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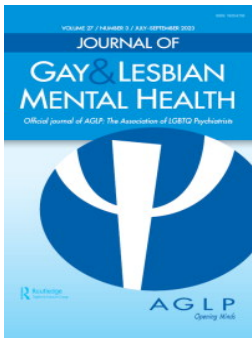


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# Interpersonal trauma in gay men: A systematic review of post-aggression risk and protective factors for PTSD

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## ABSTRACT

**Introduction:** This systematic review synthesizes research on post-aggression factors influencing the PTSD symptoms of gay male victims of physical or sexual aggression.

**Method:** Four databases with specific key words were systematically searched. Articles published between 1973 and 2022 focusing on adult gay men, PTSD symptoms, sexual or physical aggression experiences and post-aggression factors were included. Risks of bias and study characteristics were examined for cross-sectional studies.

**Results:** The search led to the inclusion of 26 articles containing five domains of post-aggression factors significantly associated with PTSD, i.e., cognitive, social, coping strategies, emotional and gay identity.

**Conclusion:** Clinical implications are discussed.

## ARTICLE HISTORY

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## Introduction

Interpersonal trauma, which is, by definition, caused by another human, can take on many forms (e.g., sexual or physical aggression) (Karatzias et al., 2016; Widera-Wysoczańska & Kuczyńska, 2010). This type of traumatic event can strongly impact the well-being of the victim and can contribute to high post-interpersonal trauma symptomatology (Breslau et al., 1998; Kessler et al., 1995). A population particularly at risk of experiencing interpersonal trauma is the gay male community, which faces some additive and specific minority stresses (e.g., discrimination due to their sexual orientation; D'Augelli et al., 2006; Roberts et al., 2010). Overall, the current scientific literature highlights the fact that interpersonal trauma is more prevalent among gay men than among their heterosexual counterparts. Indeed, one in two gay men report at least one experience of

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interpersonal violence compared to one in four heterosexual men (Roberts et al., 2010). Gay men experience significantly more severe *sexual victimization* such as unwanted sex (17.95% vs. 2.2%), attempted rape (15.1% vs. 2.2%) and rape (11.6% vs. 1.6%) than heterosexual men (Balsam et al., 2005; Roberts et al., 2010). Additionally, the prevalence of different types of *physical victimization*, such as being mugged (27.5% vs. 16.2%), attacked/beaten up (20.7% vs. 11.7%), and stalked (8.1% vs. 2.6%; Roberts et al., 2010), is significantly higher among gay men when compared with the heterosexual reference group. Not only do gay men experience more interpersonal traumatic events than heterosexual men do, but this type of traumatic experience is known to significantly increase the subsequent risk of developing posttraumatic stress disorder (PTSD) compared to other types of psychologically traumatic experiences (Kessler et al., 1995).

PTSD is a mental health consequence that can occur after the experience of an interpersonal traumatic experience (e.g., an exposure to an actual or threatened death, serious injuries or sexual violence; American Psychiatric Association, 2013). PTSD can include several types of symptoms, such as intrusive symptoms (e.g., dreams and flashbacks of the interpersonal traumatic event), avoidance of stimuli associated with the event, negative alterations of thoughts and emotions (e.g., inability to feel positive emotions) and alterations in activation and reactivity (e.g., startle and hypervigilance; American Psychiatric Association, 2013). This psychological disorder often leads to serious repercussions on a victim's life. More specifically, PTSD is associated with significant dysfunction (e.g., difficulty carrying out normal activities; Alonso et al., 2011), self-esteem instability (Kashdan et al., 2006), deleterious physical health consequences (Pacella et al., 2013), increased risk of suicidal behaviors (Stein et al., 2010), interpersonal disconnectedness (Dorahy et al., 2009), and co-occurring depression (Kessler et al., 1995). A recent systematic review of the lifetime prevalence rate of PTSD in the American civilian population showed that PTSD prevalence ranges from 3.4% to 8% (Schein et al., 2021). Roberts et al., 2010, found that the lifetime prevalence rate of PTSD among heterosexual men ( $N=13422$ ) exposed to a potentially psychologically traumatic event is estimated at 5%. The same study revealed that gay men ( $N=190$ ) who experienced a potentially psychological traumatic event have a 13.4% prevalence rate of developing lifetime PTSD (Roberts et al., 2010). However, the great difference in sample size in this study leads to the conclusion that these prevalence rates could differ between groups more equal in size.

This emphasizes the discrepancy between gay men and their heterosexual counterparts, not only with regards to the prevalence of interpersonal traumatic events but also on the subsequent PTSD symptomatology that may arise. It is imperative that researchers target key therapeutic risk and

protective factors, given this discrepancy. This would also help clarify the psychological mechanisms contributing to the distress of this sexual minority group (King, 2000). It would also contribute to the development of more specific psychotherapeutic prevention and intervention strategies for this population.

According to Brewin et al. (2000) and Sayed et al. (2015), three specific types of psychological trauma-related factors should be considered when planning the treatment of a victim's PTSD symptoms. In the context of the specific trauma of aggression, these are referred to as: peri-aggression, pre-aggression and post-aggression factors. The peri-aggression factors are related to the characteristics of the experienced aggression, such as the severity of perpetrated violence and the type of emotions felt by the victim during the aggression (e.g., fear, shame, helplessness or dissociative symptoms). The pre-aggression factors are elements of the victim's history that preceded the aggression (e.g., history of previous stressful events, history of psychological trauma). Finally, post-aggression factors, which occur after the aggression, can protect against distress (e.g., positive social support), maintain it or worsen it (e.g., self-attributions of the event or maladaptive coping strategies). In the present study a post-aggression factor is defined as (1) any factor following the aggression, (2) that may affect the distress of the victim, and (3) is not a one-time stressful event (such as divorce, personal bankruptcy, etc.). The post-aggression factors are of particular interest as they can generally be targeted in therapy and are therefore a source of hope in terms of the emotional integration process (Dalgleish et al., 2018).

Theoretical models of PTSD development guide the interventions for victims by proposing key post-aggression factors that contribute to their posttraumatic distress. Indeed, Joseph et al. (1995) point to the role of three post-aggression psychosocial factors that may moderate or aggravate the risk of suffering from posttraumatic distress. These post-aggression factors include cognitive factors (e.g., causal attributions), social support (e.g., support from family or friends) and coping strategies (e.g., behavioral disengagement).

Additionally, some authors suggest that emotional factors can interfere with victims' recovery following an interpersonal trauma. For instance, Foa et al. (1989) explain how in the context of psychological trauma, neutral stimuli associated with the event can be linked to an emotional response (e.g., fear of danger; Foa et al., 1989). Emotions can be reactivated during post-aggression recovery by the presence of similar stimuli, which can hinder posttraumatic remission (Foa et al., 1989). Other authors have recognized the importance of crucial negative emotions affecting PTSD such as sadness, anger, guilt and shame (Brewin et al., 2000; Lee et al., 2001; Pitman et al., 1991).

While all post-aggression factors within the cognitive, social, coping strategies and emotional domains may be relevant for gay men, the specific context of this population as a sexual minority may also be an important contributor to PTSD. In line with this, the minority stress model (Meyer, 1995) provides insight into crucial additional post-aggression factors specifically experienced by gay men. It is particularly important to better understand these factors since interpersonal trauma experienced by gay men may be distinct from events experienced by heterosexual people. In fact, contrary to heterosexual men, gay men may experience stigma, prejudice and discrimination aimed directly at their sexual orientation (i.e., distal minority stress; Kelleher, 2009). These potentially psychologically traumatic events could exacerbate the distress of gay men. Therefore, assessing post-aggression factors specific to gay men could help explain the higher level of distress experienced by them.

In this regard, Meyer (2003) indicates three proximal factors (internal processes of dealing with one's homosexuality) that could contribute to the fragility of gay men when they experience a psychologically traumatic event: (1) internalized homophobia/homonegativity (i.e., internalizing anti-homosexual social attitudes; Maylon, 1982), (2) hiding their sexual orientation, and (3) anticipating rejection from others due to their sexual orientation. Since the development of the theoretical model by Meyer, many other authors have considered additional proximal minority stressors, such as identity dissatisfaction/acceptance (Camp et al., 2020; Mohr & Fassinger, 2000). The addition of the minority stress theory to the existing conceptualization of PTSD presents a better understanding of the unique post-aggression factors in gay men that can exacerbate or alleviate PTSD symptomatology. It also adds a fifth domain (i.e., gay identity factors) to the four identified in Joseph et al. (1995) and Foa et al.'s (1989) theoretical model of domains that may influence a victim's posttraumatic response (i.e., cognitive, social, coping strategies and emotional post-aggression factors).

These theoretical conceptualizations of post-aggression factors allowed us to establish which main domains arise in the current literature regarding victims' PTSD. In summary, the cognitive, social, coping strategies, emotional and gay identity factors appear to emerge as important domains that may contribute to the development and maintenance of PTSD among gay men.

### **Research questions**

In the present article, we sought to systematically review the available literature on the association between post-aggression factors and PTSD following interpersonal trauma among gay men. When possible, we aimed

to study the results of comparisons between gay male victims and their heterosexual counterparts to better understand how post-aggression risk and protective factors are correlated with posttraumatic distress between these two groups. The results will allow us to answer the following questions:

- What are the post-aggression factors that contribute to the development of PTSD among gay male victims of sexual or physical trauma?
- Are there differences between gay and heterosexual men regarding these post-aggression factors?

## **Method**

### ***Selection of studies***

This systematic review followed the PRISMA guidelines (Page et al., 2020) and was registered on *PROSPERO*, an international database of systematic reviews on health and social well-being. The two independent investigators were doctoral students in psychology who both have bachelor's degrees in psychology. In order to determine studies' eligibility, as recommended by Higgins and Green (2008), the investigators reviewed the articles based on cues that referred to the selection criteria in the title or the abstract.

