Table 1. Selected characteristics and main findings of cross-sectional studies comparing ethnic minorities with majorities on stigma outcomes (*N* = 29)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Country** | **Type of CMD** | **Racial groups** | **Recruitment** | **Outcomes** | **Results** |
| Adewuya, 2008 [38] | Nigeria | Various | Black (Nmaj =1869)Other (Nmin =92) | Community | * Self-report
* SDS
 | * There were no ethnic differences in discrimination against people with mental illness (p=0.14)
 |
| Ahn 2015 [39] | North Korea | Various | Asian (Nmaj=3055)Asian (Nmin=545) | Other | * Self-report
* PDD
 | * Asian majorities (M=35.64) had higher perceived stigma than Asian minorities (M=37) (p=0.007)
 |
| Anglin 2006 [18] | USA | Various | White (Nmaj=913)Black (Nmin=118) | Community | * Vignette
* Study-constructed
 | * There was more stereotype (i.e. perceived dangerousness) against people with depression among Black group compared to White group (t=2.14) (p<.05)
* There was less prejudice (i.e. tendency to blame) against people with depression among Black group compared to White group (t=-2.33) (p<.05)
* There was less discrimination (i.e. tendency to endorse punishment) against people with depression among Black group compared to White group (t=-3.91) (p<.001)
 |
| Aznar-Lou 2016 [33] | Catalonia, Spain | Various | White (Nmaj=1668)White (Nmin=56)Black (Nmin=58)Asian (Nmin=7)Other (Nmin=82) | Community | * Self-report
* CAMI-23
 | * Asian (M=20.9), Other (M=23.0) Black (M=23.5) and White minority (M=23.9) had less stereotypes (i.e. less favourable attitudes in authoritarianism) against those with CMDs) compared to White majority (M=25.0)
* Asian (M=25.4) Other (M= 26.9) and Black (M=27.0) groups had less stereotypes (i.e. favourable attitudes in benevolence) compared to white minority (M=27.8) and majority (M=27.7)
* Asian (M=34.3) Other (M=36.2) Black (M=36.4) had less stereotypes (i.e. favourable attitudes toward supporting those with CMDs) compared to White minority (M=37.3) and majority (M=37.5)
* Asian group (M=13.7) had more discrimination (i.e. least favourable attitudes towards those with CMDs) compared to Other (M=15.3) Black (M=15.5) White minority (M=16.6) majority (M=16.5)
 |
| Brown 2010 [19] | USA | Various | White (Nmaj=229)Black (Nmin=220) | Community | * Self-report
* ISMI
* PDD
 | * There were no differences between Black (M=31.3, SD=4.1) and White (M=31.0, SD=4.8) groups in perceived stigma (p=.55)
* There were no differences between Black (M=65.9, SD=11) and White (M=65.0, SD=11.4) groups in internalised stigma (p=.42)
 |
| Caplan 2011 [22] | USA | Depression | Hispanic (Nmaj=91)Hispanic (Nmin=86) | Clinical  | * Self-report
* Study-constructed
 | * There was higher anticipated stigma among minority Hispanic group compared to the majority (p=0,015)
 |
| Cheng 2015 [15] | USA | Depression | White (Nmaj=206)Asian (Nmin=231) | Community | * Vignette
* AQ
 | * There was more discrimination(i.e. desire for social distance) against a person with depression among Asian group (M=3.16, SD=1.06) compared to White (M=2.80, SD=1.18) p=0.004
* There was more discrimination (i.e. less willingness to hire and rent) against a person with depression among Asian group (M=5.54, SD=1.64) compared to White (M=6.00, SD=1.82) p=0.008
* There was more prejudice (i.e. blame) against a person with depression among Asian group (M=4.18, SD=1.63) compared to White (M=3.73, SD=1.78) p=0.02
* There was more prejudice (i.e. anger) against a person with depression among Asian group (M=3.26, SD=1.90) compared to White (M=2.58, SD=1.72) p=0.002
* There was more prejudice (i.e. fear of someone) against someone with depression among Asian group (M=3.78, SD=1.96) compared to White (M=3.32, SD=2.01) p=0.54
 |
| Conner 2010 [43] | USA | Various | White (Nmaj=229)Black (Nmin=201) | Community | * Self-report
* ISMI
* PDD
 | * There was no differences in perceived stigma between Black (M= 2.61, SD= 0.28) and White (M= 2.59, SD= .29) groups t [246]=-0.58
* There was more internalised stigma among Black (M=2.18, SD=0.30) compared to White (M=2.10, SD=0.30) group (t [246]=-2.118, p= .035).
 |
| Conner 2009 [40] | USA | Various | White (Nmaj=51)Black (Nmin=48) | Other | * Self-report
* ISMI
* PDD
 | * There was more perceived stigma among Black (M = 2.90, SD = 0.75) compared to White (M = 2.32, SD = 0.55) group (p < .001)
* There was more internalised stigma among Black (M = 2.75, SD = 0.81) compared to White (M = 2.30, SD = 0.53)
 |
| Copelj 2011 [41] | Australia | Depression | White (Nmaj=54)Other (Nmin=54) | Community | * Self-report
* DSS
 | * There was more perceived stigma (i.e. perceived attitudes of others about depression) among Other group (M=17.82, SD=7.58) compared to White (M=9.03, SD=5.36) F=32.95
* There was more stereotype (i.e. personal attitudes toward depression) about depression among Other group (M=25.16, SD=6.13) compared to White (M=19.35, SD=8.79) F=10.78
