 | Canada | PANSS G12 | Randomised Controlled Trial | 1447 | Age, education, ethnicity, sex | Neuropsychopharmacology | Ineligible analysis | Schizophrenia | Yes (sex) |
| Klaas | 2017 | Switzerland | Clinical Judgement | Prospective Cohort | 240 | Education, migration status, sex | Psychological Medicine | Absent statistics | EIP | No |
| Kumar | 2013 | India | SUMD | Cross Sectional | 44 | Marital Status, sex | Journal of Postgraduate Medicine | Absent statistics | Mania | No |
| Liu | 2017 | Singapore | Subjective vs. Cognitive testing discrepancy | Cross Sectional | 751 | Marital Status, sex | Psychogeriatrics | Neuropsychological test discrepancy | Memory Impairment in older adults | Yes (marital status, sex) |
| Lysaker, Bell | 1995 | USA | PANSS G12 | Case Control | 44 | Age, education, employment | The Journal of Nervous and Mental Disease | Longitudinal only | Schizophrenia | No |
| Lysaker, Dimaggio | 2011 | USA | SUMD | Cross Sectional | 65 | Age, education, sex | Comprehensive Psychiatry | Absent statistics | Schizophrenia Spectrum Disorder | No |
| Lysaker, Gagen | 2018 | USA | PANSS G12 | Cross Sectional | 324 | Sex | Schizophrenia Bulletin | Ineligible analysis | Schizophrenia or Schizoaffective disorder | Yes (sex) |
| Lysaker, Whitney | 2006 | USA | SUMD | Cross Sectional | 53 | Age, education | Journal of Neuropsychiatry and Clinical Neurosciences | Absent statistics | Schizophrenia or Schizoaffective disorder | No |
| Marazziti | 2002 | Italy | Y-BOCS (item 11) | Cross Sectional | 117 | Age, | European Psychiatry | Absent statistics | OCD | No |
| Maremmani | 2012 | Italy | DAH-RS item 7 | Cross Sectional | 1066 | Age, employment, income, marital status, sex | Frontiers in Psychiatry | Absent statistics | Substance misuse | No |
| Martyr, Clare | 2012 | UK | FAD | Cross Sectional | 96 | Age | The Clinical Neuropsychologist | Ineligible analysis | Dementia | Yes (age) |
| McCabe | 2002 | NR | SAI | Cross Sectional | 89 | Sociodemographic (unspecified) | Journal of Nervous and Mental Disease | Ineligible insight variable/demographic | Schizophrenia | No |
| Mintz | 2004 | USA | BIS | Cross Sectional | 91 | Age | Israel Journal of Psychiatry and Related Sciences | Ineligible analysis | Psychiatric inpatients | No |
| Mograbi | 2012 | Various | Self report vs. Neuropsychological test | Cross Sectional | 683 | Education, marital status, sex | International Psychogeriatrics | Neuropsychological test discrepancy | Dementia | Yes (education) |
| Moore | 1999 | Ireland | SUMD | Cross Sectional | 46 | Age, socioeconomic status, sex | European Psychiatry | Absent statistics | Schizophrenia | No |
| Mullick | 2001 | USA | SAI | Cross Sectional | 44 | Education | Psychiatric Services | Absent statistics | SMI | No |
| Parellada | 2009 | Spain | SUMD | Prospective Cohort | 110 | Age, sex | Psychological Medicine | Absent statistics | FEP (adolescents) | No |
| Pijnenborg | 2015 | Various | PANSS G12 | Prospective Cohort | 455 | Age, country, sex | European Neuropsychopharmacology | Ineligible analysis | Schizophrenia and Schizoaffective | No |
| Pia | 2014 | Italy | Clinical Judgement | Cross Sectional | 27 | Age, education | Cortex | Ineligible analysis | Stroke | No |
| Pillai | 2018 | USA | AQ-D | Cross Sectional | 80 | Age, education | Movement Disorders and Clinical Practice | Absent statistics | Parkinson's disease | No |
| Reed | 1993 | USA | ARS | Cross Sectional | 57 | Age, education | Journal of Clinical and Experimental Neuropsychology | Ineligible analysis | Alzheimer's disease | No |
| Sanchez-Torres | 2015 | Spain | AMDP | Retrospective Cohort | 42 | Age, , education, sex | Schizophrenia Research | Longitudinal only | Schizophrenia | Yes (sex) |
| Sanz | 1998 | UK | ITAQ, Markova & Berrios (a), Markova & Berrios (b), PANSS G12 | Cross Sectional | 33 | Education | Psychological Medicine | Absent statistics | Psychosis | Yes (education) |
| Saravanan | 2007 | India | SAI-E | Cross Sectional | 131 | Age, education, sex | Social Psychiatry and Psychiatric Epidemiology | Absent statistics | Schizophrenia | No |