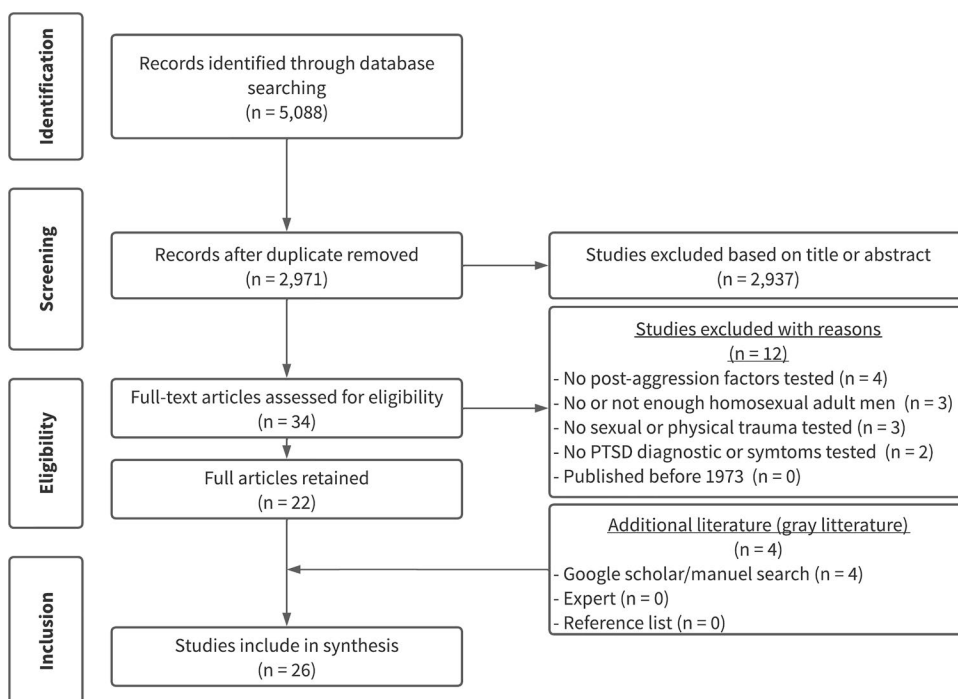
The Gender Studies, ProQuest, PsycINFO and PubMed bibliographic databases were searched using the following key words and combinations: (gay OR homosexual\* OR "same sex") AND ("posttraumatic stress disorder" OR "post-traumatic stress disorder" OR "PTSD" OR stress\* OR distress). To maximize the number of articles that potentially fit the inclusion criteria, the investigators of the current review also searched in Google Scholar, consulted the reference lists of the most relevant articles identified (i.e., Dillon, 2001) and sent emails to the authors of the retained articles asking them for suggestions regarding other eligible articles.

### ***Inclusion/exclusion criteria***

Eligible articles had to: (1) focus on adult gay men (mean age had to be 18 years or older), (2) use a measure of PTSD diagnosis or PTSD symptoms, (3) measure sexually or physically violent traumatic experiences, (4) measure at least one post-aggression factor (i.e., (1) any factor following the aggression, (2) that may affect the distress of the victim, and (3) is not a one-time stressful event (such as divorce, personal bankruptcy, etc.), and (5) be published between 1973 and 2022, following the withdrawal of homosexuality as a psychological disorder in the DSM-III.

Though English search terms were used, articles written in any language and using any type of empirical research design (quantitative, qualitative and mixed methods) were included. We accepted articles which included comorbid psychological diagnoses because comorbidity between PTSD and other psychological disorders is highly prevalent in heterosexual as well as LGBT samples (Cochran et al., 2003; Dunner, 2001). All post-aggression factor results were presented only if they were considered as predictors of PTSD, significantly or not, by the authors of the articles reviewed.

As seen in Figure 1, the database searches yielded 5,088 records. After discarding 2,117 duplicates, a total of 2,971 records remained. Of this number, 2,937 records were excluded following the title and abstract screening. As a result, 34 articles were retained for a full-text review. *EndNote X9* software was used throughout the screening process. The inter-rater reliability between the two evaluators was 91% (31 out of 34) with a kappa of 0.79. Following the full-text review, 22 papers were retained. In addition, four articles identified by using other types of literature search strategies were included. Therefore, the final number of papers included in this systematic review is 26 (all included articles are presented with an asterisk in the reference section of this article).



**Figure 1** Flow Diagram of the Screening Process Adapted from the Recommendations of the PRISMA Statement (Page et al., 2020).

### **Data extraction and analysis**

Data was subsequently extracted from each of the 26 articles based on the study's characteristics, including (1) the sample's characteristics (e.g., participants' sexual orientation, sample size, data source/setting and type of traumatic experiences, i.e., physical or sexual); (2) the information provided on the interpersonal trauma experienced (i.e., what types of aggressions were included in the articles; e.g., sexual victimization); (3) the measure used to assess PTSD and the outcomes associated with PTSD; (4) the results found between post-aggression factors and PTSD; and (5) if the study compared whether post-aggression factors and PTSD are differently associated in gay than in heterosexual men.

First, we extracted and interpreted the data. Results were then grouped according to the five domains of post-aggression factors as per Joseph et al. (1995), Foa et al. (1989), and Meyer's (1995) theoretical conceptualizations (i.e., cognitive, social, coping strategies, emotional and gay identity). Second, the risk factors and protective factors were summarized based on their significant negative or positive associations with PTSD. In this systematic research, risk factors were considered as factors positively and significantly associated with PTSD by correlation, group comparison or regression analysis. Protective factors were considered as factors negatively and significantly associated with PTSD by correlation, group comparison or regression analysis.

### **Assessment of the risk of bias**

As recommended by Ma et al. (2020) for systematic research with cross-sectional studies, risk of bias was assessed using the Appraisal tool for Cross-Sectional Studies (AXIS) developed by Downes et al. (2016). This tool evaluates the credibility and the reliability of each step in scientific research (i.e., introduction, method, results, discussion and others; Downes et al., 2016). The range of scores is between 0 and 20, with higher scores indicating a lower risk of bias. Before using the AXIS, a calibration between the first and last authors of this study was performed on three randomly selected articles that did not meet inclusion criteria. To create a more accurate and reliable rating scale for the reviewers, each AXIS item's sub-questions were specified following Downes et al.'s (2016) guidelines. The assessment of risk of bias (see [Supplemental Materials](#)) demonstrated a minimum score of 11/20 (55%; higher risk of bias) and a maximum score of 18/20 (90%; lower risk of bias) with a mean score of 15/20 (75%). Inter-rater reliability for the risk of bias analysis was 88% (421 items out of 480; 26 cross-sectional articles with 20 items each) with a kappa of 0.65. Finally, two case study articles were not fit to be assessed by the AXIS tool since this tool is used for cross-sectional studies only (Carbone, 2008; Kaysen et al., 2005).

## Results

### *Characteristics of the selected studies*

Overall, the 26 articles contained data on approximately 7,852 gay men participants (mean of 357 gay men participants per article, ranging from one to 5167) with a total of 18,145 participants of varied sexual orientations and genders. For some articles, the exact number of gay male participants was impossible to precisely determine as the authors presented different types of participant groupings (e.g., gay men with bisexual men or gay men with lesbians and bisexual people). The sexual orientation of the participants was assessed differently across the included studies. The results presented here base the sexual orientation of the participants on the information reported by the authors of each selected study. Across the included studies, the mean age of the participants was 31 years old and ranged from 18 to 55 years old. Out of the 26 articles, 21 included participants from the United States. The other five articles included participants from Canada, New Zealand and the United Kingdom. Regarding the types of aggression, 14 out of the 26 articles focused on both physical and sexual aggression (one cognitive, one coping, two emotional, five social and five gay identity post-aggression factors tested), six articles focused exclusively on physical aggression (one cognitive, three coping, two gay identity, one social and one emotional post-aggression factors tested) and six articles solely on sexual aggression (one cognitive, two coping, two social and one emotional post-aggression factors tested). Most articles (15 out of 26) included aggression that occurred before as well as after the age of 14. Additionally, two articles only focused on adult participants over the age of 18 who were victims of an aggression prior to the age of 14. Three articles studied aggression that took place after the age of 14, and six articles did not specify when the aggression occurred for the participants. This distinction is important, as early life adversities tend to be associated with a higher risk of facing psychological traumatic events in adulthood and of developing PTSD (Brewin et al., 2000; Widom, 1999). Measures used to assess PTSD symptoms varied from online or in person questionnaires (24 articles) to clinical interviews (two articles) based on the DSM-IV (American Psychiatric Association, 1994) or DSM-IV-TR (American Psychiatric Association, 2000). Regarding the research designs, among the 26 articles, 22 used a quantitative cross-sectional design, one used a mixed cross-sectional design, one used a cohort design, one used a quantitative case study design, and one used a qualitative case study design. Finally, 23 articles were published in peer-reviewed journals and three articles were written in the context of a doctoral dissertation. The main characteristics of the included articles are presented in [Table 1](#).