 |
| Eisenberg 2009 [42] | USA | Various | White (Nmaj=3780Asian (Nmin=579)Black (Nmin=266)Hispanic (Nmin=302)Combination(Nmin=240)Other(Nmin=290) | Students | * Self-report
* PDD
 | * There was more perceived stigma for depression among Black (M=2.77),Hispanic (M=2.50) Asian (M=2.50), Combination (M=2.48) and Other (M=2.54) groups compared to White (M=2.38
* There was more stereotype (i.e. personal attitudes toward depression) about depression among Asian (M=1.45) compared to Black (M=0.93), Hispanic (M=1.05), Combination (M=0.91), Other (M=1.10) groups compared to White (M=0.95)
 |
| Fogel 2005 [16] | USA | Depression | White (Nmaj=66817)Asian (Nmin=1839) | Community | * Self-report
* Study-constructed
 | * There was more anticipated stigma for depression related with depression among Asian (M=2.45, SD=1.22) compared to White (M=2.10, SD=1.25) F=144.40, (p<0.001)
* There was more anticipated stigma for depression related with employer among Asian (M=2.93, SD=1.07) compared to White (M=2.68, SD=1.16) F=85.55, (p<0.001)
* There was more anticipated stigma for depression related with family among Asian (M=2.23, SD=1.19) compared to White (M=1.71, SD=1.18) F=360.38 (p<0.001)
 |
| Georg Hsu 2008 [17] | USA | Depression | White (Nmaj=100)Asian (Nmin=100) | Community  | * Vignette
* Study-constructed
 | * There was more stereotype (i.e. personal attitudes toward depression) about depression among Asian (M=39.4) compared to White (M=15.0) P=0.000
 |
| Givens 2007 [21] | USA | Depression | White (Nmaj=68319)Black (Nmin=3596)Asian (Nmin=2794)Hispanic (Nmin=3203)Other (Nmin=841) | Community | * Self-report
* Study-constructed
 | * There was more anticipated stigma for depression related with family among Asian (M=71.7, SD=1.24), Black (M=68.5, SD=1.24), Hispanic (M=61.8, SD=0.89) and Other (M=60.4, SD=0.96) groups compared to White (M=63.1, SD=1.00)
* There was more anticipated stigma for depression related with family among Asian (M=55.0, SD=1.30), Black (M=45.4, SD=1.08), Hispanic (M=42.8, SD=0.91) and Other (M=43.01, SD=1.01) groups compared to White (M=43.03, SD=1.0)
* There was more anticipated stigma for depression related with employer among Asian (M=42.9, SD=1.88), African (M= 26.8, SD=0.92),
* Hispanic (M=28.1, SD=0.96) and Other (M=27.5, SD=1.01) groups compared to White (M=27.9, SD=1.0)
 |
| Hickie 2007 [43] | Australia | Depression | White (Nmaj=38)Asian (Nmin=184) | Students | * Self-report
* Study-constructed
 | * There were no differences in discrimination against those with depression related with employer among Asian compared to White groups (p= 1.00)
* There were no differences in discrimination against those with depression related with family (among Asian compared to White groups (p= 0.05)
* There was more discrimination against those with depression related with friends among Asian compared to White groups (p=0.04)
* There was more discrimination against those with depression related with doctor/health professional among Asian compared to White groups (p=0.001)
* There was more stereotype (i.e. perception of those with depression as dangerous) among Asian compared to White groups (p= 0.000)
* There was more prejudice (i.e. blame) against those with depression among Asian compared to White groups (p= 0.000)
 |
| Jimenez 2012 [23] | USA | Various | White (Nmaj=1257)(Black (Nmin=536)Asian (Nmin=112)Hispanic (Nmin=303) | Other | * Self-report
* Study-constructed
 | * There was more anticipated stigma for having any CMDs among Hispanic (40.3%) compared to Asian (25.9%), Black(12.9%) groups compared to White (15.3%) p=0.000
 |
| Makowski 2017 [11] | Germany | Various | White (Nmaj=1622)Other (Nmin=364) | Community | * Self-report
* Study-constructed
 | * Other group had more prejudice (i.e. perception of migrants with depression as scary) (M=2.28; SE=0.11) compared to White group (M=1.82; SE=0.04)F=8.179; (p=0.000)
* Other group had more prejudice (i.e. perception of migrants with depression as having problems with comprehension) (M=2.04, SE=0.11) compared to White groups (M=1.64, SE=0.04) F=5.796, (p=0.003)
* Other group had more prejudice (i.e. feeling more uncomfortable) (M=2.50, SE=0.13) against migrants with depression compared to White (M=2.00; SE=0.04) F=9.339 (p=0.000)
* Other group had more stereotypes (i.e. perception of migrants with depression as feeling inadequate around others) (M=2.47, SE=0.07) compared to White (M=2.31, SE=0.02) F=3.539 (p=0.029)
 |
| Menke 2009 [44] | USA | Depression | White (Nmaj=744)Black (Nmin=147) | Clinical | * Self-report
* LSCS
 | * There was more perceived stigma for depression among Black group (M=46.16; SD=12.59) compared to White (M=41.95; SD=18.89) t=3.35 (p=0.000)
 |
| Mokkarala 2016 [45] | USA | Various | White (Nmaj=116)Asian (Nmin=61) | Students | * Self-report
* Study-constructed