| Sasse | 2013 | Germany | PCRS | Cross Sectional | 141 | Age, education, employment | Journal of Head Trauma and Rehabilitation | Absent statistics | Traumatic Brain Injury | No |
| Schwartz | 1997 | USA | SUMD | Prospective Cohort | 23 | Age | Comprehensive Psychiatry | Absent statistics | Schizophrenia | No |
| Setkowski | 2016 | Netherlands | BIS | Prospective Cohort | 100 | Age, country, domestic situation, sex | International Journal of Social Psychiatry | Longitudinal only | Psychiatric Inpatients | No |
| Sherer | 2003 | USA | AQ-D | Cross Sectional | 129 | Age, education, sex | Archives of Physical Medicine Rehabilitation | Ineligible analysis | Traumatic Brain Injury | Yes (age) |
| Sherer | 2005 | USA | AQ(2) | Cross Sectional | 91 | Age | Journal of Head and Trauma Rehabilitation | Ineligible analysis | Traumatic brain injury | No |
| Smith | 1997 | USA | SUMD | Cross Sectional | 33 | Age, sex | Journal of Clinical Psychopharmacology | Absent statistics | Schizophrenia | No |
| Smith | 2014 | Australia | YMRS (item 11) | Cross Sectional | 41 | Age, sex | Journal of Affective Disorders | Ineligible insight variable/demographic | FEP | No |
| Tariku | 2019 | Ethiopia | SUMD | Cross Sectional | 455 | Employment, literacy, sex | Psychiatry Journal | Ineligible analysis | Schizophrenia | Yes (employment) |
| Turro-Garriga | 2014 | Spain | AQ-D | Cross Sectional | 352 | Age, marital status, sex | Journal of Geriatric Psychiatry and Neurology | Absent statistics | Alzheimer's disease | Yes (age) |
| van Vliet | 2013 | Netherlands | GRAD | Prospective Cohort | 268 | Sex | Alzheimer's Disease & Associated Disorders | Longitudinal | Alzheimer's disease | Yes (sex) |
| Vanderploeg | 2007 | USA | KBCI | Cross Sectional | 36 | Age, education | Journal of Rehabilitation and Research Development | Absent statistics | Traumatic brain injury (moderate to severe) | No |
| Vannini | 2017 | USA | Discrepancy between neuropsychological testing and MFQ subscale | Cross Sectional | 297 | Age, education, sex | Neuropsychologia | Neuropsychological test discrepancy | Mild cognitive impairment | Yes (sex) |
| Vasterling, Seltzer, Watrous | 1997 | USA | EMQ | Prospective Cohort | 28 | Age, , education | Neuropsychiatry, Neuropsychology and Behavioural Neurology | Longitudinal only | Alzheimer's disease | No |
| Vazmalaei, Jolfaei | 2012 | Iran | MDIS/SUMD | Cross Sectional | 145 | Age | Journal of Research in Medical Sciences | Absent statistics | Bipolar disorder (type 1) | No |
| Vigne | 2014 | Brazil | BABS | Cross Sectional | 37 | Age, employment, marital status, religion, socioeconomic status, sex | Psychiatry Research | Few population samples | Social anxiety disorder | Yes (marital status) |
| Welten | 2016 | Netherlands | YMRS (item 11) | Retrospective Cohort | 1904 | Age, BMI, sex | Journal of Clinical Psychopharmacology | Ineligible insight variable/demographic | Bipolar disorder (acute mania) | Yes (BMI) |
| Wiffen | 2010 | Various | SAI-E | Retrospective Cohort | 303 | Sex | Schizophrenia Research | Ineligible analysis | Schizophrenia or Schizoaffective disorder | No |
| Wilson | 2015 | USA | Discrepancy between episodic memory rating and neuropsychological battery performance | Retrospective Cohort | 2092 | Age, education, sex | Neurology | Neuropsychological test discrepancy | Dementia | Yes (age) |
| Yen, Chen.1 | 2002 | Taiwan | SAI-E | Cross Sectional | 109 | Sex | The Journal of Nervous and Mental Disease | Ineligible analysis | Psychosis | No |
| Yen, Hslao | 2008 | Taiwan | HAIS | Cross Sectional | 401 | Employment, ethnicity, sex | The American Journal of Drug and Alcohol Abuse | Ineligible analysis | Alcohol use disorder | Yes (ethnicity) |
| Yen, Chen.2 | 2003 | Taiwan | SAI-E | Prospective Cohort | 33 | Age, education | Comprehensive Psychiatry | Longitudinal only | Bipolar disorder | No |
| Young | 1993 | Canada | SUMD | Cross Sectional | 31 | Age, education | Schizophrenia Research | Absent statistics | Schizophrenia | No |
| Zimmerman | 2017 | Brazil | PCRS | Cross Sectional | 65 | Age | Cognitive Neuropsychiatry | Ineligible analysis | Traumatic brain injury | Yes (age) |