**Table 1.** Main characteristics of included studies.

First author and years	Population	Place of recruitment	Mean age with standard deviation when available (all participants)	Measure used for PTSD	Trauma type	Age of trauma (before or after 14-years old)
Alessi et al. (2013)	382 LGB and 126H; total of 19 LGB who experienced a prejudice event	United States	32.13	Modified WMH-CIDI	Physical	Mixed
Bandermann and Szymanski (2014)	423 LGBT	United States	33.31 (14.66)	PCL-C	Mixed	Mixed
Batchelder et al. (2021)	290 MSM (199GM; 64 B; 7 H; 14 Unsure; 6 other)	United States	38 (12)	DTS	Sexual	Mixed
Carbone (2008)	4 GM	- <sup>b</sup>	37	DSM-IV-TR Diagnostic	Physical	<14 years old
DeLaney et al. (2022)	234 LGBTQA in college	United States	18.46 (0.41)	PC-PTSD	Sexual	-
Dillon (2001)	190GM; 120L; 14 B men; 17 B women	United States	-	PDS	Mixed	Mixed
Dragowski et al. (2011)	350 LGB Youth (161GM; 99L; 34 B men; 56 B women)	United States, Canada, New Zealand	19 (92% were 19, 20 or 21 years old)	TSC-40	Physical	Mixed
Gold et al. (2007)	74 GM	Northeastern United States	34.71 (12.53)	PDS	Mixed	Mixed
Gold et al. (2011) <sup>a</sup>	115GM; 122L	United States	33.56 (12.47)	PDS	Mixed	Mixed
Hendy et al. (2016)	128GM; 123L	United States	34 (13.01)	PDS	Physical	>14 years old
Herek et al. (1999)	898GM; 980L; 191 B men; 190 B women	United States	34 (median)	20 items DSM-III Diagnostic adapted for self-administration	Mixed	-
Kaysen et al. (2005)	1 GM	United States	-	PSS	Physical	>14 years old
McCall (1993)	48GM; 76H men; 5 B men; 5 Other	United States	35.6	TSC-40	Sexual	<14 years old
Monin et al. (2017)	Veterans (39GM; 21L; 51 B; 2,993H; 16 Other)	United States	57.95	PCL	Mixed	Mixed
Rashkovsky et al. (2022)	21 couples of LGB veterans	United States	34.9 Veteran; 35.1 partners	PCL-5	Sexual	-
Rivers and Cowie (2006)	Students	United Kingdom	29	PTEQ	Mixed	-
Rivers et al. (2010)	150GM and B men; 1 T; 39L and B women	England, Scotland and Wales	30.52 (12.53)	TSC-40	Mixed	Mixed
Rose and Mechanic (2002)	149GM; 123L; 9 B men; 9 B women	United States	31.95	DSM III-R CMS	Mixed	-
Scheer et al. (2020)	218 LGBTQ	United States	27.95 (9.70)	PCL-C	Mixed	Mixed
Scheer et al. (2021)	6305 CSA-exposed sexual minority men	United States	33.2 (11.2)	Adapted version of the SPAN for CSA-related PTSD symptoms	Sexual	-
Scheer and Potat (2021)	239 LGBTQ IPV survivors	United States	27.66 (9.27)	PCL-C	Physical	>14 years old
Skinta (2007)	90GM	United States	21 (1.5)	PSS	Mixed	Mixed
Smith et al. (2016)	299 Undergraduate students (9GM; 13L; 7 B)	Pacific Northwest	-	PCL-C	Sexual	Mixed
Stenersen et al. (2019)	87GM; 76L; 128 B; 1 MSM; 45 other	United States	-	PCL-5	Mixed	Mixed
Stults et al. (2015)	598 Young MSM	United States	Participants were only 18 or 19 years old	TATC Q	Mixed	Mixed
Travers et al. (2020)	Students (993H; 123 LGB)	Northern Ireland	24.38 (7.46)	PCL-5	Mixed	Mixed

B: Bisexuals; GM: Gay Men; H: Heterosexuals; L: Lesbians; LGB: Lesbians, Gay and Bisexuals; LGBT: Lesbians, Gay, Bisexuals and Transgender; LGBTQ: Lesbians, Gay, Bisexuals, Transgender and Queer; LGBTQ: Lesbians, Gay, Bisexuals, Transgender, Queer and Asexual; MSM: Men who have Sex with Men; T: Transgender; WSW: Women who have Sex with Women; CMC: Civilian Mississippi Scale; DSM: Diagnostic and Statistical Manual of Mental Disorders; DTS: Davidson Trauma Scale; PCL-C: Posttraumatic Stress Disorder Checklist-Civilian for DSM-5; PDS: Posttraumatic Diagnostic Scale; PSS: PTSD Symptom Scale; PTEQ: Potentially Traumatic Experiences Questionnaire; TATC Q: Trauma Awareness and Treatment Center Questionnaire; TSC: Trauma Symptom Checklist; WMH-CIDI: World Health Organization-Composite International Diagnostic Interview. When no gender specification is given (e.g., H: heterosexuals), please interpreted as any inclusive of any gender.

<sup>a</sup>This article used the same data with different statistical analysis as Gold et al. (2007).

<sup>b</sup>The presence of a dash means that no information was presented in the article.

### ***Post-aggression factors of PTSD***

As seen in [Table 2](#), among gay men, several post-aggression factors have been considered for their association with PTSD. The post-aggression factors significantly associated with PTSD are further categorized in [Table 3](#) into *five domains*, based on the current scientific literature: (1) cognitive factors, (2) social factors, (3) coping strategies factors, (4) emotional factors and (5) gay identity factors. For the following results, it is worth noting that only eight articles out of 26 included analyses strictly for gay men (Batchelder et al., 2021; Carbone, 2008; Gold et al., 2007; 2011; Hendy et al., 2016; Kaysen et al., 2005; Skinta, 2007; Stults et al., 2015). The results presented for the 18 other articles were taken from heterogenous samples of lesbian, gay and bisexual (LGB) people combined.

#### ***Cognitive post-aggression factors***

Cognitive factors, which included (1) institutional betrayal (i.e., the belief that an institution has failed to prevent or respond appropriately to a sexual assault; one article), (2) self-blame or victim's blame (one article), and (3) other beliefs (i.e., safety and security, control, power, intimacy and benevolence of the world; three articles), were studied in five articles. Only self-blame or victim's blame (Dillon, 2001) and institutional betrayal (Smith et al., 2016) were found to be risk factors (i.e., to have a significant positive association with PTSD).

#### ***Social post-aggression factors***

Social post-aggression factors of PTSD were studied in nine articles and covered social support from family or parents (two articles), willingness to seek counseling (one article), help-seeking behaviors (three articles), social withdrawal (one article), and general social support (four articles). Of these nine articles, eight presented social post-aggression factors associated with PTSD and one article measured components of relationships (e.g., satisfaction), but association between post-aggression factors and PTSD was not tested.

The protective social post-aggression factors were willingness to seek counseling (Rivers et al., 2010), social support from family (Rivers et al., 2010), general social support (Travers et al., 2020) and help-seeking behaviors among professionals (Stenersen et al., 2019). However, contrary to Rivers et al. (2010), Rose and Mechanic (2002) found that victims who sought professional help reported significantly higher mean scores of PTSD than those who did not. This could suggest that when victims are more symptomatic, they tend to seek more help. Furthermore, social withdrawal was found as a social risk factor in Scheer and Poteat (2021). Regarding the inconclusive results, Rivers and Cowie (2006) found no significant differences in PTSD symptoms as a function of the levels of support-seeking and DeLaney et al. (2022) found no significant association between social support and PTSD symptoms.

### ***Coping strategies post-aggression factors***

Coping strategies were studied in nine articles. More specifically, among all coping strategy factors tested, the protective factors were: generalized expectancy for success and self-efficacy (McCall, 1993), self-efficacy in the context of bullying (Skinta, 2007) and empowerment (Scheer and Poteat (2021)). As for coping strategies that are risk factors for PTSD, the following were identified: experiential avoidance (Gold et al., 2007), problems with self-esteem (McCall, 1993), avoidant coping and behavioral disengagement (Batchelder et al., 2021), internalization (i.e., the tendency to take responsibility for a discriminatory incident), detachment (i.e., distancing oneself from others) and drug and alcohol use (Bandermann & Szymanski, 2014).

Regarding the inconclusive results, in Carbone's (2008) study, no analyses were generated to evaluate the statistical association between gay men irrational excuses and their PTSD symptoms, nor between their substance use and their PTSD symptoms. Emotional regulation was not significantly associated with PTSD symptoms in Scheer and Poteat (2021). Also, coping behaviors such as exercise, sleep duration, spirituality and alcohol did not significantly explain the indirect association between coping behaviors and gay men's PTSD symptoms (Hendy et al., 2016). Finally, experiential avoidance did not significantly mediate the association between childhood physical abuse and PTSD symptoms (Gold et al., 2007).

### ***Emotional post-aggression factors***

Emotional post-aggression factors were included in five articles. Five emotional post-aggression factors were identified: shame (Scheer et al., 2020 and Scheer & Poteat, 2021), expressed anger (Hendy et al., 2016), repressed anger (Hendy et al., 2016), impulsivity and loneliness (Stults et al., 2015). These factors are all significantly associated with more PTSD symptoms. Loneliness was also measured in Scheer et al. (2021) but no analyses were generated to evaluate the statistical association between this factor and PTSD symptoms.

### ***Gay identity factors***

The most frequently studied gay identity factor was internalized homophobia, with eight articles out of 26 examining this factor (Dillon, 2001; Dragowski et al., 2011; Gold et al., 2007; 2011; Kaysen et al., 2005; Rivers & Cowie, 2006; Skinta, 2007; Stenersen et al., 2019). One article examined a factor similar to internalized homophobia, known as gay-related personal or public stigma, which is an internalized sexual minority stressor (Stults et al., 2015). Finally, factors related to the sexual orientation of the victims were acceptance concerns, concealment motivation, difficult process (one article; Stenersen et al., 2019) and openness about sexual orientation (one article; Rivers et al., 2010).

