**Supplementary Materials**

Supplementary Table 1: Search strategy and number of hits per database (current to 30th September 2022).

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| --- | --- | --- |
| **Database** | **String** | **Number of records** |
| PubMed (Medline) | ("Sexual and Gender Minorities"[Mesh]) AND ("Stress Disorders, Post-Traumatic"[Mesh]) | 64 |
| Scopus | ( ( TITLE-ABS-KEY ( lgbt ) OR TITLE-ABS-KEY ( lgbtiq ) OR TITLE-ABS-KEY ( sexual AND minority ) OR TITLE-ABS-KEY ( sexual AND minorities ) ) ) AND ( ( TITLE-ABS-KEY ( ptsd ) OR TITLE-ABS-KEY ( post-traumatic AND stress AND disorder ) ) ) | 288 |
| EMBASE | ('sexual and gender minority'/exp OR 'gender minorities' OR 'gender minority' OR 'sexual and gender minorities' OR 'sexual and gender minority' OR 'sexual minorities' OR 'sexual minority' OR 'lgbtqia+ people'/exp OR 'glbti individual' OR 'glbti+' OR 'glbtq individual' OR 'glbtq+' OR 'glbtqq' OR 'lgbti+' OR 'lgbtiaq' OR 'lgbtiq+' OR 'lgbtiqa+' OR 'lgbtiqq' OR 'lgbtq people' OR 'lgbtq+' OR 'lgbtq2' OR 'lgbtq2s' OR 'lgbtq2sia+' OR 'lgbtqa' OR 'lgbtqai' OR 'lgbtqia' OR 'lgbtqia+' OR 'lgbtqia+ people' OR 'lgbtqia2s+' OR 'lgbtqpia+' OR 'lgbtqq' OR 'lgbtqqia' OR 'lgbttq+' OR 'lgbttqqiaap' OR 'lgtbqa' OR 'bisexual, gay, lesbian, pansexual, queer, questioning' OR 'gay, bisexual, lesbian, queer, pansexual, asexual' OR 'gay, lesbian, bisexual, pansexual, queer, asexual' OR 'gay, lesbian, bisexual, transgender and intersex' OR 'gay, lesbian, bisexual, transgender and queer/questioning' OR 'gay, lesbian, bisexual, transgender or queer' OR 'gay, lesbian, bisexual, transgender or questioning' OR 'gay, lesbian, bisexual, transgendered and questioning' OR 'gay, lesbian, bisexual, transgendered, queer and questioning' OR 'gender-expansive people' OR 'lesbian, bisexual, queer or pansexual' OR 'lesbian, gay, bisexual or queer questioning people' OR 'lesbian, gay, bisexual, pansexual or queer' OR 'lesbian, gay, bisexual, pansexual, queer and transgender' OR 'lesbian, gay, bisexual, pansexual, queer and/or transgender' OR 'lesbian, gay, bisexual, pansexual, transgender, genderqueer' OR 'lesbian, gay, bisexual, queer and pansexual' OR 'lesbian, gay, bisexual, trans and intersex' OR 'lesbian, gay, bisexual, trans, queer or asexual' OR 'lesbian, gay, bisexual, transgender and intersex' OR 'lesbian, gay, bisexual, transgender and queer' OR 'lesbian, gay, bisexual, transgender and queer/questioning' OR 'lesbian, gay, bisexual, transgender, intersex and queer' OR 'lesbian, gay, bisexual, transgender, intersex or queer' OR 'lesbian, gay, bisexual, transgender, intersex, queer and questioning' OR 'lesbian, gay, bisexual, transgender, intersex, queer/questioning and allied' OR 'lesbian, gay, bisexual, transgender, queer and 2 spirit' OR 'lesbian, gay, bisexual, transgender, queer, 2-spirit, intersex or asexual' OR 'lesbian, gay, bisexual, transgender, queer, intersex and asexual' OR 'lesbian, gay, bisexual, transgender, queer, intersex, asexual' OR 'lesbian, gay, bisexual, transgender, queer/questioning, intersex and allies' OR 'lesbian, gay, bisexual, transgender, queer/questioning, intersex and asexual' OR 'lesbian, gay, bisexual, transgender, transsexual and queer questioning' OR 'lesbian, gay, bisexual, transgender, transsexual, queer, questioning, intersex, asexual, ally, pansexual' OR 'lesbian, gay, bisexual, transgender, two-spirit, and queer' OR 'lesbian, gay, bisexual, transgender/gender diverse, questioning/queer, intersex and asexual' OR 'lesbian, gay, bisexual, transgender/transsexual, intersex and queer/questioning' OR 'lesbian, gay, bisexual, transgendered, queer, questioning, intersex, asexual or two-spirited' OR 'lesbian, gay, bisexual, transsexual, transgender and queer' OR 'lesbian, queer, bisexual, pansexual and asexual' OR 'lesbian/gay/bisexual/transgender/transsexual/queer' OR 'lesbians, gays, bisexuals, transgender, questioning and asexuals' OR 'pansexual, lesbian, queer, bisexual, gay, questioning') AND ('posttraumatic stress disorder'/exp OR 'ptsd' OR 'ptsd (posttraumatic stress disorder)' OR 'post-traumatic stress' OR 'post-traumatic stress disorder' OR 'post-traumatic stress disorders' OR 'posttraumatic neurosis' OR 'posttraumatic psychic syndrome' OR 'posttraumatic psychosis' OR 'posttraumatic stress' OR 'posttraumatic stress disorder' OR 'posttraumatic syndrome' OR 'psychosis, posttraumatic' OR 'stress disorders, post-traumatic' OR 'stress disorders, traumatic' OR 'stress, posttraumatic' OR 'trauma and stressor related disorders' OR 'traumatic stress' OR 'traumatic stress disorder' OR 'traumatic stress disorders') | 493 |
| PsycINFO | (MA ( lgbtq or lesbian or gay or homosexual or bisexual or transgender or homosexual or queer or sexual minority ) OR PO ( lgbtq or lesbian or gay or homosexual or bisexual or transgender or homosexual or queer or sexual minority )) AND (MA ptsd or post traumatic stress disorder or posttraumatic stress disorder or post-traumatic stress disorder) | 35 |