**Table A.3.** Study characteristics of all records that were only included in the qualitative synthesis.

# SENSITIVITY ANALYSES FOR INFLUENTIAL CASES

## Overview of Potential Outliers: Meta-Analysis (Continuous Outcome)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **k** | **Original I2** | **First Author** | **Cook’s Distance (Critical d)** | **Leave in/out Effect Size** | **I2 Change** | **Effect Size Change** |
| Age | 67 | 52% | McEvoy | .09 (.06) | -.22 | -5% | -.01 |
|  |  |  | Mohamed | .09 (.06) | -.22 | -7% | -.01 |
|  |  |  | Verhey | .12 (.06) | -.20 | -3% | +.01 |
| Education | 44 | 62% | Cernovsky | .11 (.09) | .14 | -5% | .0 |
| Marital Status | 13 | 93% | Ampalam | .47 (.31) | .04 | -11% | -.10 |
| Sex | 27 | 59% | Prus | .17 (.15) | .03 | -7% | -.02 |

**Table A.4.** A summary of influential cases for each socio-demographic characteristic when insight was measured as a continuous variable. Excluded cases are highlighted in red.

## Overview of Potential Outliers: Meta-Analysis 2 (Dichotomous Outcome)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **k** | **First Author** | **Original I2** | **Cook’s Distance (Critical d)** | **Leave in/out Effect Size** | **I2 Change** | **Effect Size Change** |
| Age | 48 | De Carolis | 91% | 1.47 (.08) | .24 | -86% | -.22 |
| Education | 31 | De Carolis | 63% | .43 (.13) | .18 | -63% | +.06 |
|  | 30 | Therriault | 0% | .16 (.13) | .19 | 0% | + 02 |
| Sex | 49 | Therriault | 13% | .15 (.08) | .13 | -6% | -.02 |
|  |  | Yoon | 13% | .11 (.08) | .13 | -3% | -.02 |

**Table A.5.** A summary of influential cases for each socio-demographic characteristic when insight was measured as a dichotomous variable. Excluded cases are highlighted in red.

## Overview of Meta-Analytic Decisions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | First Author | Methodological Considerations | Considerations for Meta-Analysis | Study Author Comments | Decision to Exclude? |
| Age | De Carolis | Very low threshold for ‘anosognosia’ group (score >1). Large heterogeneity observed for other variables in study. Mean age = 72.5. | Large heterogeneity in age. Large number of studies looking at age. Study effect size is very large and significant, and the direction is comparable to other effect sizes in MCI groups. Cook’s d is minimally above threshold. Removal would substantially change the pooled effect size and substantially reduce heterogeneity. | None. | Yes. |
|  | McEvoy | Large schizophrenia sample (n= 251). Mean age= 40.52. Longitudinal, randomised trial for antipsychotics. | Moderate heterogeneity in age. Large number of studies looking at age. Study effect size is moderate and significant. In opposite direction, which may be expected, as the effect is weaker in schizophrenia samples. Cook’s d is minimally above threshold. Removal would not substantially change the pooled effect size or heterogeneity. Pooled effect would remain significant if removed. | Reported but not explained. | No. |
|  | Mohamed | Very large, chronic schizophrenia sample (n= 1432). Mean age = 40.5. Longitudinal, randomised trial for antipsychotics. | Moderate heterogeneity in age. Large number of studies looking at age. Study effect size is small and significant. In opposite direction, which may be expected, as the effect is weaker in schizophrenia samples. Cook’s d is minimally above threshold. Removal would not substantially change the pooled effect size or heterogeneity. Pooled effect would remain significant if removed. | None. | No. |
|  | Verhey | Dutch study. Large, mixed dementia sample. Awareness scored with dual raters and achieved reasonably good reliability. Mean age= 71.2. | Moderate heterogeneity in age. Large number of studies looking at age. Study effect size is large and significant. In expected direction, and is comparable to other effect sizes in dementia groups. Cook’s d is moderately above threshold. Removal would not substantially change the pooled effect size or heterogeneity. Pooled effect would remain significant if removed. | Reported but not explained. | No. |
| Education | Cernovsky | Canadian study. Moderate size schizophrenia sample (n= 111). Mean age= 38.10. Insight assessed using generic clinical interview and then dichotomised. | Moderate heterogeneity in education. Large number of studies looking at education. Study effect size large and significant and in the expected direction. Cook’s d is minimally above threshold. Removal would not change the pooled effect size to or substantially reduce heterogeneity. Pooled effect would remain significant if removed. | Reported but not explained. | No. |
|  | De Carolis | Very low threshold for ‘anosognosia’ group (score >1). Large heterogeneity observed for other variables in this study. Mean education = 9.3. All participants had at least five years of education so potentially biased. | Moderate heterogeneity in education. Large number of studies looking at education. Study effect size not large or significant but only one other study found an effect in this direction. Cook’s d very high. Removal would moderately change the pooled effect size and would substantially reduce heterogeneity. | None. | Yes. |
|  | Therriault | Amnestic MCI sample. Multiple countries. 46% female. 44% sample had insight. Cut-off determined statistically. Large sample (N= 467). Mean age= 71.29. | Zero heterogeneity in education. Large number of studies looking at education. Study level effect is minimal and non-significant. Cook’s d is minimally above threshold. Would not substantially change the effect size or heterogeneity to remove. Pooled effect would remain significant if removed. | Reported but not explained. | No. |
| Marital Status | Ampalam | Indian study. Small-to-moderate sample size (N= 60). Mean age not reported. 46% male sample overall. SAI scale used to assess insight. | Large heterogeneity in marital status. Relatively small number of studies looking at marital status. Study effect size is large and significant but in opposite direction to the pooled effect. Cook’s d moderately high. Would substantially change the pooled effect size and heterogeneity to remove. Pooled effect would remain non-significant if removed. | Reported and explanation offered (coping mechanisms and social support). | Yes. |
| Sex | Prus | German study. Moderate sample size (n= 111). Insight rated using SUMD scale and administered by graduate students. Mean age= 39. 53% male. | Moderate heterogeneity in sex. Moderate number of studies looking at education. Study effect size is large and significant. Cook’s d minimally above threshold. Would moderately change the pooled effect size to remove and would substantially reduce heterogeneity. Pooled effect would remain non-significant if removed. | Reported and explanations offered (gender differences in disclosure, verbal memory, adaptive behaviour, neurobiological differences) | No. |
|  | Therriault | Amnestic MCI sample. Multiple countries. 46% female. 62.6% sample had insight. Cut-off determined statistically. Large sample (N= 467). Mean age= 71.29. | Very little heterogeneity in sex. Large number of studies looking at sex. Study effect in same direction to pooled effect. Cook’s d moderately above threshold. Would not substantially change pooled effect size or heterogeneity to remove. However, pooled effect would become marginally non-significant if removed (p= .067) | Reported but not explained. | No. |
|  | Yoon | Very large sample (N= 616). South Korean study. Patients diagnosed with early onset Alzheimer’s disease. 87.6% of patients had insight. 37% male. | Very little heterogeneity in sex. Large number of studies looking at sex. Study effect in same direction to pooled effect. Cook’s d minimally above threshold. Would not substantially change pooled effect size or heterogeneity to remove. However, pooled effect would become marginally non-significant if removed (p= .062) | None. | No. |

