Understanding Psychological Responses to Disasters: a Systematic Review of Mental Health Trajectory Studies

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Abstract

Disasters, pose significant threats to mental health, yet individuals' psychological responses over time are highly variable. This systematic review aimed to identify the most common mental health trajectories following exposure to disasters and to examine how these trajectories differ across disaster types, mental health outcomes, and methodological and sociodemographic factors. Synthesizing findings from 35 studies (53 outcome entries), five primary trajectories were identified: resilience (60.0%), moderate stable (14.9%), recovery (11.1%), chronic (7.1%), and delayed onset (6.3%). While resilience was the primary response, nearly 40% of individuals exhibited non-resilient patterns, emphasizing substantial mental health needs in disaster-affected populations. For resilience and recovery, no significant predictors were identified. The moderate stable trajectory was more prevalent in studies using probability sampling ($p = 0.046$). Chronic trajectories were less prevalent after pandemics than after natural disasters ($p = 0.016$). For delayed onset, prevalence was higher after pandemics ($p = 0.010$) and human-made disasters ($p = 0.003$), lower among women ($p = 0.017$), and more frequently detected with latent growth mixture modelling ($p < 0.001$). These findings highlight that while most individuals show resilience, a substantial minority experience persistent or delayed distress, underlining the need for targeted mental health support after disasters.

Understanding Psychological Responses to Disasters: a Systematic Review of Mental Health Trajectory Studies

Disasters, whether natural or human-made, have profoundly shaped human history. They are typically defined as sudden events, such as an accident or a natural catastrophe, which cause great damage or loss ("Disaster," 2025). Disasters can range from phenomena like earthquakes, hurricanes and pandemics to human caused events such as industrial accidents and terrorist attacks. Unlike individual traumatic events, disasters impact entire communities, disrupt infrastructures and economies, and necessitate large-scale emergency responses. The collective and destructive nature of disasters exposes individuals not only to direct harm but also to secondary stressors, such as displacement, resource shortages, and prolonged uncertainty. These stressors can lead to long-term psychological consequences, including a decline in overall well-being, with potential outcomes such as post-traumatic stress disorder (PTSD), anxiety, or depression (Beaglehole et al., 2018; Bryant et al., 2021; Bonde et al., 2016; Newnham et al., 2022; Liang et al., 2019; Robinson et al., 2022). To build on existing knowledge, this study systematically reviews the literature to examine the patterns, determinants, and contextual factors that influence mental health trajectories.

Notably, research by Bonanno et al. (2010) found that severe psychological problems affect only a minority of exposed individuals, rarely exceeding 30% in adults. Psychological problems following disaster do not always appear immediately or remain constant; instead they can follow distinct patterns over time (Bonanno, 2008; Galatzer-Levy et al., 2018). These patterns, known as mental health trajectories, provide insights into the diverse ways individuals experience and recover from disaster, highlighting the diversity of psychological responses over time. Understanding these trajectories, and the factors associated with them, can inform targeted interventions. Four common mental health trajectories after experiencing disaster have been

identified (Bonanno, 2008; Galatzer-Levy et al., 2018).

The first trajectory, called resilience, describes individuals who maintain stable mental health from before to after the disaster. While they may face temporary distress, they generally do not suffer long-term psychological consequences. Galatzer-Levy et al. (2018) found that resilience is the most common trajectory, being observed in 65.7% of the cases. The second trajectory, recovery, is characterized by an initial period of distress, disruptions in functioning, or the emergence of psychopathology before stabilizing over time. The third trajectory, chronic dysfunction, is marked by persistent and severe psychological distress that does not improve over time. According to Pietrzak et al. (2013) this trajectory is often linked to greater disaster exposure, illness, or community destruction. The fourth trajectory, delayed onset, is when individuals initially appear stable but develop psychological difficulties over time. This delayed onset of distress may be triggered by the accumulation of post-disaster stressors, particularly financial difficulties, prior trauma exposure, or a gradual increase in psychological burden (Pietrzak et al., 2013).

Although these four trajectories offer a broad framework for understanding post-disaster mental health, alternative trajectories exist. For example, Johannesson et al. (2015) distinguish between moderate and severe chronic conditions. Understanding these trajectories is valuable not only for categorizing post-disaster responses but also for predicting long-term psychological outcomes and informing mental health interventions (Newnham et al., 2022). By carefully examining the factors that influence mental health trajectories, researchers and practitioners can develop targeted interventions aimed at addressing these factors to prevent long-term psychological harm.

Several factors influence these mental health trajectories. For instance, Newnham et al.

(2022) found that disaster type shaped recovery trajectories: earthquakes were linked to persistently higher PTSD and anxiety, industrial disasters to sustained anxiety, and epidemics to initially high anxiety that declined after the first year. These findings suggest an influence of disaster type on mental health trajectory. Similarly, Santiago et al. (2013) found that while PTSD prevalence generally decreased over time, the pattern differed based on trauma type. PTSD prevalence decreased for non-intentional traumas, such as natural disasters, but increased for intentional traumas, such as assault or terrorism, suggesting that intentional traumas often result in more long-lasting traumatic effects.

Sociodemographic context can also affect mental health trajectories following disasters (Rubonis & Bickman, 1991; Norris et al., 2002). Research indicates that females tend to experience higher rates of PTSD symptoms after experiencing a disaster than males, suggesting a gender difference in post-disaster vulnerability (Bondjers et al., 2018; Smid et al., 2018; Yang et al., 2011), which may influence mental health trajectories over time. Similarly, individuals from ethnic minority backgrounds often face poorer mental health outcomes after disasters (Liu et al., 2010; Lowe & Rhodes, 2013; Smid et al., 2018), highlighting the potential impact of social and structural inequalities. Age also appears to play a role in post-disaster mental health trajectories. Newnham et al. (2022) found that while children and adolescents generally follow similar mental health patterns as adults, they experience significantly higher levels of depression and anxiety over time, suggesting that younger populations may be particularly vulnerable to the long-term psychological effects of disasters.