**Table 2.** Association between the post-aggression factors and the PTSD of gay men.

First Author and years	Post-aggression factor	Statistical associations between post-aggression factors and PTSD symptoms
Analysis on gay men (GM)		
Batchelder et al. (2021)	1. Avoidant Coping (AC) 2. Behavioral Disengagement (BD)	Both significant predictors of more symptoms of PTSD. Both significant partial mediators between childhood sexual abuse duration and PTSD score or symptoms (re-experiencing and avoidance). Both significant full mediators between childhood sexual assault duration and PTSD symptoms: hyperarousal.
Carbone (2008)	1. Healthy and Maladaptive Coping Strategies	One case study with PTSD symptoms used irrational excuses for people's mistreatment of him and had difficulty setting limits with peers and subordinates at work. (Association between post-aggression factors and PTSD not tested)
Gold et al. (2007)	1. Internalized Homophobia (IH) 2. Experiential Avoidance (EA)	Both significant predictors of more PTSD symptoms. EA partially and significantly mediated the association between IH and PTSD.
Gold et al. (2011)	1. Internalized Homophobia (IH) 2. Experiential Avoidance (EA)	IH predicted significantly more PTSD symptoms. IH significantly and partially mediated the relation between childhood physical abuse and PTSD symptoms. EA not significantly mediated the relation between childhood physical abuse and PTSD symptoms.
Hendy et al. (2016)	1. Coping behaviors via Exercise, Sleep Duration, Alcohol and Tobacco use 2. Religiosity 3. Expressed and repressed Anger	Expressed and repressed anger predicted significantly more PTSD symptoms. Repressed anger was a significant mediator between the stressor of harassment and PTSD. Coping behaviors or religiosity were not associated significantly with PTSD symptoms for GM.
Kaysen et al. (2005)	1. Internalized Homophobia 2. Beliefs about Safety, trust, power, esteem and intimacy	Reduction in symptoms between intake and end of treatment (maintained at the 3-month follow-up point) for PTSD symptoms, internalized homonegativity, beliefs about power/control and beliefs about intimacy. (Association between post-aggression factors and PTSD not tested)
Skinta (2007)	1. Internalized Homophobia (IH) 2. Parental Social Support (PSS) 3. Bullying-specific self-Efficacy (BSSE)	IH was associated positively and significantly with PTSD symptoms. BSSE was associated negatively and significantly with PTSD symptoms. PSS was associated negatively but not significantly with PTSD symptoms. IH was not a significant mediator of the relation between bullying and PTSD symptoms. All three factors were associated positively and significantly with PTSD symptoms.
Stults et al. (2015)	1. Impulsivity 2. Loneliness 3. Gay-related personal and public stigma	
Analysis on mixed population varying among LGBT+		
Alessi et al. (2013)	1. Compromised sense of safety and security	Only qualitative results: Prejudice events associated with relaxed criterion A1 PTSD shared common themes: major life changes and compromised participants' sense of safety or security. (Association between post-aggression factors and PTSD not tested)
Bandermann and Szymanski (2014)	1. Coping with heterosexism via Internalization, Detachment and Drug and Alcohol Use	All three factors were significantly and positively associated with PTSD symptoms.
DeLaney et al. (2022)	1. Social support	No association found with PTSD symptoms. Not a significant moderator of the relation between childhood sexual assault and PTSD symptoms.
Dillon (2001)	1. Internalized Homophobia (IH) 2. Self-blame 3. Victim blame	When entered in a hierarchical regression: victim blame explained positively and significantly PTSD when entered with gender. Self-blame explained positively and significantly PTSD when entered with victim blame and gender. IH explained positively and significantly PTSD when entered with self-blame, victim blame and gender.

Dragowski et al. (2011)	1. Internalized Homophobia (IH)	Associated positively and significantly with PTSD symptoms and stronger predictor of PTSD.
Herek et al. (1999)	1. Benevolence of the Impersonal World 2. Benevolence of people 3. Personal safety 4. Sense of control 5. Attribution to Sexual Prejudice	Comparison analysis between five groups of hate crimes levels and outcomes: hate crime survivors displayed significantly more fear of crime, perceived vulnerability, lower self-mastery, and attributions to sexual prejudice and less belief in the benevolence of people, than did nonbiased crime victims, victims of earlier crime and nonvictims. (Association between post-aggression factors and PTSD not tested)
McCall (1993)	1. Index of Self-Esteem (ISE) 2. Generalized Expectancy for Success (GES) 3. Self-Efficacy (SE)	ISE positively and significantly correlated with PTSD symptoms. GES and SE negatively and significantly correlated with PTSD symptoms.
Monin et al. (2017)	1. Social Support (structural and functional)	LGB veterans had higher rates of: PTSD and other outcomes than heterosexuals but not when the model was adjusted with covariates (e.g., age, retirement and branches of service). Younger LGB veterans reported the largest social support networks and older LGB veterans reported the smallest support networks. (Association between post-aggression factors and PTSD not tested)
Rashkovsky et al. (2022)	1. Relationship satisfaction 2. Sexual functioning 3. Revised conflict tactics 4. Symptom accommodation	(Association between post-aggression factors and PTSD not tested)
Rivers and Cowie (2006)	1. Internalized Homophobia (self) 2. Seeking support	Internalized homophobia was significantly higher for participants who met the criteria for PTSD when compared to those who did not. No significant difference of PTSD between levels of seeking support.
Rivers et al. (2010)	1. Openness about sexual orientation 2. Family social support 3. Willingness to seek counseling	All three factors were associated significantly with lower trauma score (PTSD symptoms).
Rose and Mechanic (2002)	1. Help-seeking behaviors	Victims who sought professional help had significantly higher PTSD scores than victims who did not seek professional help.
Scheer et al. (2020)	1. Shame	Associated positively and significantly with PTSD symptoms. Partially and significantly mediated the relationship between potentially traumatic events and self-reported mental health.
Scheer et al. (2021)	1. Social support 2. Loneliness	(Association between post-aggression factors and PTSD not tested) Moderation: at lower levels of social support and higher levels of loneliness, reporting active suicidal ideation at one-year follow-up is elevated regardless of CSA-related PTSD symptom severity. In addition, suicidal ideation is substantially reduced among those reporting higher social support or lower loneliness.
Scheer and Poteat (2021)	1. Social withdrawal 2. Shame 3. Emotional regulation 4. Empowerment	Social withdrawal and shame were associated significantly and positively with PTSD symptoms. Empowerment was associated significantly and negatively with PTSD symptoms. Emotional regulation was not significantly associated with PTSD symptoms. Mediation of lower social withdrawal on the association between Trauma Informed Care and mental health (PTSD and depressive symptoms)
Smith et al. (2016)	1. Institutional Betrayal (IB) 2. Sexual identity collective self-esteem	IB explained positively and significantly PTSD above LGB status. Sexual identity collective self-esteem not tested on PTSD.
Stenersen et al. (2019)	1. Minority Stress (MS; acceptance concerns; concealment; motivation; internalized homonegativity; Difficult process) 2. Help-Seeking Behavior (HSB)	Acceptance concerns, concealment motivation and difficult process were significant predictors of more PTSD symptoms. Internalized homonegativity was not associated significantly with PTSD. HSB was significantly and negatively associated with PTSD symptoms.
Travers et al. (2020)	1. Social Support (SS)	SS negatively and significantly predicted PTSD. SS from family partially, and significantly explained the associations between LGB status and PTSD.

**Table 3.** Synthesis of post-aggression factors significantly associated with the PTSD of gay men (or LGBT+ When Necessary) by category.

Categories	Post-aggression factor	Number of articles
Cognitive variables	Institutional betrayal	1
	Self-blame	1
	Victim blame	1
Social variables	Willingness to seek counseling	1
	Help-seeking (professional)	2
	Family social support	1
	General social support	1
	Social withdrawal	1
Coping strategies	Avoidant coping	1
	Behavioral disengagement	1
	Coping with heterosexism via internalization, detachment, drug and alcohol use	1
	Experiential avoidance	1
	Problem with self-esteem	1
	Empowerment	1
	General self-efficacy and Bullying-specific self-efficacy	1
	General expectancy for success	1
	Emotional variables	Expressed anger
Repressed anger	1	
Impulsivity	1	
Shame	2	
Loneliness	1	
Gay identity variables	Acceptance concerns	1
	Concealment motivation	1
	Difficult process	1
	Internalized homophobia	6
	Perception of gay-related stigma	1
	Openness about sexual orientation	1

Among all the gay identity factors studied, only openness about sexual orientation was a protective factor of PTSD (Rivers et al., 2010). The risk factors that were identified were internalized homophobia (Dillon, 2001; Dragowski et al., 2011; Gold et al., 2007; 2011; Rivers & Cowie, 2006; Skinta, 2007), perception of gay-related stigma (Stults et al., 2015), difficulty in the process of accepting one's own sexual orientation, concerns regarding acceptance from others and motivation to conceal sexual identity (Stenersen et al., 2019). As for internalized homophobia, mixed results were found in Skinta (2007). More specifically, internalized homophobia was associated positively and significantly with PTSD symptoms, but it did not significantly mediate the association between bullying and PTSD symptoms (Skinta, 2007).

### ***Studies focusing on gay men only***

Many articles included in this systematic review did not uniquely focus on gay men. Indeed, so far, analyses provided were for heterogenous populations such as lesbian, gay and bisexual (LGB) people combined. Only eight out of 26 articles described analyses strictly of gay men. Among

these eight articles, two were case reports with only one participant with a history of physical trauma (Carbone, 2008; Kaysen et al., 2005), and these did not present statistical analyses leading to information about the association between the post-aggression factors tested and PTSD.