**Table A.6.** Study characteristics and inclusion decisions for potential outliers.

## Data analysis procedure

All statistical results were converted into standardised effect sizes (cohen’s d and fisher’s z), to correct for potential violations of the normality assumption. The procedure for this is outlined below. All effects were ultimately reported as Cohen’s d, following standard research reporting procedures. 95% confidence intervals were also calculated for each effect size. 3x2 Chi Squared tests were excluded, unless they could be reasonably reduced to a two-by-two frequency matrix. This was done for marital status (single/unmarried vs. married/partnered), ethnicity (white/Caucasian ethnicity vs. black/African/Caribbean ethnicity) and insight (poor/low/impaired insight/present anosognosia vs. good/high/preserved insight/no anosognosia. We did, however, exclude data from the meta-synthesis if age or education was reported as a categorical variable. Where more than one insight measure was eligible for inclusion, the results were pooled so that the assumption of independence was maintained.

See here for the associated formulas [1].

|  |  |  |
| --- | --- | --- |
| Statistic | Conversion One | Final Conversion |
| Independent (t) | Cohen (d)/Pearson (r) | Fisher (z)/Cohen (d) |
| Pearson (r) | N/A | Fisher (z) /Cohen (d) |
| Cohen (d) | Cohen (d)/Pearson (r) | Fisher (z) /Cohen (d) |
| Spearman (rho) | N/A | Fisher (z) /Cohen (d) |
| Mann Whitney (U) | Rank Biserial Correlation | Fisher (z) /Cohen (d) |

**Table A.7.** Conversion metrics for effect sizes included in the meta analyses.

# SENSITIVITY ANALYSES FOR EFFECTS

## Forest Plots

**Diagram, schematic

Description automatically generated**

**Figure A.1.** Forest plot detailing the relationship between insight and age when insight was measured as a continuous variable (measured in Fisher’s Z units).

Diagram, schematic

Description automatically generated

**Figure A.2.** Forest plot detailing the relationship between insight and education when insight was measured as a continuous variable (measured in Fisher’s Z units).

Chart, box and whisker chart

Description automatically generated

**Figure A.3.** Forest plot detailing the relationship between insight and employment when insight was measured as a continuous variable (measured in Fisher’s Z units).

**Diagram, box and whisker chart

Description automatically generated**

**Figure A.4.** Forest plot detailing the relationship between insight and ethnicity when insight was measured as a continuous variable (measured in Fisher’s Z units).

A picture containing text, receipt

Description automatically generated

**Figure A.5.** Forest plot detailing the relationship between insight marital status when insight was measured as a continuous variable (measured in Fisher’s Z units).

**A picture containing text, receipt

Description automatically generated**

**Figure A.6.** Forest plot detailing the relationship between insight and sex when insight was measured as a continuous variable (measured in Fisher’s Z units; Male coded as positive).

Chart, box and whisker chart

Description automatically generated

**Figure A.7.** Forest plot detailing the odds of an employed person being judged to have good insight, relative to an unemployed person.

Chart, diagram, box and whisker chart

Description automatically generated

**Figure A.8.** Forest plot detailing the odds of a white person being judged to have good insight, relative to a black person.

Chart, box and whisker chart

Description automatically generated

**Figure A.9.** Forest plot detailing the odds of a married person being judged to have good insight, relative to an unmarried person.

Diagram, schematic

Description automatically generated

**Figure A.10.** Forest plot detailing the odds of females being judged to have good insight, relative to a males (males coded as positive).

## Funnel Plots

**Chart

Description automatically generated**

**Figure A.11.** Funnel plot of studies that investigated the relationship between insight and age when insight was measured as a continuous variable.