  | * There were no significant differences in perceived stigma (shame) for having any CMDs between White (M=1.90, SD=0.67) and Asian groups (M=2.04, SD=0.57), t=1.29
 |
| Nadeem 2007 [8] | USA | Depression | White (Nmaj=886)Black (Nmin=1497)Hispanic(Nmin=5153) | Clinical | * Self-report
* Study-constructed
 | * There was more stereotype (i.e. personal attitudes toward depression) about depression among Black (p=.037) and Hispanic (p=.30) groups compared to White.
 |
| O`Mahen 2011 [46] | USA | Depression | White (Nmaj=251)Black (Nmin=281) | Other | * Self-report
* LSCS
 | * There was more perceived stigma for depression among Black (M=42.31, SD=5.76) compared to White groups (M=40.04, SD=6.44) (p=0.000)
 |
| Papadopoulos 2002 [47] | UK | Various | White (Nmaj=79)Other (Nmin=91) | Community | * Self-report
* CAMI-23
 | * There was more discrimination (i.e. desire for more social distance) towards those with CMDs among Other group compared to White (p<.001)
* There was more stereotype about those with CMDs among Other group compared to White (p<.001)
 |
| Picco 2016 [48] | Singapore | Various | Asian (Nmaj=150)Asian (Nmin=130) | Clinical | * Self-report
* ISMI
 | * There was more internalised stigma (i.e. alienation, social withdrawal) among the minority Asian group compared to the majority (p=0.615); IN (p=0.161)
 |
| Rao 2007 [49] | USA | Various | White (Nmaj=158)Black (Nmin=71)Asian (Nmin=28)Hispanic (Nmin=100) | Students | * Vignette
* AQ
 | * There was more stereotype (i.e. perceiving people with CMDs and dangerous) among Black (M=14)(p<.001) and Asian (M=11) groups compared to White (M=12) and Hispanic (M=9) (p<.001)
* There was more discrimination (i.e. desire for segregation) against those with CMDs among African (M=13) (p<.001), Asian (M=13) groups compared to White (M=11) and Hispanic (M=10) (p<.005)
 |
| Rüsh 2012 [50] | UK | Various | White (Nmaj=2990)Comb (Nmin=429) | Community | * Self-report
* CAMI-23
 | * There was more prejudice and discrimination (i.e. desire for segregation) against people with CMDs among Black (p<0.001) and Asian groups compared to White (p<0.001)
* There was less tolerance and support for people with CMDs among Black (p<0.001) and Asian groups compared to White (p=<0.005)
* There was more discrimination against those with CMDs among African (p<0.001) and Asian groups compared to White (p<0.001)
 |
| Schafer 2011 [51] | UK | Various | White (Nmaj=209)Black (Nmin=63) | Students | * Self-report
* CAMI-23
 | * There was more stereotype (i.e. negative attitudes) against those with any CMDs among Black (M=2.27) compared to White groups (M=1.93) t=-4.563 (p=0<001)
 |
| Shamblaw 2015 [52] | Canada | Depression | White (Nmaj=200)Asian (Nmin=276) | Students | * Self-report
* DAQ
* SDS
 | * There was more stereotype against those with depression among Asian (M=115.71, SD=24.74) compared to White (M=105.72, SD=27.08), t=4.07 (p<0.001)
* There was more discrimination (i.e. desire for social distance) among Asian (M=37.30, SD=9.21) compared to White groups (M=40.26, SD=9.40), t=3.34, (p=0.001)
 |
| Subramaniam 2017 [23] | Singapore | Various | Asian (Nmaj=1034)Asian (Nmin=977)Asian (Nmin=963)Other (Nmin=32) | Community | * Self-report
* DSS
 | * There was more discrimination (i.e. desire for social distance) against those with CMDs among majority Asian group (M=12.00, SE=0.09) compared to minority Asian groups (M=10.89, SE=0.09), (M=11.52, SE=0.11) and Other (M=11.71, SE=0.45) (p<.001)
* There was more perceived stigma (i.e. perception of those with CMDs as weak not sick) among minority Asian groups (M=10.95, SE=0.06), (M=10.74, SE=0.08) compared to the majority (M=10.07, SE=0.06) (p<.001)
* There was more perceived stigma (i.e. perception of those with CMDs as dangerous and unpredictable) among minority Asian groups (M=11.60, SE=0.09),(M=11.75, SE=0.11) compared to the majority (M=11.61, SE=0.08) (p=0.66)
 |
| Wang 2013 [53] | USA | Various | White (Nmaj=467)Black (Nmin=221)Hispanic (Nmin=57)Other (Nmin=65) | Students | * Vignette
* SDS
 | * There was more discrimination (i.e. desire for social distance) against those with any CMDs among Black (M=24.28, SD=5.04), Other (M=23.60, SD=6.23) and Hispanic (M=23.17, SD=4.87) compared to White (M=22.41, SD=5.07), F=6.32 (p=0.000)
 |