Supplementary Table 2: Summary of traumatic experiences reported in the included studies

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, Year** | **N LG**  **(% Females)** | **N B**  **(% Females)** | **N T**  **(% Females)** | **N other SM**  **(% Females)** | **N LGBTQ (% Females)** | **N Controls**  **(% Females)** | **Traumatic situations** |
| Alba et al. 2022 | 756  (32.1) | NR | NR | NR | 756  (32.1) | NR | NR |
| Bettis et al. 2020 | 38 | 125 | NR | 15 | 178 | 266 | ACE. |
| Brewerton et al. 2022 | 29 | 69 | NR | 29 | 127 | 415 | Unwanted sexual experience, physical assault, sexual assault, and exposure to severe human suffering. |
| Brown et al. 2016 | NR | NR | 5135 | NR | 5135 | 15405 | Veteran sample, but war-related trauma not reported. |
| Burns et al. 2015 | 329 | 96 | NR | 24 | 449 | NR | NR |
| Caceres et al. 2019 | 323 | 137 | NR | 87 | 547 | 0 | Physical abuse, sexual abuse, and parental neglect before the age of 18; physical abuse, sexual abuse, and IPV after the age of 18. |
| Carey et al. 2022 | 1824  (64) | 1614  (59.6) | NR | NR | 3438  (61.9) | 93492  (28) | Veteran sample, but war-related trauma not reported. |
| Evans-Polce et al. 2020 | NR | NR | NR | NR | 3203 | 32593 | Sexual orientation discrimination (only in the SM sample), stressful life events, ACE, and lack of social support. |
| Flentje et al. 2016 | 100  (56) | 88  (75) | 49  (67.3) | 54  (38.9) | 242  (59.1) | 714  (27) | NR |
| Hao et al. 2021 | 26 | 25 | 3 | 2 | 56 | 44 | NR |
| Harper et al. 2021 | 196 | 250 | 62 | 16 | 524 | NR | IPV and SGMV. |
| Hatzenbuehler et al. 2009 | NR | NR | NR | NR | 577  (51.3) | 34076  (52.1) | Living (or not) in a state with policies extending protection to lesbian, gay, and bisexual individuals. |
| Holloway et al. 2021 | NR | NR | 58 | 187 | 245 | 295 | NR |
| Jeffery et al. 2021 | 424  (73.6) | 439  (71.7) | NR | NR | 863 | 13542  (35.3) | Unwanted sexual contact and physical assault. Veteran sample, but war-related trauma not reported. |
| Lehavot et al. 2014 | 209 | 55 | NR | NR | 264 | 442 | Childhood trauma; adult sexual and physical victimization; combat exposure; discrimination; and past-year sexist events. Sexual assault during military service increased the risk of PTSD especially among lesbian and bisexual women. |
| Livingston et al. 2022 | NR | NR | 9995 | NR | 9995 | 29985 | Military sexual trauma reported only for descriptive purpose. |
| Lucas et al. 2018 | NR | NR | NR | NR | 110 | 330 | Military sexual assault. |
| McDonald et al. 2020 | NR | NR | NR | NR | 67  (56.7) | 573  (23.1) | NR |
| Mustanski et al. 2010 | 152 | 70 | 20 | NR | 246 | NR | NR |
| Roberts et al. 2012 | 196 | 172 | NR | NR | 368 | 7828 | Childhood maltreatment. |
| Rodriguez-Seijas et al. 2019 | 581 | 581 | NR | NR | 1162 | 32425 | Discrimination due to sexual orientation and race/ethnicity. |
| Schefter et al. 2022 | 14 | 8 | 1 | NR | 22 | 379 | Gynecologic cancer. |
| Terra et al. 2022 | 60 | 151 | 9 | 1 | 221 | 1241 | NR |
| Walukevich-Dienst et al. 2019 | 13 | 31 | NR | 2 | 46 | 393 | NR |
| Wang et al. 2021 | NR | NR | 2890  (30.9) | NR | 2890  (30.9) | 8670  (6.3) | NR |
| Weiss et al. 2015 | 38 | 57 | NR | 14 | 109 | 368 | IPV, lack of social support, adult sexual assault, adult physical assault, ACE. |
| Whitbeck et al. 2004 | NR | NR | NR | NR | 63 | 366 | Physical and sexual abuse, neglect, and physical victimization. |