**Chart

Description automatically generated**

**Figure A.12.** Funnel plot of studies that investigated the relationship between insight and education when insight was measured as a continuous variable.

**Chart

Description automatically generated**

**Figure A.13.** Funnel plot of studies that investigated the relationship between insight and employment when insight was measured as a continuous variable.

**Chart

Description automatically generated**

**Figure A.14.** Funnel plot of studies that investigated the relationship between insight and ethnicity when insight was measured as a continuous variable.

**Chart, line chart

Description automatically generated**

**Figure A.15**. Funnel plot of studies that investigated the relationship between insight and marital status when insight was measured as a continuous variable.

**Chart

Description automatically generated**

**Figure A.16.** Funnel plot of studies that investigated the relationship between insight and sex when insight was measured as a continuous variable.

## Cook’s Distance Plots

**Chart, histogram

Description automatically generated**

**Figure A.17.** Cook’s distance analysis investigating outliers from studies the relationship between insight and age when insight was measured as a continuous variable.

**A picture containing text, boat, different, several

Description automatically generated**

**Figure A.18.** Cook’s distance analysis investigating outliers from studies the relationship between insight and education when insight was measured as a continuous variable.

**Chart

Description automatically generated with medium confidence**

**Figure A.19.** Cook’s distance analysis investigating outliers from studies the relationship between insight and ethnicity when insight was measured as a continuous variable.

**Chart, line chart

Description automatically generated**

**Figure A.20.** Cook’s distance analysis investigating outliers from studies the relationship between insight and employment when insight was measured as a continuous variable.

**A picture containing text, boat

Description automatically generated**

**Figure A.21.** Cook’s distance analysis investigating outliers from studies the relationship between insight and marital status when insight was measured as a continuous variable.

**A picture containing text, boat, different, several

Description automatically generated**

**Figure A.22.** Cook’s distance analysis investigating outliers from studies the relationship between insight and sex when insight was measured as a continuous variable.

# SUPPLEMENTARY SUBGROUP ANALYSES

## Age effect on insight in Psychiatric and Neurological samples



**Figure A.23.** The effect of age on insight between psychiatric and neurological sub-samples.

## Age effect on insight between diagnoses

** Figure A.24.** The effect of age on insight, between different diagnoses.

## Age effect on insight for different types of insight scales



**Figure A.23.** The effect of age on insight between different types of measurement scales.

# SUPPLEMENTARY DATA FOR QUALITATIVE SYNTHESIS

## Summary of Longitudinal Results

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| First Author | Year | Sociodemographic factors | Diagnostic group | Follow up period | Follow ups | Significant results (insight total scores only). |
| Aalten | 2006 | Age, education, SES, sex | Dementia | 18 months | 3 | Only better education predicted good insight at 6 months. Younger age, better education, male gender and higher socioeconomic status predicted good insight at 12 months. Better education and higher socioeconomic status predicted good insight at 16 months. |
| Chan | 2014 | Age, education | Schizophrenia | 1 year | 2 | Neither variable significantly predicted insight. |
| Chen | 2001 | Age, education | SMI inpatients | Variable | 1 | No variable predicted change in insight. |
| Comacchio | 2020 | Gender | Psychosis | 5 years | 3 | Female patients scored worse than males at baseline but improved more than males over time. |
| Derouesne | 1999 | Age, education, sex | Alzheimer’s disease | Variable (M= 21 months) | 1 | Only younger age predicted good insight at follow up. |
| Fennig | 1996 | Marital status | Psychosis | 6 months | 1 | Being married predicted good insight. |
| Gerretsen | 2017 | Age, education | Schizophrenia | 28 weeks | 1 | No variable predicted good insight at follow up. |
| Greenfeld | 1990 | BMI | Anorexia | Variable (1.2 to 10 years) |  | Increase in BMI between hospitalization and follow-up predicted better insight. |
| Hanseeuw | 2020 | Age | Alzheimer’s disease | Var (M= 3 years) | 3.3 | Older patients had faster decreases in awareness over time, than did younger patients. |
| Lysaker | 1995 | Age, education, employment | Schizophrenia | 26 weeks | 1 | No variable predicted change in insight. |
| Ozzoude | 2019 | Age, education, sex | Schizophrenia | Variable (1-3 months) | 1 | Only male gender predicted good insight at follow up. |
| Rathod | 2005 | Age, employment, ethnicity, marital status, sex | Schizophrenia | 12 months | 2 | Younger age, being in part time employment and white ethnicity predicted good insight at 5 months. Only white ethnicity predicted good insight at 12 months. |
| Sanchez-Torres | 2015 | Age, , education, sex | Schizophrenia | 10 years | 1 | Only female gender predicted good insight at follow up. |
| Schennach | 2012 | Age, employment, marital status, sex | Schizophrenia | 1 year | 1 | Only being employed predicted improvement in insight. |
| Setkowski | 2016 | Age, country, marital status, sex | SMI inpatients | 2 years | 1 | No variable predicted change in insight. |
| Silva | 2016 | Age, education, sex | MCI | 2 years | 1 | No variable predicted good insight at follow up. |
| Sousa | 2015 | Age, education, carer burden sex | Alzheimer’s disease | 12 months | 1 | No variable predicted good insight at follow up. |
| Van Vliet | 2013 | Sex | Alzheimer’s disease | 1 year | 2 | Male gender predicted good insight over the follow up period. |
| Vasterling | 1997 | Age, , education | Alzheimer’s disease | Variable (M= 16.4 months) | 1 | No variable predicted change in insight. |
| Wiffen | 2010 | Sex | Schizophrenia | 6 months | 3 | No variable predicted good insight at follow up. |
| Yen | 2003 | Age, education | Bipolar disorder | Variable (M= 32.8 days) | 1 | No variable predicted change in insight. |