Consequently, six articles tested the association between post-aggression factors and PTSD among gay men only. Regarding coping factors, Gold et al. (2007), presented positive and significant correlations and regressions between experiential avoidance and PTSD. Batchelder et al. (2021) tested a significant and positive regression between avoidant coping and PTSD, as well as between behavioral disengagement and PTSD. Skinta (2007) also presented results of a significant and negative association between bullying-specific self-efficacy and PTSD. In addition, emotional post-aggression factors were studied in two articles which showed that expressed and repressed anger (Hendy et al., 2016) and impulsivity and loneliness (Stults et al., 2015) were positively and significantly associated with PTSD. Regarding the gay identity factors, three studies presented significant positive correlations between internalized homophobia and PTSD (Gold et al., 2007; 2011; Skinta, 2007). Stults et al. (2015) also presented a similar factor (i.e., perception of gay-related stigma) as being associated positively with PTSD. No article specifically studied associations between cognitive or social post-aggression factors and PTSD exclusively among gay men.

### ***Comparison of post-aggression factors between homosexual and heterosexual men***

Only three articles separated gay and heterosexual men in some of their analyses (McCall, 1993; Monin et al., 2017; Travers et al., 2020). First, McCall (1993) compared different types of psychological traumas experienced by these two populations. Second, Monin et al. (2017) compared the socio-demographic variables and social support of gay and heterosexual men. Third, Travers et al. (2020) compared LGB and heterosexual participants, but not specifically gay and heterosexual men. Therefore, we were unable to analyze whether the impact of post-aggression factors on PTSD symptoms significantly varied between gay and heterosexual men.

### **Discussion**

The purpose of this systematic review was to explore and synthesize the post-aggression factors that contribute to the development of PTSD among gay men victims of sexual or physical trauma. To our knowledge, this is the first systematic review that specifically analyzes studies targeting this understudied population.

This systemic research had two objectives. The first was to synthesize all the post-aggression factors that could contribute to the development of PTSD among gay men. The second was to assess whether post-aggression factors were differently associated with PTSD symptoms for gay men and for heterosexual men. Despite a comprehensive search using broad inclusion criteria across four databases and other search strategies, only 26 articles were retained in this systematic review. More specifically, results show that 28 post-aggression factors across five domains (i.e., cognitive, social, coping strategies, emotional and gay identity) should be considered when trying to prevent or treat PTSD in gay male victims of physical or sexual aggression. Unfortunately, our systematic review of the literature also revealed the absence of articles comparing the association between gay and heterosexual men on post-aggression factors and PTSD, which would certainly be our main suggestion for future research.

### ***Strengths and limitations of the current scientific literature***

The most important strength of the current literature available on gay men who were victims of interpersonal trauma is the presence of a wide range of factors that are known to impact heterosexuals (e.g., self-blame or social support) or sexual minorities such as gay men (e.g., gay identity components). This diversity of factors combines the general theoretical framework of PTSD development (e.g., Brewin et al., 2000; Foa et al., 1989; Joseph et al., 1995) and Meyer's (2003) minority stressors model.

However, important limitations of the current literature have been emphasized by this systematic review. Firstly, there is only a small amount of data that focuses on gay men. In fact, most of the articles focused on heterogeneous populations composed of gay men and other minority populations (e.g., LGBT) or on men with different sexual orientations (e.g., either gay, bisexual or heterosexual men who have sex with men). Also, the extant literature does not always analyze sexual orientation as a possible confounding variable. This could impact the interpretation of some results, as post-aggression factors may affect LGBT people and gay men differently. Indeed, LGBT people are part of a large group of diverse subgroups (e.g., gay men, lesbian, queer people, etc.) which present intra-subgroup variation (e.g., two gay men from different cultures) as well as inter-subgroup variation (e.g., cisgender gay men and cisgender lesbians; Meyer, 2001). Considering the variation of experiences between these different sexual minorities, studying these sub-groups separately could contribute significantly to the existing literature. A clear recruitment process of gay men apart from other LGBTQ subgroups and further specific analysis on this group would make it possible to account for the variability among sexual minority subgroups.

Secondly, the absence of articles that directly compared the association between post-aggression factors and PTSD symptoms for gay and heterosexual men exposes a critical problem. Indeed, it makes it difficult to discern which post-aggression factors should be specifically targeted to prevent post-aggression distress of gay and heterosexual men. Given the high prevalence rate of interpersonal trauma among gay men and the subsequent elevated risk of PTSD in comparison to heterosexual men (Roberts et al., 2010), the lack of data specific to gay men is concerning. Future studies should analyze this comparison because clinicians and researchers could recognize which post-aggression factors to prioritize in each of these populations.

Thirdly, regarding victim age, 15 articles of the 26 reviewed focused on aggression without clearly distinguishing if it occurred before or after the age of 14. As mentioned previously, early life adversities may increase the risk of facing psychological traumatic events later in life and of developing PTSD (Brewin et al., 2000; Widom, 1999). Therefore, future studies should measure the age at which the aggression was experienced. In the same way, we recommend that revictimization be measured with greater scientific precision in order to better classify it as childhood or adulthood psychological trauma/adversity (Brewin et al., 2000). Additionally, regarding the types of aggression examined, most studies combined sexual and physical aggression types. Only six articles focused on either physical or sexual aggression. There may be specificities of therapeutic work between sexual and physical aggression that are not accounted for in most of the included studies.

Fourthly, it is surprising that post-aggression factors that have been identified as important and significant in the empirical and clinical heterosexual literature have not been measured in the literature on gay men. Indeed, while coping strategies as well as gay identity factors seem to have been studied more extensively, some cognitive, social and emotional post-aggression factors have been overlooked in the existing literature. With regards to cognitive post-aggression factors, causal attribution has been shown to be an important factor contributing to posttraumatic distress in women who have been abused or raped (Brillon et al., 1999; Frazier, 2003; Frazier & Schauben, 1994; Jaffe et al., 2021; Overholser & Moll, 1990; Resick et al., 2008) as well as in military personnel and veterans (Kimber et al., 2020; Thorsteinsson & Loi, 2017). Based on these results, gay men who attribute the cause of the aggression to an internal component such as a personality trait, their behavior or their sexual orientation could develop more guilt, shame, self-loathing and posttraumatic distress. Regarding the social post-aggression factors, social support from the community was not examined in the reviewed articles. However, research has illustrated that a sense of community and support from sexual

minority peers is crucial for gay men or LGBT people and may result in less emotional distress (Doty et al., 2010). As a matter of fact, in addition to the well-known protective effect of general social support (Brewin et al., 2000), being part of a community with a shared identity and similar life experiences could be beneficial, as it reduces isolation and provides validation and support (Reading & Rubin, 2011). With regards to the emotional post-aggression factors, articles studied only negative emotions, such as expressed anger or repressed anger, which have both been conceptualized as negative ways of dealing with anger issues. However, positive emotions may serve as protective factors. Forgiveness, for example, is an emotion that tends to be associated with lower PTSD symptoms (Cerci & Colucci 2018). Some authors suggested using this positive emotion as a strategy in therapy to help posttraumatic stress reactions or distress (Meneses & Greenberg, 2019; Van Loey et al., 2008). Future research should then consider causal attributions, support received from the gay community, the experience of positive emotions and other factors as possible risk or protective post-aggression factors for gay men with PTSD.

Fifthly, the risk of the bias analysis (see [Supplemental Material](#)) demonstrated that the quality of the studies varied between 55% and 90%. A higher score indicates better quality in each section of the article. A limitation that was often observed in our risk of bias analysis was that PTSD was assessed either through a diagnostic interview or through a civilian or military questionnaire assessing PTSD or psychological trauma experiences. We recommend the use of specific and recognized PTSD measures and interviews (e.g., the PCL-5; Weathers et al., 2013), which would increase the validity of the results obtained.

Finally, a major limitation of the current literature pertains to the methodology of the studies, which were mostly cross-sectional. In the context of this systematic review, cross-sectional studies did not make it possible to assess the directionality of the relationship between the post-aggression factors and distress (Levin, 2006; Solem, 2015). Furthermore, among the cross-sectional studies, only a few included potentially mediating or moderating factors of the association between post-aggression factors and PTSD (i.e., Batchelder et al. 2021; DeLaney et al., 2022; Gold et al., 2007; 2011; Hendy et al., 2016; Scheer et al., 2020; Skinta, 2007). To address this issue, longitudinal studies conducted after the aggression could be beneficial. More precisely, longitudinal studies can help determine how post-aggression factors may change over time, as well as document whether these factors gain or lose their influence on PTSD symptoms. This would make it possible to achieve a greater understanding of the short- and long-term effect that these post-aggression factors have on PTSD in gay men.

### ***Strengths and limitations of the present systematic review***

The first strength of this systematic review is its attempt to cover the broadest spectrum of scientific literature on the subject. This comprehensive range of articles is inclusive of those focusing on gay men only and some LGBT+ people as well. This constitutes an important attempt to identify all possible post-aggression factors that may be of clinical and empirical interest when working with gay men. The rigorous systematic research method employed to retain the eligible articles is also an important strength. Indeed, the good reliability scores obtained between the assessors for the article inclusion tasks and risk of bias assessments demonstrate scientific rigor.