*Note.* Various: Several CMDs are studied together and/or the type of CMD was not specified; CMDs: Common Mental Disorders; Recruitment: Community: Community sample; Clinical: Clinical sample; Student: Student sample; AQ: Attribution Questionnaire; CAMI-23: Community Attitudes towards Mentally Ill Scale; ISMI: Internalized Stigma of Mental Illness Scale; PDD: Perceived Devaluation and Discrimination Scale; SDS: Social Distance Scale; DSS: Depression Stigma Scale; DAQ: Depression Attribution Questionnaire: LSCS: Link Stigma Consciousness Scale; Study-Constructed: study-constructed questionnaires; Nmin: Sample size for racial minorities; Nmaj: Sample size for racial majorities; M: mean; SD: standard deviation; p: p value; SE: standard error; t= t statistic; F: F statistic.

Table 2. Risk of Bias Assessment of all the studies (*N* = 29)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***Study*** | ***Type of Studies*** | ***Analyses*** | ***Confound*** | ***Data collection*** | ***Select Bias*** | ***Study Design*** | ***RoB a)*** |
| Adewuya, 2008 [38] | Self-report | Low | High | Low | Low | High | High |
| Ahn 2015 [39] | Self-report | Low | High | Low | Low | High | High |
| Anglin 2006 [18] | Vignette | Low | Low | High | Low | Low | High |
| Aznar-Lou 2016 [33] | Self-report | Low | Low | Low | High | Low | Moderate |
| Brown 2010 [19] | Self-report | High | Low | High | Low | Low | High |
| Caplan 2011 [22] | Self-report | Low | High | High | High | High | High |
| Cheng 2015 [15] | Vignette | Low | Low | Unclear | Low | Low | Moderate |
| Conner 2010 [43] | Self-report | Low | High | Low | Low | Low | Moderate |
| Conner 2009 [40] | Self-report | Low | High | Low | High | Low | High |
| Copelj 2011 [41] | Self-report | Low | High | High | High | Low | High |
| Eisenberg 2009 [42] | Self-report | Low | Low | Low | High | Low | Moderate |
| Fogel 2005 [16] | Self-report | Low | High | High | Low | Low | High |
| Georg Hsu 2008 [17] | Vignette | Unclear | High | High | High | High | High |
| Givens 2007 [21] | Self-report | High | High | Low | High | Low | High |
| Hickie 2007 [43] | Self-report | Low | High | High | High | Low | High |
| Jimenez 2012 [23] | Self-report | Low  | Low | High | Unclear | Low | Moderate |
| Makowski 2017 [11] | Self-report | Low | Low | High | Low | Low | Moderate |
| Menke 2009 [44] | Self-report | Low | High | Low | High | High | High |
| Mokkarala 2016 [45] | Self-report | Low | High | High | Low | Low | High |
| Nadeem 2007 [8] | Self-report | Low | Low | High  | High | Low | High |
| O`Mahen 2011 [46] | Self-report | Low | Low | Unclear | High | High | High |
| Papadopoulos 2002 [47] | Self-report | Low | High | Unclear | High | High | High |
| Picco 2016 [48] | Self-report | Low | Low | Low | High | High | High |
| Rao 2007 [49] | Vignette | Unclear | Low | Low | High | Low | High |
| Rüsh 2012 [50] | Self-report | Low | Low | Low | Low | Low | Low |
| Schafer 2011 [51] | Self-report | High | High | Low | High | High | Low |
| Shamblaw 2015 [52] | Self-report | Low | High | Low | High | High | High |
| Subramaniam 2017 [23] | Vignette | Low | Low | Low | Low | Low | Low |
| Wang 2013 [53] | Vignette | Low | High | High | High | High | High |