**Table A.11.** Sociodemographic associations with insight, when measured as a longitudinal variable.

## Explanations of Results Provided by Authors

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Predictor of Good Insight | Proposed Explanations | | | |
|  | **Clinical** | **Psychosocial** | **Methodological** | **Neurocognitive** |
| Older age | Prolonged experience with disorder | Age-related psychological functions, coping mechanisms | Sampling bias (adolescent samples), interviewer bias |  |
| Younger age | Neurodegeneration, functional impairment, early diagnosis, illness onset, illness duration | Age-related beliefs, coping mechanisms, learning processes, upbringing styles | Sampling bias | Differences in premorbid functioning |
| Better education | NR | Compensatory mechanisms, access to support, illness knowledge, learning processes | NR | Cognitive reserve, intellectual functioning |
| Female gender | Disease onset, antipsychotic response | Gender norms, coping mechanisms, cultural norms |  | Gender differences in verbal memory |
| White ethnicity | NR | Cultural constructions of illness, client-patient interaction | Dropout rates, racial bias in evaluation | NR |

**Table A.12.** A brief summary of possible explanations for the relationship between insight and sociodemographic variables, as outlined by study authors.

# REVIEW PROTOCOL

## Insight Review Protocol (Amended)

|  |  |
| --- | --- |
| **Included** | **Excluded** |
| **Design** | |
| Cross-sectional | Qualitative only studies |
| Epidemiological analyses | Non-systematic review |
| Case note analyses | Non-English language |
| Case control | Commentaries |
| Retrospective cohort | Case studies |
| Prospective cohort | Small N samples (<20 eligible participants) |
| Randomised controlled studies | Conference abstracts |
| Systematic review | Brief reports |
| Meta-analyses | Books |
| Unpublished dissertations of the above |  |
| **Population** | |
| Cognitive impairment | Non-human participants |
| Dementia/stroke | Palliative care |
| Mental health diagnosis | Rare neuropsychiatric syndromes |
| Substance use disorder | Intellectual/Learning disability |
| All ages | Healthy populations |
|  | Physical health problems only |
| **Focus** | |
| Clinical insight | Mental capacity focus only |
| Anosognosia | Non-clinical or non-cognitive focus |
| Neuroimaging of relevant populations (other eligibility criteria applies) | Methodological focus only |
| Neuropsychological testing of relevant populations (other eligibility criteria applies) | Interventions for medical professionals  Cognitive Insight |
| Metacognitive experiments of relevant populations (other eligibility criteria applies) |  |
| **Data/Outcomes** | |
| Quantitative measure of insight via:   * Full validated insight assessment tool (and international adaptations) * Subjective clinical judgment * Awareness discrepancy measure | No quantitative measure of insight or measure can’t be linked to a protected characteristic |
| PANSS G12/OVIS item 11/Y-BOCS item 11 are the only eligible single item scales | No recorded protected characteristic (or insufficient data to merit a conclusion) |
| Self-reports vs. neuropsychological test discrepancies | Insight subscales or single item scales (except PANSS G12/OVIS item 11/Y-BOCS item 11) |
|  | Protected characteristic included as a covariate only |

# REVIEW SEARCH TERMS

## MEDLINE

(("clinical insight"[All Fields] OR "cognitive insight"[All Fields] OR "anosognosia"[All Fields] OR ("insight"[All Fields] AND "self awareness"[All Fields]) OR ("insight"[All Fields] AND "awareness of deficit"[All Fields]) OR ("insight"[All Fields] AND "self certainty"[All Fields]) OR "patient's insight"[All Fields] OR "patient insight"[All Fields] OR "lack of insight"[All Fields] OR "loss of insight"[All Fields] OR "impaired insight"[All Fields] OR "poor insight"[All Fields] OR "lack of insight"[All Fields])) AND ((("age" OR "children" OR "younger" OR "older" OR "gender\*" OR "sex" OR "male\*" OR "female\*" OR "rac\*" OR "ethnic\*" OR "minority" OR "Afro\*" OR "African" OR "Caribbean" OR "Asian" OR "Indian" OR "Chinese" OR "sexual orient\*" OR "homosexual" OR "bisexual" OR "trans\*" OR "gender AND reassign\*" OR "disab\*" OR "plegic" OR "special AND needs" OR "religi\*" OR "spiritu\*" OR "pregnan\*" OR "matern\*" OR "natal")))

## Cochrane Database for Systematic Reviews & Cochrane Controlled Register of Trials (CENTRAL)

#1 "clinical insight" OR "cognitive insight" OR "anosognosia"