Another strength is that our results are consistent with other systematic reviews on victimized populations. Indeed, many of the post-aggression factors identified in this research were also uncovered in previous systematic reviews: Hall (2018) conducted a systematic review that evaluated psychosocial risk and protective factors for depression among LGBQ youth. This systematic review demonstrated that some psychological (e.g., maladaptive coping strategies) and social factors (i.e., family or parental rejection) were found to be risk factors for depression. It also concluded that social support from friends was a protective factor. Hall's result aligned with ours considering that gay men who were part of this larger LGBQ group seemed to benefit from positive social factors while other factors may have compounded their distress (i.e., maladaptive coping strategies). Although Hall's research (Hall, 2018) targeted a larger sexual minority group than gay men only and a different distress indicator (i.e., depression instead of PTSD), we can infer that some factors are consistently found in the literature and can either protect or exacerbate gay men's distress. In addition to Hall's research (Hall, 2018), Casey and Masters' (2017) review on sexual violence experienced by LGBT people identified some community-specific risk factors (e.g., internalized stigma, negative self-perceptions), and protective factors (e.g., social support, connectedness) of sexual violence. These factors were also found in the present investigation through the effect of social support and gay identity (more specifically internalized homophobia) on PTSD symptoms. Further studies should address these factors to better understand their role in gay men's mental health as they happened to be associated with the sexual traumatic experiences of LGBT people (Casey & Masters, 2017), and the PTSD of gay men following an aggression (as seen in the present systematic review).

As for the limitations of this research, we decided to proceed with a systematic review that would be broad enough to include as many articles as possible on the subject. However, this decision led to the inclusion of articles that assessed samples which merged different sexual

orientations and sometimes sexual identities (18 articles out of 26 presented mixed LGBT populations). We must underline the potential effect of population diversity in our results as a limitation of the current scientific literature on this subject. In addition, intersectional factors (e.g., ethnicity and socioeconomic status) were not included in the present systematic research, which limited the interpretation of the results. Indeed, different articles may present populations with different backgrounds and these samples distinctions may act as risk or protective factors per se. A future meta-analysis on the current literature could analyze if intersectional pre-aggression factors may also have an impact on the post-aggression distress of gay men.

It should also be noted that no articles were excluded following the risk of bias assessment. Some of the articles obtained low scores on the AXIS (e.g., 55%) which suggests a higher risk of bias throughout the article sections. The exclusion of articles with high risk of bias could have contributed to the better validity of the results presented. However, had we excluded articles based on their risk of bias and thus excluded possible important posttraumatic factors, this could have potentially narrowed our recommendations for future research avenues. We recommend a careful interpretation of the results presented here as a function of each article's risk of bias score. Finally, while we presented promising results, these were found only in a few articles. We strongly encourage further research on this important subject and population that is scientifically underrepresented but nonetheless suffering, and that is gaining increasing social recognition.

### ***Clinical implications***

The results of this review highlight multiple clinical implications for mental health professionals working with gay male victims of interpersonal trauma. Indeed, this study could help clarify which contributive post-aggression factors of the PTSD among gay men victims of interpersonal trauma should be assessed by clinicians and also which measures or instruments to use to assess for PTSD symptomatology. The cognitive, social, coping strategies, emotional and gay identity post-aggression factors that have been shown to be significant risk or protective factors in this systematic review may constitute important therapeutic targets (e.g., cognitively restructuring the process of internalized homophobia to develop a more adaptive and accepting perception of one's own sexual orientation). Therapeutic targets may also include psychoeducation on the protective factors that should be reinforced (e.g., gay men could benefit from learning the importance of seeking and maintaining their social support networks), as well as on the deleterious effect of having a negative perception of one's own sexual

orientation, presenting cognitions of blame, using coping strategies such as behavioral disengagement and having unresolved emotions. A distinction between general (e.g., social support) post-aggression factors and those particular to gay identity (e.g., acceptance concerns) could help psychologists prepare a more adequate and adaptable treatment plan with clear knowledge of what the unique supplemental therapeutic target for gay male victims is. For example, it might be wise to combine work on the victim's perception of self-efficacy (a protective factor that emerged in our analysis) with a more adaptative view of their homosexuality, thus moving away from internalized homophobia. Finally, some of the results could also be implemented in the ongoing clinical guidelines for gay male clients who experience psychological trauma (see e.g., Livingston et al., 2020 and Rivera, 2002).

In summary, the results presented in this systematic review expose how, in addition to cognitive, social, coping strategies and emotional factors, gay identity components could explain the distress of gay men following a sexual or physical aggression. It also demonstrates how gay identity components, known as proximal minority stressors, are fundamental and crucial post-aggression factors to include in therapeutic settings.

## **Conclusion**

This systematic review addresses the few articles that present research on post-aggression factors and PTSD in gay men. However, many future steps should be taken to clarify the longitudinal effect of these post-aggression factors as well as their unique contribution to the development of PTSD. Our findings suggest that general post-aggression factors uncovered by the theoretical conceptualization of PTSD (e.g., self-blame, social support and coping strategies and deleterious emotions) and specific post-aggression factors for gay men (i.e., gay identity components) should be considered in therapy to help gay male victims of sexual or physical trauma. The coherence between theory, empirical research and clinical implications highlighted by this systematic review indicates that there are clear advantages to pursuing and improving research on this subject.

## **Disclosure statement**

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## Data availability and ethics statement

Data sharing is not applicable to this article as no new data was created or analyzed in this systematic review. For this same reason, institutional ethics review was not required.

## References

- \*Alessi, E. J., Martin, J. I., Gyamerah, A., & Meyer, I. H. (2013). Prejudice events and traumatic stress among heterosexuals and lesbians, gay men, and bisexuals. *Journal of Aggression, Maltreatment & Trauma*, 22(5), 510–526. <https://doi.org/10.1080/10926771.2013.785455>
- Alonso, J., Petukhova, M., Vilagut, G., Chatterji, S., Heeringa, S., Üstün, T. B., Alhamzawi, A. O., Viana, M. C., Angermeyer, M., Bromet, E., Bruffaerts, R., de Girolamo, G., Florescu, S., Gureje, O., Haro, J. M., Hinkov, H., Hu, C.-Y., Karam, E. G., Kovess, V., ... Kessler, R. C. (2011). Days out of role due to common physical and mental conditions: Results from the WHO World Mental Health surveys. *Molecular Psychiatry*, 16(12), 1234–1246. <https://doi.org/10.1038/mp.2010.101>
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). American Psychiatric Association. [https://doi.org/10.1007/springer-reference\\_179660](https://doi.org/10.1007/springer-reference_179660)
- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). American Psychiatric Association. <https://doi.org/10.1176/appi.books.9780890423349>
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Association. <https://doi.org/10.1176/appi.books.9780890425596>
- Balsam, K. F., Rothblum, E. D., & Beauchaine, T. P. (2005). Victimization over the life span: A comparison of lesbian, gay, bisexual, and heterosexual siblings. *Journal of Consulting and Clinical Psychology*, 73(3), 477–487. <https://doi.org/10.1037/0022-006x.73.3.477>
- \*Bandermann, K. M., & Szymanski, D. M. (2014). Exploring coping mediators between heterosexist oppression and posttraumatic stress symptoms among lesbian, gay, and bisexual persons. *Psychology of Sexual Orientation and Gender Diversity*, 1(3), 213–224. <https://doi.org/10.1037/sgd0000044>
- \*Batchelder, A. W., Safren, S. A., Coleman, J. N., Boroughs, M. S., Thiim, A., Ironson, G. H., Shipherd, J. C., & O'Cleirigh, C. (2021). Indirect effects from childhood sexual abuse severity to PTSD: The role of avoidance coping. *Journal of Interpersonal Violence*, 36(9-10), NP5476–NP5495. <https://doi.org/10.1177/0886260518801030>
- Breslau, N., Kessler, R. C., Chilcoat, H. D., Schultz, L. R., Davis, G. C., & Andreski, P. (1998). Trauma and posttraumatic stress disorder in the community: The 1996 Detroit Area Survey of Trauma. *Archives of General Psychiatry*, 55(7), 626–632. <https://doi.org/10.1001/archpsyc.55.7.626>

- Brewin, C. R., Andrews, B., & Rose, S. (2000). Fear, helplessness, and horror in posttraumatic stress disorder: Investigating DSM-IV criterion A in victims of violent crime. *Journal of Traumatic Stress, 13*(3), 499–509. <https://doi.org/10.1023/A:1007741526169>
- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*(5), 748–766. <https://doi.org/10.1037/0022-006X.68.5.748>
- Brillon, P., Marchand, A., & Stephenson, R. (1999). Influence of cognitive factors on sexual assault recovery: Descriptive review and methodological concerns. *Scandinavian Journal of Behaviour Therapy, 28*(3), 119–137. <https://doi.org/10.1080/028457199439973>
- Camp, J., Vitoratou, S., & Rimes, K. A. (2020). LGBTQ+ self-acceptance and its relationship with minority stressors and mental health: A systematic literature review. *Archives of Sexual Behavior, 49*(7), 2353–2373. <https://doi.org/10.1007/s10508-020-01755-2>
- \*Carbone, D. J. (2008). Treatment of gay men for post-traumatic stress disorder resulting from social ostracism and ridicule: Cognitive behavior therapy and eye movement desensitization and reprocessing approaches. *Archives of Sexual Behavior, 37*(2), 305–316. <https://doi.org/10.1007/s10508-007-9239-3>
- Casey, E. A., Masters, T. (2017). Sexual violence risk and protective factors: A systematic review of the literature. *Injury and Violence Prevention*. <https://www.doh.wa.gov/Portals/1/Documents/Pubs/140-164-SexualViolenceRiskProtectiveFactors.pdf>
- Cerci, D., & Colucci, E. (2018). Forgiveness in PTSD after man-made traumatic events: A systematic review. *Traumatology, 24*(1), 47–54. <https://doi.org/10.1037/trm0000130>
- Cochran, S. D., Sullivan, J. G., & Mays, V. M. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *Journal of Consulting and Clinical Psychology, 71*(1), 53–61. <https://doi.org/10.1037/0022-006x.71.1.53>
- Dalglish, T., Smith, P., & Meiser-Stedman, R. (2018, April 13). Practitioner Review: Post-traumatic Stress Disorder and its Treatment in Children and Adolescents. *Journal of Child Psychology and Psychiatry, 60*(5), 500–515. <https://doi.org/10.31234/osf.io/dcnwy>
- D’Augelli, A. R., Grossman, A. H., & Starks, M. T. (2006). Childhood sex atypicality, victimization, and PTSD among lesbian, gay, and bisexual youth. *Journal of Interpersonal Violence, 21*(11), 1462–1482. <https://doi.org/10.1177/0886260506293482>
- \* DeLaney, E. N., Williams, C. D., Mosley, D. V., Hawn, S. E., & Dick, D. M. (2022). The associations between sexual victimization and health outcomes among LGBTQ college students: Examining the moderating role of social support. *Journal of Interpersonal Violence, 37*(11-12), NP10393–NP10417. NP10417. <https://doi.org/10.1177/0886260520978179>
- \*Dillon, J. R. (2001). *Internalized homophobia, attributions of blame, and psychological distress among lesbian, gay, and bisexual trauma victims* (Publication No. 3,013,147). [Doctoral dissertation] University of Missouri - Saint Louis. ProQuest Dissertations Publishing.
- Dorahy, M. J., Corry, M., Shannon, M., Macsherry, A., Hamilton, G., McRobert, G., Elder, R., & Hanna, D. (2009). Complex PTSD, interpersonal trauma and relational consequences: Findings from a treatment-receiving Northern Irish sample. *Journal of Affective Disorders, 112*(1-3), 71–80. <https://doi.org/10.1016/j.jad.2008.04.003>
- Doty, N. D., Willoughby, B. L., Lindahl, K. M., & Malik, N. M. (2010). Sexuality related social support among lesbian, gay, and bisexual youth. *Journal of Youth and Adolescence, 39*(10), 1134–1147. <https://doi.org/10.1007/s10964-010-9566-x>
- Downes, M. J., Brennan, M. L., Williams, H. C., & Dean, R. S. (2016). Development of a critical appraisal tool to assess the quality of cross-sectional studies (AXIS). *BMJ Open, 6*(12), e011458. <https://doi.org/10.1136/bmjopen-2016-011458>