Abbreviations: LG: Lesbian and Gay; B: Bisexual; T: Transgender; SM: other Sexual Minorities; NR: Not Reported; ACE: adverse childhood experience; IPV: intimate partner violence; SGMV: sexual and gender minority-based violence.



Supplementary Figure 1: Forest plot of PTSD among lesbian compared with gay people.

Supplementary Figure 2: Forest plot of PTSD among B compared with LG people.

Supplementary Figure 3: Funnel plot of publication bias for PTSD estimate among LGBTQ people and controls.

Supplementary Table 3: Leave-one-out analysis of PTSD among LGBTQ and controls

|  |  |  |  |
| --- | --- | --- | --- |
| **Study ID** | **OR (95% CI)** | **p-value** | **I2** |
| Bettis et al. 2020 | 2.21 (1.85; 2.63) | <0.001 | 95% |
| Brewerton et al. 2022 | 2.20 (1.85; 2.63) | <0.001 | 95% |
| Brown et al. 2016 | 2.16 (1.81; 2.57) | <0.001 | 93% |
| Carey et al. 2022 | 2.23 (1.86; 2.66) | <0.001 | 94% |
| Evans-Polce et al. 2020 | 2.15 (1.80; 2.56) | <0.001 | 94% |
| Flentje et al. 2016 | 2.29 (1.94; 2.69) | <0.001 | 76% |
| Hao et al. 2021 | 2.21 (1.86; 2.63) | <0.001 | 95% |
| Hatzenbuehler et al. 2009 | 2.20 (1.84; 2.62) | <0.001 | 95% |
| Holloway et al. 2021 | 2.18 (1.83; 2.59) | <0.001 | 95% |
| Jeffery et al. 2021 | 2.27 (1.92; 2.69) | <0.001 | 94% |
| Lehavot et al. 2014 | 2.26 (1.90; 2.67) | <0.001 | 94% |
| Livingston et al. 2022 | 2.18 (1.83; 2.61) | <0.001 | 92% |
| Lucas et al. 2018 | 2.22 (1.86; 2.64) | <0.001 | 95% |
| McDonald et al. 2020 | 2.19 (1.84; 2.61) | <0.001 | 95% |
| Roberts et al. 2012 | 2.11 (1.80; 2.48) | <0.001 | 94% |
| Rodriguez-Seijas et al. 2019 | 2.11 (1.80; 2.49) | <0.001 | 93% |
| Schefter et al. 2022 | 2.18 (1.84; 2.58) | <0.001 | 95% |
| Terra et al. 2022 | 2.19 (1.84; 2.61) | <0.001 | 95% |
| Walukevich-Dienst et al. 2019 | 2.20 (1.85; 2.62) | <0.001 | 95% |
| Wang et al. 2021 | 2.19 (1.83; 2.62) | <0.001 | 95% |
| Weiss et al. 2015 | 2.20 (1.85; 2.62) | <0.001 | 95% |
| Whitbeck et al. 2004 | 2.21 (1.86; 2.64) | <0.001 | 95% |

Abbreviations: 95%CI: 95% confidence intervals.