#2 ("insight" AND "self awareness") OR ("insight" AND "awareness of deficit") OR ("insight" AND "self certainty")

#3 "patient's insight" OR "patient insight" OR "lack of insight" OR "loss of insight" OR "impaired insight" OR "poor insight" OR "lack of insight"

#4 "Beck Cognitive Insight Scale" OR "Birchwood Insight Scale" OR "Scale to assess unawareness of mental disorder" OR "Positive negative syndrome scale" OR "schedule for the assessment of insight" OR "self reflection insight scale" OR "self appraisal of illness questionnaire" OR "mood disorders insight scale"

#5 ("BCIS" AND "insight"):ti,ab,kw OR ("BIS" AND "insight"):ti,ab,kw OR ("SUMD" AND "insight"):ti,ab,kw OR ("PANSS" AND "insight"):ti,ab,kw OR ("SAI" AND "insight"):ti,ab,kw OR ("SRIS" AND "insight"):ti,ab,kw OR ("SAIQ" AND "insight"):ti,ab,kw OR ("MDIS" AND "insight"):ti,ab,kw

#6 "age" OR "children" OR "younger" OR "older" OR "gender\*" OR "sex" OR "male\*" OR "female\*" OR "rac\*" OR "ethnic\*" OR "minority" OR "Afro\*" OR "African" OR "Caribbean" OR "Asian" OR "Indian" OR "Chinese" OR "sexual orient\*" OR "homosexual" OR "bisexual" OR "trans\*" OR "gender AND reassign\*" OR "disab\*" OR "plegic" OR "special AND needs" OR "religi\*" OR "spiritu\*" OR "pregnan\*" OR "matern\*" OR "natal"

#7 (#1 or #2 or #3 or #4 or #5) ***=*** 257 (51 reviews, 206 trials.

#8 (#7 and #6) = 190 (51 reviews, 139 trials).

## Web of Science

Indexes = SCI-EXPANDED, SSCI, CPCI-S, CPCI-SHH, ESCI. Languages = English, Document Type = Article, Timespan = All years (1900-2019)

#1 ALL= ("clinical insight" OR "cognitive insight" OR "anosognosia”)

#2 ALL= ("insight" AND "self awareness") OR ("insight" AND "awareness of deficit") OR ("insight" AND "self certainty")

#3 ALL= ("patient's insight" OR "patient insight" OR "lack of insight" OR "loss of insight" OR "impaired insight" OR "poor insight" OR "lack of insight")

#4 ALL= ("Beck Cognitive Insight Scale" OR "Birchwood Insight Scale" OR "Scale to assess unawareness of mental disorder" OR "Positive negative syndrome scale")

#5 ALL= ("schedule for the assessment of insight" OR "self reflection insight scale" OR "self appraisal of illness questionnaire" OR "mood disorders insight scale")

#6 TS= (("BCIS" NEAR/5 "insight") OR ("BIS" NEAR/5 "insight") OR ("SUMD" NEAR/5 "insight") OR ("PANSS" NEAR/5 "insight") OR ("SAI" NEAR/5 "insight") OR ("SRIS" NEAR/5 "insight") OR ("SAIQ" NEAR/5 "insight") OR ("MDIS" NEAR/5 "insight"))

#7 ALL= ("age" OR "children" OR "younger" OR "older" OR "gender\*" OR "sex" OR "male\*" OR "female\*" OR "rac\*" OR "ethnic\*" OR "minority" OR "Afro\*" OR "African" OR "Caribbean" OR "Asian" OR "Indian" OR "Chinese" OR "sexual orient\*" OR "homosexual" OR "bisexual" OR "trans\*" OR "gender AND reassign\*" OR "disab\*" OR "plegic" OR "special AND needs" OR "religi\*" OR "spiritu\*" OR "pregnan\*" OR "matern\*" OR "natal")

#8 ALL= ((#1 OR #2 OR #3 OR #4 OR #5 OR #6) AND #7) = 1043 Articles.

## EMBASE (& EMBASE Classic)

Dates: 1947-2019, Limits: Human participants only, English language

#1 Text Word: "clinical insight" or "cognitive insight" or "anosognosia" or ("insight" and "self awareness") or ("insight" and "awareness of deficit") or ("insight" and "self certainty") or "patient's insight" or "patient insight" or "lack of insight" or "loss of insight" or "impaired insight" or "poor insight" or "lack of insight" or "Beck Cognitive Insight Scale" or "Birchwood Insight Scale" or "Scale to assess unawareness of mental disorder" or "Positive negative syndrome scale" or "schedule for the assessment of insight" or "self reflection insight scale" or "self appraisal of illness questionnaire" or "mood disorders insight scale"

#2 Text Word: ("BCIS" adj5 "insight") or ("BIS" adj5 "insight") or ("SUMD" adj5 "insight") or ("PANSS" adj5 "insight") or ("SAI" adj5 "insight") or ("SRIS" adj5 "insight") or ("SAIQ" adj5 "insight") or ("MDIS" adj5 "insight")

#3 Text Word: "age" or "children" or "younger" or "older" or "gender\*" or "sex" or "male\*" or "female\*" or "rac\*" or "ethnic\*" or "minority" or "Afro\*" or "African" or "Caribbean" or "Asian" or "Indian" or "Chinese" or "sexual orient\*" or "homosexual" or "bisexual" or "trans\*" or "gender AND reassign\*" or "disab\*" or "plegic" or "special AND needs" or "religi\*" or "spiritu\*" or "pregnan\*" or "matern\*" or "natal"

#4 All Fields: (#1 or #2) AND #3 = 1356 records.