- \*Dragowski, E. A., Halkitis, P. N., Grossman, A. H., & D'Augelli, A. R. (2011). Sexual orientation victimization and posttraumatic stress symptoms among lesbian, gay, and bisexual youth. *Journal of Gay & Lesbian Social Services, 23*(2), 226–249. <https://doi.org/10.1080/10538720.2010.541028>
- Dunner, D. L. (2001). Management of anxiety disorders: The added challenge of comorbidity. *Depression and Anxiety, 13*(2), 57–71. <https://doi.org/10.1002/da.1018>
- Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioural/cognitive conceptualizations of post-traumatic stress disorder. *Behavior Therapy, 20*(2), 155–176.(89)80,067-x <https://doi.org/10.1016/s0005-7894>
- Frazier, P. A. (2003). Perceived control and distress following sexual assault: A longitudinal test of a new model. *Journal of Personality and Social Psychology, 84*(6), 1257–1269. <https://doi.org/10.1037/0022-3514.84.6.1257>
- Frazier, P., & Schauben, L. (1994). Causal attributions and recovery from rape and other stressful life events. *Journal of Social and Clinical Psychology, 13*(1), 1–14. <https://doi.org/10.1521/jscp.1994.13.1.1>
- \*Gold, S. D., Marx, B. P., & Lexington, J. M. (2007). Gay male sexual assault survivors: The relations among internalized homophobia, experiential avoidance, and psychological symptom severity. *Behaviour Research and Therapy, 45*(3), 549–562. <https://doi.org/10.1016/j.brat.2006.05.006>
- \*Gold, S. D., Feinstein, B. A., Skidmore, W. C., & Marx, B. P. (2011). Childhood physical abuse, internalized homophobia, and experiential avoidance among lesbians and gay men. *Psychological Trauma: Theory, Research, Practice, and Policy, 3*(1), 50–60. <https://doi.org/10.1037/a0020487>
- Hall, W. J. (2018). Psychosocial risk and protective factors for depression among lesbian, gay, bisexual, and queer youth: A systematic review. *Journal of Homosexuality, 65*(3), 263–316. <https://doi.org/10.1080/00918369.2017.1317467>
- \*Hendy, H. M., Joseph, L. J., & Can, S. H. (2016). Repressed anger mediates associations between sexual minority stressors and negative psychological outcomes in gay men and lesbian women. *Journal of Gay & Lesbian Mental Health, 20*(3), 280–296. <https://doi.org/10.1080/19359705.2016.1166470>
- \*Herek, G. M., Gillis, J. R., & Cogan, J. C. (1999). Psychological sequelae of hate-crime victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology, 67*(6), 945–951. <https://doi.org/10.1037/0022-006x.67.6.945>
- Higgins, J. P., & Green, S. (2008). Guide to the contents of a Cochrane protocol and review. In *Cochrane Handbook for Systematic Reviews of Interventions: Cochrane Book Series* (pp. 51–79). Wiley-Blackwell. <https://doi.org/10.1002/9780470712184.ch4>
- Jaffe, A. E., Steel, A. L., DiLillo, D., Messman-Moore, T. L., & Gratz, K. L. (2021). Characterizing sexual violence in intimate relationships: An examination of blame attributions and rape acknowledgment. *Journal of Interpersonal Violence, 36*(1-2), 469–490. <https://doi.org/10.1177/0886260517726972>
- Joseph, S., Williams, R., & At Yule, W. (1995). Psychosocial perspectives on post-traumatic stress. *Clinical Psychology Review, 15*(6), 515–544.(95)00029-O <https://doi.org/10.1016/02727358>
- Karatzias, T., Ferguson, S., Gullone, A., & Cosgrove, K. (2016). Group psychotherapy for female adult survivors of interpersonal psychological trauma: A preliminary study in Scotland. *Journal of Mental Health, 25*(6), 512–519. <https://doi.org/10.3109/09638237.2016.1139062>
- Kashdan, T. B., Uswatte, G., Steger, M. F., & Julian, T. (2006). Fragile self-esteem and affective instability in posttraumatic stress disorder. *Behaviour Research and Therapy, 44*(11), 1609–1619. <https://doi.org/10.1016/j.brat.2005.12.003>
- \*Kaysen, D., Lostutter, T. W., & Goines, M. A. (2005). Cognitive processing therapy for acute stress disorder resulting from an anti-gay assault. *Cognitive, Cognitive and Behavioral Practice, 12*(3), 278–289. [https://doi.org/10.1016/s1077-7229\(05\)80050-1](https://doi.org/10.1016/s1077-7229(05)80050-1)

- Kelleher, C. (2009). Minority stress and health: Implications for lesbian, gay, bisexual, transgender, and questioning (LGBTQ) young people. *Counselling Psychology Quarterly*, 22(4), 373–379. <https://doi.org/10.1080/09515070903334995>
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52(12), 1048–1060. <https://doi.org/10.1001/archpsyc.1995.03950240066012>
- Kimber, J., Sullivan, N., Anastasides, N., Slotkin, S., & McAndrew, L. M. (2020). Understanding Veterans' Causal Attributions of Physical Symptoms. *International Journal of Behavioral Medicine*, 28(3), 299–307. <https://doi.org/10.1007/s12529-020-09918-0>
- King, N. (2000). Childhood sexual trauma in gay men: Social context and the imprinted arousal pattern. *Journal of Gay & Lesbian Social Services*, 12(1-2), 19–35. [https://doi.org/10.1300/J041v12n01\\_02](https://doi.org/10.1300/J041v12n01_02)
- Lee, D. A., Scragg, P., & Turner, S. (2001). The role of shame and guilt in traumatic events: A clinical model of shame-based and guilt-based PTSD. *The British Journal of Medical Psychology*, 74(Pt 4), 451–466. <https://doi.org/10.1348/000711201161109>
- Levin, K. A. (2006). Study design III: Cross-sectional studies. *Evidence-Based Dentistry*, 7(1), 24–25. <https://doi.org/10.1038/sj.ebd.6400375>
- Livingston, N. A., Berke, D., Scholl, J., Ruben, M., & Shipherd, J. C. (2020). Addressing diversity in PTSD treatment: Clinical considerations and guidance for the treatment of PTSD in LGBTQ populations. *Current Treatment Options in Psychiatry*, 7(2), 53–69. <https://doi.org/10.1007/s40501-020-00204-0>
- Ma, L. L., Wang, Y. Y., Yang, Z. H., Huang, D., Weng, H., & Zeng, X. T. (2020). Methodological quality (risk of bias) assessment tools for primary and secondary medical studies: What are they and which is better? *Military Medical Research*, 7(1), 7. <https://doi.org/10.1186/s40779-020-00238-8>
- Maylon, A. K. (1982). Psychotherapeutic implications of internalized homophobia in gay men. *Journal of Homosexuality*, 7, 59–70. [https://doi.org/10.1300/j082v07n02\\_08](https://doi.org/10.1300/j082v07n02_08)
- \*McCall, D. O. (1993). *Post-traumatic stress and personal adjustment in adult males sexually abused as children* (Publication No. 9,320,170). [Doctoral dissertation]. The Catholic University of America]. ProQuest Dissertations Publishing.
- Meneses, C. W., & Greenberg, L. S. (2019). *Forgiveness and letting go in emotion-focused therapy*. American Psychological Association. <https://doi.org/10.1037/0000144-000>
- Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior*, 36(1), 38–56. <https://doi.org/10.2307/2137286>
- Meyer, I. H. (2001). Why lesbian, gay, bisexual, and transgender public health? *American Journal of Public Health*, 91(6), 856–859. <https://doi.org/10.2105/ajph.91.6.856>
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129(5), 674–697. <https://doi.org/10.1037/0033-2909.129.5.674>
- Mohr, J., & Fassinger, R. (2000). Measuring dimensions of lesbian and gay male experience. *Measurement and Evaluation in Counseling and Development*, 33(2), 66–90. <https://doi.org/10.1080/07481756.2000.12068999>
- \*Monin, J. K., Mota, N., Levy, B., Pachankis, J., & Pietrzak, R. H. (2017). Older age associated with mental health resiliency in sexual minority US veterans. *The American Journal of Geriatric Psychiatry*, 25(1), 81–90. <https://doi.org/10.1016/j.jagp.2016.09.006>
- Overholser, J. C., & Moll, S. H. (1990). Who's to blame: Attributions regarding causality in spouse abuse. *Behavioral Sciences & the Law*, 8(2), 107–120. <https://doi.org/10.1002/bsl.2370080203>
- Pacella, M. L., Hruska, B., & Delahanty, D. L. (2013). The physical health consequences of PTSD and PTSD symptoms: A meta-analytic review. *Journal of Anxiety Disorders*, 27(1), 33–46. <https://doi.org/10.1016/j.janxdis.2012.08.004>