Supplementary Table 4: Univariable meta-regression results on PTSD risk estimate among LGBTQ and controls

|  |  |  |
| --- | --- | --- |
| **Variable(s)** | **B (95% CI)** | **p-value** |
| Age | 0.003 (-0.013; 0.018) | 0.732 |
| % Females† | 0.001 (-0.007; 0.007) | 0.898 |
| Country:  USA  Brazil | 0.786 (0.611; 0.960)  0.034 (-0.971; 1.04) | <0.001  0.947 |
| Year of publication | -0.001 (-0.038; 0.037) | 0.989 |
| Measure of PTSD:  Manual  Psychometric scale  Self-reported | 0.996 (0.779; 1.21)  -0.402 (-0.721; -0.084)  -0.334 (-0.824; 0.155) | <0.001  0.013  0.181 |

Legend: †sex assigned at birth.

Abbreviations: B: unstandardized regression coefficient; 95% CI: 95% confidence intervals; PTSD: post-traumatic stress disorder.

Supplementary Figure 4: Risk of bias graph: review authors' judgements about each risk of bias item presented as percentages across all included studies.

Supplementary Figure 5: Risk of bias summary: review authors' judgements about each risk of bias item for each included study.

Supplementary Table 5: GRADE evidence summary for each outcome

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Certainty assessment** | | | | | | | **N of patients** | | **Effect** | **Certainty** | **Importance** |
| **N of studies** | **Study design** | **Risk of bias** | **Inconsistency** | **Indirectness** | **Imprecision** | **Other considerations** | **Sexual minorities** | **Controls** | **OR (95% CI)** |  |  |
| *LGBTQ vs non-LGBTQ* | | | | | | | | | | | |
| 22 | Observational studies | Serious | Serious | Not serious | Not serious | Not serious | 29381 | 273842 | 2.20 (1.85; 2.60) | +???  LOW | Important |
| *LG vs non-LGBTQ* | | | | | | | | | | | |
| 4 | Observational studies | Serious | Serious | Not serious | Not serious | Not serious | 2544 | 115576 | 1.96 (1.13; 3.39) | ????  VERY LOW | Important |
| *B vs non-LGBTQ* | | | | | | | | | | | |
| 4 | Observational studies | Serious | Serious | Not serious | Not serious | Not serious | 2313 | 115576 | 2.44 (1.05; 2.88) | +???  LOW | Important |
| *B vs LG* | | | | | | | | | | | |
| 7 | Observational studies | Serious | Serious | Not serious | Not serious | Not serious | 2616 | 3435 | 1.44 (1.07; 1.93) | ????  VERY LOW | Important |
| *T vs cisgender* | | | | | | | | | | | |
| 7 | Observational studies | Serious | Serious | Not serious | Not serious | Not serious | 18209 | 55893 | 2.52 (2.22; 2.87) | +???  LOW | Important |

Abbreviations: LGBTQ: Lesbian, Gay, Bisexual, Transgender, Intersex, Queer; 95% CI: 95% Confidence Intervals.

*Explanation of reasons for downgrading/upgrading:*

We GRADEd each pooled estimate for each relevant outcome according to the following criteria:

a. ***Risk of Bias:*** *We downgraded this domain by one level when any of the sources of Risk of Bias were rated as “high” or every two rated as “unclear” for the studies included in the pooled estimate.*

b. ***Inconsistency:*** *We downgraded this domain by one level where the I2 value indicated substantial levels of heterogeneity (i.e., I2≥75%).*

c. ***Indirectness:*** *We protected against indirectness in this review by ensuring all studies included in any meta-analysis assessed PTSD diagnosis using clinical interview, clinical chart/register analysis, or other validated measure of PTSD. We therefore did not downgrade this domain.*

d. ***Imprecision:*** *We downgraded this domain by one level where the 95% confidence interval included the null value.*

e. ***Other Considerations:*** *We considered here the impact of publication bias as detected by the Egger test; if publication bias was present (Egger’s test p-value <0.05) we downgraded by one level. Furthermore, we considered the magnitude of the effect and upgraded by one if ES was ≥0.8 by <1.4 (i.e., pooled OR ≥2.2 by <4.0) or two levels if ES ≥1.4 (i.e., pooled OR ≥4.0).*