## CINAHL

Limits: English language only, Human participants,

#1 TX: "clinical insight" or "cognitive insight" or "anosognosia" or ("insight" and "self awareness") or ("insight" and "awareness of deficit") or ("insight" and "self certainty") or "patient's insight" or "patient insight" or "lack of insight" or "loss of insight" or "impaired insight" or "poor insight" or "lack of insight")

#2 TX: "Beck Cognitive Insight Scale" or "Birchwood Insight Scale" or "Scale to assess unawareness of mental disorder" or "Positive negative syndrome scale" or "schedule for the assessment of insight" or "self reflection insight scale" or "self appraisal of illness questionnaire" or "mood disorders insight scale"

#3 TX: ("BCIS" N5 "insight") or ("BIS" N5 "insight") or ("SUMD" N5 "insight") or ("PANSS" N5 "insight") or ("SAI" N5 "insight") or ("SRIS" N5 "insight") or ("SAIQ" N5 "insight")) or ("MDIS" N5 "insight")

#4 TX: "age" or "children" or "younger" or "older" or "gender\*" or "sex" or "male\*" or "female\*" or "rac\*" or "ethnic\*" or "minority" or "Afro\*" or "African" or "Caribbean" or "Asian" or "Indian" or "Chinese" or "sexual orient\*" or "homosexual" or "bisexual" or "trans\*" or "gender AND reassign\*" or "disab\*" or "plegic" or "special AND needs" or "religi\*" or "spiritu\*" or "pregnan\*" or "matern\*" or "natal"

#1 TX ( "clinical insight" or "cognitive insight" or "anosognosia" or ("insight" and "self awareness") or ("insight" and "awareness of deficit") or ("insight" and "self certainty") or "patient's insight" or "patient insight" or "lack of insight" or "loss of insight" or "impaired insight" or "poor insight" or "lack of insight") )

#2 TX ( "Beck Cognitive Insight Scale" or "Birchwood Insight Scale" or "Scale to assess unawareness of mental disorder" or "Positive negative syndrome scale" or "schedule for the assessment of insight" or "self reflection insight scale" or "self appraisal of illness questionnaire" or "mood disorders insight scale" )

#3 TX ( ( "BCIS" N5 "insight") or ("BIS" N5 "insight") or ("SUMD" N5 "insight") or ("PANSS" N5 "insight") or ("SAI" N5 "insight") or ("SRIS" N5 "insight") or ("SAIQ" N5 "insight")) or ("MDIS" N5 "insight") )

#4 ( "age" or "children" or "younger" or "older" or "gender\*" or "sex" or "male\*" or "female\*" or "rac\*" or "ethnic\*" or "minority" or "Afro\*" or "African" or "Caribbean" or "Asian" or "Indian" or "Chinese" or "sexual orient\*" or "homosexual" or "bisexual" or "trans\*" or "gender AND reassign\*" or "disab\*" or "plegic" or "special AND needs" or "religi\*" or "spiritu\*" or "pregnan\*" or "matern\*" or "natal" )

#5 TX: (#1 or #2 or #3) AND #4 = 943 records.

## PsycINFO

Limits: No date filter (1806-2019), English language, Human participants

#1 Text Word: "clinical insight" or "cognitive insight" or "anosognosia" or ("insight" and "self awareness") or ("insight" and "awareness of deficit") or ("insight" and "self certainty") or "patient's insight" or "patient insight" or "lack of insight" or "loss of insight" or "impaired insight" or "poor insight" or "lack of insight" or "Beck Cognitive Insight Scale" or "Birchwood Insight Scale" or "Scale to assess unawareness of mental disorder" or "Positive negative syndrome scale" or "schedule for the assessment of insight" or "self reflection insight scale" or "self appraisal of illness questionnaire" or "mood disorders insight scale"

#2 Text Word: ("BCIS" w5 "insight") or ("BIS" w5 "insight") or ("SUMD" w5 "insight") or ("PANSS" w5 "insight") or ("SAI" w5 "insight") or ("SRIS" w5 "insight") or ("SAIQ" w5 "insight") or ("MDIS" w5 "insight")

#3 Text Word: "age" or "children" or "younger" or "older" or "gender\*" or "sex" or "male\*" or "female\*" or "rac\*" or "ethnic\*" or "minority" or "Afro\*" or "African" or "Caribbean" or "Asian" or "Indian" or "Chinese" or "sexual orient\*" or "homosexual" or "bisexual" or "trans\*" or "gender AND reassign\*" or "disab\*" or "plegic" or "special AND needs" or "religi\*" or "spiritu\*" or "pregnan\*" or "matern\*" or "natal"

#4 All Fields: (#1 or #2) AND #3 = 953 records

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[2-131]

## Qualitative Synthesis Only

[132-208]

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