- Page, M. J., McKenzie, J., Bossuyt, P., Boutron, I., Hoffmann, T., Mulrow, C. D., ... Moher, D. (2020). Updating guidance for reporting systematic reviews: Development of the PRISMA 2020 statement. *Journal of Clinical Epidemiology* 134, 103–112.
- Pitman, R. K., Altman, B., Greenwald, E., Longpre, R. E., Macklin, M. M., Poire, & R. E., Al. et (1991). Psychiatric complications during flooding therapy for posttraumatic stress disorder. *The Journal of Clinical Psychiatry*, 52, 17–20. [https://doi.org/10.1016/s0010-440x\(96\)90024-3](https://doi.org/10.1016/s0010-440x(96)90024-3)
- \*Rashkovsky, K., Solano, I., Khalifian, C., Morland, L. A., & Knopp, K. (2022). Interpersonal trauma histories and relationship functioning among LGB Veteran couples seeking PTSD treatment. *Military Psychology*, 34(4), 494–501. <https://doi.org/10.1080/08995605.2021.2016308>
- Reading, R., & Rubin, L. R. (2011). Advocacy and empowerment: Group therapy for LGBT asylum seekers. *Traumatology*, 17(2), 86–98. <https://doi.org/10.1177/1534765610395622>
- Resick, P. A., Galovski, T. E., Uhlmansiek, M. O., Scher, C. D., Clum, G. A., & Young-Xu, Y. (2008). A randomized clinical trial to dismantle components of cognitive processing therapy for posttraumatic stress disorder in female victims of interpersonal violence. *Journal of Consulting and Clinical Psychology*, 76(2), 243–258. <https://doi.org/10.1037/0022-006X.76.2.243>
- Rivera, M. (2002). Informed and supportive treatment for lesbian, gay, bisexual and transgendered trauma survivors. *Journal of Trauma & Dissociation*, 3(4), 33–58. [https://doi.org/10.1300/J229v03n04\\_03](https://doi.org/10.1300/J229v03n04_03)
- \*Rivers, I., & Cowie, H. (2006). Bullying and homophobia in UK schools: A perspective on Factors affecting resilience and recovery. *Journal of Gay & Lesbian Issues in Education*, 3(4), 11–43. [https://doi.org/10.1300/J367v03n04\\_03](https://doi.org/10.1300/J367v03n04_03)
- \*Rivers, I., McPherson, K. E., & Hughes, J. R. (2010). The role of social and professional support seeking in trauma recovery: Lesbian, gay and bisexual experiences of crime and fears for safety. *Psychology and Sexuality*, 1(2), 145–155. <https://doi.org/10.1080/19419899.2010.484596>
- Roberts, A. L., Austin, S. B., Corliss, H. L., Vander Morris, A. K., & Koenen, K. C. (2010). Pervasive trauma exposure among US sexual orientation minority adults and risk of posttraumatic stress disorder. *American Journal of Public Health*, 100(12), 2433–2441. <https://doi.org/10.2105/ajph.2009.168971>
- \*Rose, S. M., & Mechanic, M. B. (2002). Psychological distress, crime features, and help-seeking behaviors related to homophobic bias incidents. *American Behavioral Scientist*, 46(1), 14–26. <https://doi.org/10.1177/0002764202046001003>
- Sayed, S., Iacoviello, B. M., & Charney, D. S. (2015). Risk factors for the development of psychopathology following trauma. *Current Psychiatry Reports*, 17(8), 70. <https://doi.org/10.1007/s11920-015-0612-y>
- \*Scheer, J. R., Clark, K. A., Talan, A., Cabral, C., Pachankis, J. E., & Rendina, H. J. (2021). Longitudinal associations between childhood sexual abuse-related PTSD symptoms and passive and active suicidal ideation among sexual minority men. *Child Abuse & Neglect*, 122, 105353. <https://doi.org/10.1016/j.chiabu.2021.105353>
- \*Scheer, J. R., Harney, P., Esposito, J., & Woulfe, J. M. (2020). Self-reported mental and physical health symptoms and potentially traumatic events among lesbian, gay, bisexual, transgender, and queer individuals: The role of shame. *Psychology of Violence*, 10(2), 131–142. <https://doi.org/10.1037/vio0000241>
- \*Scheer, J. R., & Poteat, V. P. (2021). Trauma-informed care and health among LGBTQ intimate partner violence survivors. *Journal of Interpersonal Violence*, 36(13-14), 6670–6692. <https://doi.org/10.1177/0886260518820688>

- Schein, J., Houle, C., Urganus, A., Cloutier, M., Patterson-Lomba, O., Wang, Y., King, S., Levinson, W., Guérin, A., Lefebvre, P., & Davis, L. L. (2021). Prevalence of post-traumatic stress disorder in the United States: A systematic literature review. *Current Medical Research and Opinion*, 37(12), 2151–2161. <https://doi.org/10.1080/03007995.2021.1978417>
- \*Skinta, M. D. (2007). The effects of bullying and internalized homophobia on psychopathological symptom severity in a community sample of gay men [Doctoral dissertation, Kent State University]. OhioLINK Archive. [https://etd.ohiolink.edu/apexprod/rws\\_etd/send\\_file/send?accession=kent1187983398&disposition=inline](https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=kent1187983398&disposition=inline)
- \*Smith, C. P., Cunningham, S. A., & Freyd, J. J. (2016). Sexual violence, institutional betrayal, and psychological outcomes for LGB college students. *Translational Issues in Psychological Science*, 2(4), 351–360. <https://doi.org/10.1037/tps0000094>
- Solem, R. C. (2015). Limitation of a cross-sectional study. *American Journal of Orthodontics and Dentofacial Orthopedics*, 148(2), 205. <https://doi.org/10.1016/j.ajodo.2015.05.006>
- Stein, D. J., Chiu, W. T., Hwang, I., Kessler, R. C., Sampson, N., Alonso, J., Borges, G., Bromet, E., Bruffaerts, R., de Girolamo, G., Florescu, S., Gureje, O., He, Y., Kovess-Masfety, V., Levinson, D., Matschinger, H., Mneimneh, Z., Nakamura, Y., Ormel, J., ... Nock, M. K. (2010). Cross-national analysis of the associations between traumatic events and suicidal behavior: Findings from the WHO World Mental Health Surveys. *PLoS One*, 5(5), e10574. <https://doi.org/10.1371/journal.pone.0010574>
- \*Stenersen, M., Ovrebo, E., Emery, H., Brown, E., New, C., Brasfield, C., & Turner, L. (2019). Interpersonal trauma, and PTSD symptomology among lesbian, gay, and bisexual individuals: A closer look at gender, minority stress, and help-seeking behaviors. *Journal of LGBT Issues in Counseling*, 13(3), 216–231. <https://doi.org/10.1080/15538605.2019.1627976>
- \*Stults, C. B., Javdani, S., Greenbaum, C. A., Kapadia, F., & Halkitis, P. N. (2015). Intimate partner violence and substance use risk among young men who have sex with men: The P18 cohort study. *Drug and Alcohol Dependence*, 154, 54–62. <https://doi.org/10.1016/j.drugalcdep.2015.06.008>
- Thorsteinsson, E. B., & Loi, N. M. (2017). Attributions Toward Injury in a Military Physical Training Environment. *Military Psychology*, 29(4), 336–344. <https://doi.org/10.1037/mil0000158>
- \*Travers, Á., Armour, C., Hansen, M., Cunningham, T., Lagdon, S., Hyland, P., Vallières, F., McCarthy, A., & Walshe, C. (2020). Lesbian, gay or bisexual identity as a risk factor for trauma and mental health problems in Northern Irish students and the protective role of social support. *European Journal of Psychotraumatology*, 11(1), 1708144. <https://doi.org/10.1080/20008198.2019.1708144>
- Van Loey, N. E., van Son, M. J., van der Heijden, P. G., & Ellis, I. M. (2008). PTSD in persons with burns: An explorative study examining relationships with attributed responsibility, negative and positive emotional states. *Burns : journal of the International Society for Burn Injuries*, 34(8), 1082–1089. <https://doi.org/10.1016/j.burns.2008.01.012>
- Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). *The PTSD checklist for DSM-5 (PCL-5)*. Scale available from the National Center for PTSD at [www.ptsd.va.gov](http://www.ptsd.va.gov).
- Widera-Wysoczańska, A., & Kuczyńska, A. (Eds.). (2010). *Interpersonal trauma and its consequences in adulthood*. Cambridge Scholars Publishing.
- Widom, C. S. (1999). Posttraumatic stress disorder in abused and neglected children grown up. *The American Journal of Psychiatry*, 156(8), 1223–1229. <https://doi.org/10.1176/ajp.156.8.1223>