*Note*. Low: Low risk of bias; High: High risk of bias; Unclear: reviewers were not able to reach consensus due to lack of information; a) In this column, high refers to the high risk of bias (studies which scored high risk of bias in 3 or more of the assessment domains); moderate refers to the moderate risk of bias (studies which scored high risk of bias in 2 of the assessment domains) and low refers to the low risk of bias (studies which scored high risk of bias in 1 of the assessment domains); RoB: Risk of Bias Assessment

Table 3. Stigma for racial minorities and majorities: Pooled effect sizes of primary outcomes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  *Characteristics* | *N*comp | *g* | 95% *CI* | *I*2 | 95% *CI* | *Pa* |
| Primary Analyses |  |  |  |  |  |  |
| All analyses | 39 | 0.20 | 0.12~0.27 | 91% | 89~93 | **<.001** |
| High risk of bias studies excluded | 29 | 0.20 | 0.10~0.25 | 88% | 84~90 | **<.001** |
| Standardized outcomes only | 16 | 0.23 | 0.10~0.36 | 84% | 75~89 | **<.001** |
| Outliers excluded | 12 | 0.29 | 0.21~0.36 | 29% | 0~63 | **<.001** |
|  |  |  |  |  |  |  |
| Subgroup Analyses  |  |  |  |  |  |  |
| Ethnicity Asian | 4 | 0.29 | 0.17~0.42 | 23% | 0~75 | **<.001** |
|  Black | 5 | 0.30 | 0.13~0.36 | 55% | 0~81 | **<.001** |
|  Other | 3 | 0.26 | -0.01~0.41 | 17% | 0~77 | **. 001** |
|  Total betweenb |  |  |  |  |  | .93 |
| Quality Moderate | 5 | 0.21 | 0.10~0.32 | 0% | 0~64 | **<.001** |
|  Strong | 2 | 0.24 | 0.13~0.34 | a) | b) | **<.001** |
|  Weak | 5 | 0.40 | 0.26~0.54 | 33% | 0~75 | **<.001** |
|  Total between |  |  |  |  |  | .08 |
| Outcome Self-report | 7 | 0.25 | 0.14~0.36 | 37% | 0~72 | **<.001** |
|  Vignette | 5 | 0.34 | 0.25~0.44 | 0% | 0~64 | **<.001** |
|  Total between |  |  |  |  |  | .19 |

*Note*. Ncomp: Number of comparisons; pa: Values indicating the difference within subgroups; Total betweenb: p value indicating the difference between the sub groups

a) The 95% *PI* cannot be calculated when the number of studies is lower than 3.

b) The 95% *CI* of *I*2 cannot be calculated when the number of studies is lower than 3.

Table 4. Multi-variate meta-regression analyses of predictors of stigma, by quality of studies, ethnicity and type of stigma outcomes in 10 studies of stigma in ethnic minorities and majorities

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  *Characteristics* | *N* | *SE* | *β* | *95% CI* | *Z* | *P* |
| Stigma Outcome |  |  |  |  |  |  |
| Self-report | 7 | 0.09 | 0.14 | -0.17~0.37 | 0.70 | .48 |
| Vignette (ref) | 5 |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  Quality of the Studies |  |  |  |  |  | .11 |
| Weak | 5 | 0.13 | 0.27 | 0.01~0.53 | 2.07 | **.04** |
| Strong | 2 | 0.11 | -0.03 | -0.25~0.18 | -0.34 | .73 |
| Moderate (ref) | 5 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Ethnicity |  |  |  |  |  | .42 |
| Asian | 4 | 0.12 | 0.28 | -0.08~0.41 | 1.31 | .19 |
| Black | 5 | 0.10 | 0.53 | -0.11~0.29 | 0.83 | .40 |
| Other (ref) | 3 |  |  |  |  |  |
| *Note*. Point Est: Point Estimate; p: values indicating the difference between the effect sizes in subgroups; ref: reference group |  |  |  |  |  |  |

Table 5. Stigma for CMDs between racial minorities and majorities: Effect sizes of primary outcomes in all studies

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  Study | *Ethnic Group* | *Type*  | *Outcomes* | *g* | 95% *CI* | Forest plot of Hedges’ g and 95% CI |
| Adewuya, 2008 [38] | Other | SR | SDS | -0.15 | -0.36~0.05 |  |
| Ahn 2015 [39] | Asian | SR | PDD | -0.12 | -0.21~-0.03 |
| Anglin 2016 [18] | Black | VIG | Study | -0.13 | -0.32~0.05 |
| Aznar-Lou 2016 33] | Asian | SR | CAMI-23 | 0.67 | -0.06~1.42 |
| Aznar-Lou 2016 33] | Black | SR | CAMI-23 | 0.15 | -0.11~0.41 |
| Aznar-Lou 2016 33] | Other | SR | CAMI-23 | 0.17 | -0.07~0.41 |
| Brown 2010 [19] | Black | SR | ISMI, PDD | -0.07 | -0.25~0.11 |
| Caplan 2011[22] | Hisp. | SR | Study | -0.04 | -0.33~0.24 |
| Cheng 2015 [15] | Asian | VIG | AQ | 0.29 | 0.10~0.48 |
| Conner 2010 [43] | Black | SR | ISMI, PDD | 0.16 | -0.02~0.35 |
| Conner 2009 [40] | Black | SR | ISMI, PDD | 0.76 | 0.36~1.17 |
| Copelj 2011[41] | Other | VIG | DSS | 1.04 | 0.64~1.44 |
| Eisenberg 2009 [42] | Asian | SR | PDD | 0.16 | 0.07~0.24 |
| Eisenberg 2009 [42] | Black | SR | PDD | 0.51 | 0.39~0.64 |
| Eisenberg 2009 [42] | Hisp. | SR | PDD | 0.15 | 0.04~0.27 |
| Eisenberg 2009 [42] | Other | SR | PDD | 0.17 | 0.04~0.29 |
| Fogel 2005 [16] | Asian | SR | Study | 0.31 | 0.26~0.35 |
| Georg Hsu 2008 17] | Asian | VIG | Study | 0.67 | 0.27~1.07 |
| Givens 2007 [21] | Native | SR | Study | -0.21 | -0.27~-0.14 |
| Givens 2007 [21] | Hisp. | SR | Study | -0.01 | -0.05~0.02 |
| Hickie 2007 [43] | Asian | SR | Study | 0.33 | -0.01~0.68 |
| Jimenez 2012 [23] | Black | SR | Study | 0.16 | 0.05~0.26 |
| Makowski 2017 11] | Other | VIG | Study | 0.15 | -0.00~0.31 |
| Menke 2009 [44] | Black | SR | LSCS | 0.23 | 0.05~0.41 |
| Mokkarala 2016 45] | Asian | SR | Study | 0.21 | -0.09~0.52 |
| Nadeem 2007 [8] | Black | SR | Study | 0.16 | -0.09~0.52 |
| Nadeem 2007 [8] | Hisp. | SR | Study | 0.13 | 0.01~0.24 |
| O`Mahen 2011 [46] | Black | SR | LSCS | 0.37 | 0.20~0.54 |
| Papadopoulos 2002 47 | Other | SR | CAMI-23 | 0.51 | 0.09~0.24 |
| Picco 2016 [48] | Asian | SR | ISMI | -0.14 | 0.20~0.81 |
| Rao 2007 [49] | Asian | VIG | AQ | 0.47 | 0.19~0.75 |
| Rao 2007 [49] | Hispanic | VIG | AQ | 0.42 | 0.17~0.67 |
| Rüsh 2012 [57] | Asian | SR | CAMI-23 | 0.21 | 0.11~0.45 |
| Rüsh 2012 [50] | Black | SR | CAMI-23 | 0.28 | 0.22~0.89 |
| Schafer 2011[51] | Black | SR | CAMI-23 | 0.56 | 0.16~0.54 |
| Shamblaw 2015 [52] | Asian | SR | DAQ, SDS | 0.35 | -0.23~-0.06 |
| Subramaniam 2017 [23] | Asian | VIG | DSS | -0.14 | 0.08~0.23 |
| Wang 2013 [53] | Black | VIG | SDS | 0.36 | 0.20~0.53 |
| Wang 2013 [53] | Hisp. | VIG | SDS | 0.15 | -0.12~0.42 |

*Note.* HISP: Hispanic; SR: Self-Report; VIG: Vignette; Study: Study-constructed questionnaire

Table 6. Stigma for CMDs between racial minorities and majorities: Forest plot when outliers are excluded

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  Study | *Ethnic Group* | *Type of Study* | *Outcomes* | *g* | 95% *CI* | g (95% CI) |
| Aznar-Lou 2016 [33] | Asian | Self-report | CAMI-23 | 0.67 | -0.06~1.42 |  |
| Aznar-Lou 2016 [33] | Black | Self-report | CAMI-23 | 0.15 | -0.11~0.41 |
| Aznar-Lou 2016 [33] | Other | Self-report | CAMI-23 | 0.17 | -0.07~0.41 |
| Cheng 2015 [15] | Asian | Vignette | AQ | 0.29 | 0.10~0.48 |
| Conner 2010 [43] | Black | Self-report | ISMI, PDD | 0.16 | -0.02~0.35 |
| Conner 2009 [43] | Black | Self-report | ISMI, PDD | 0.76 | 0.36~1.17 |
| Rao 2007 [49] | Asian | vignette | AQ | 0.47 | 0.19~0.75 |
| Rao 2007 [49] | Hispanic | vignette | AQ | 0.42 | 0.17~0.67 |
| Rüsh 2012 [50] | Asian | Self-report | CAMI-23 | 0.21 | 0.11~0.45 |
| Rüsh 2012 [50] | Black | Self-report | CAMI-23 | 0.28 | 0.22~0.89 |
| Wang 2013 [53] | Black | vignette | SDS | 0.36 | 0.20~0.53 |
| Wang 2013 [53] | Hispanic | vignette | SDS | 0.15 | -0.12~0.42 |