Despite considerable research on mental health trajectories, knowledge gaps remain. The resilience paradox, described by Bonanno (2021), shows that while many individuals display resilience after experiencing disasters, the predictors of resilience are modest and not well

understood. Bonanno argues that conventional assessments tend to simplify the complex factors influencing resilience by focusing on a few variables. This complexity suggests that responses to trauma depend on a dynamic interaction of situational and behavioural elements that are not easily captured by existing frameworks. Schäfer et al. (2024) found associations between resilience and factors like income, social support, and emotional regulation, especially among younger women. Yet, their research also indicates that results are inconsistent, with some studies reporting weaker effects when adjusting for sociodemographic variables and other resilience factors. These inconsistencies point to the need for a better understanding of how these factors interact and why resilience occurs in some individuals but not others. This study aims to gain insights into the factors influencing these trajectories by statistically controlling for methodological (sampling and analytic methods) and sociodemographic factors (gender, Human Development Index (HDI)). Given the limited comparative research on the psychological effects of natural versus man-made disasters, this study also seeks to clarify how different disaster contexts may shape these trajectories.

To build on existing knowledge, this study systematically reviews literature to examine the patterns, determinants, and contextual factors that influence mental health trajectories. Specifically, it will explore the following research questions:

1. What are the most common mental health trajectories observed during disasters and how prevalent are they?

2. To what extent do disaster type and mental health outcome influence the prevalence of specific mental health trajectories, when statistically controlling for sociodemographic, methodological, and all other included factors?

3. To what extent do sociodemographic and methodological factors influence the prevalence

of specific mental health trajectories, when statistically controlling for disaster type, mental health outcome, and all other included factors?

Methods

Literature search

To address the research question, a systematic review was conducted. This systematic review was prospectively registered in PROSPERO (registration number: CRD420251024573). Initially, existing reviews on long-term mental health outcomes following disasters were identified. Then, an experienced information specialist developed the initial search strategy, building on previous work regarding long-term mental health outcomes after disasters and environmental hazards. For this project, an additional search block was added for terms related to COVID-19 and symptom trajectories. Search terms were grouped into clusters (see Appendix A; Search strategies): Victims (#1), disasters and environmental hazards (#2), mental health outcomes (#3), Covid-19 (#6-#8), Trajectories (#9), trajectory-related methodologies (#10), aggregated methodology (#13). These clusters were combined using Boolean operators (#11 and #14). No filters were applied for publication year, language and or similar parameters.

The following bibliographic databases were searched on January 8, 2025: Ovid Medline ALL, PsycINFO (Ovid), PTSDpubs, Web of Science and SocIndex. All search results were imported into Endnote and deduplicated using the method described in Bramer et al. (2016). To identify additional relevant studies, backward citation tracking was conducted in Scopus on systematic reviews that were deemed relevant after screening. Appendix B shows the number of references retrieved through each search system, the number of duplicates, and thus the number of new articles collected. The items found through citation tracking are also included. These articles were then screened for inclusion in this review.

Inclusion and exclusion criteria

Comprehensive inclusion and exclusion criteria were established to guide study selection for this systematic review. Two independent reviewers screened all titles and abstracts. In cases of uncertainty or missing abstracts, records were marked as relevant for full-text review. Exclusion criteria were documented at each stage. The formulated inclusion and exclusion criteria were as follows:

Study type: Inclusion: (1). Longitudinal, prospective, or mixed-method studies. (2). Must have at least two timepoints of assessment. Exclusion: (1). Cross-sectional studies (single time-point assessments). (2). Case studies, qualitative research, or narrative reviews. (3). Research looking into the effectiveness of interventions.

Population: Inclusion: (4). Adults or children exposed to natural disasters, human-made disasters, or pandemics. (5). Includes the general population. Exclusion: (4). Studies focusing only on pre-disaster mental health without post-event trajectories. (5). Studies about war and humanitarian conflict. (6). Studies on pre-existing clinical populations (e.g., schizophrenia, bipolar disorder) unless compared to non-clinical samples. (7). Studies on cohort-specific samples (e.g., healthcare workers, military personnel).

Method: Inclusion: (6). Must categorize individuals into distinct mental health trajectories (e.g., resilience, recovery, chronic distress, delayed onset, recovered/non recovered, persistent low-level/persistent high-level). (7). Must use Latent Growth Mixture Modelling (LGMM), Latent Class Growth Analysis (LCGA), or similar methods. Exclusion: (8). Studies that do not classify participants into trajectories. (9). Studies that do not use trajectory-based statistical models. (10). The minimal number of participants is N = 30.

Timing: Inclusion: (8). First post-event assessment must occur within 12 months of disaster onset. (9). The measurement duration is not more than 3 months. Exclusion: (11). Studies with only one post-event assessment. (12). Studies where the first post-event assessment occurs more than one year after the disaster. (13). The measurement duration is longer than 3 months.

Outcome: Inclusion: (10). Must examine at least one of the following: PTSD, depression, anxiety, substance abuse, suicidality, insomnia, or distress measured by validated instruments (e.g. PCL-5, K10) with recommended cut-off values. Exclusion: (14). Studies that do not measure PTSD, anxiety, depression, or psychological distress. (15). Studies that only use composite/combined mental health scores without individual disorder measures. (16). Measurements for children have been filled out by their parents/educators.

Publication: Inclusion: (11). Journal articles. Exclusion: (17). Grey literature, dissertations, preprints, conference abstracts.

Screening

To screen and select records for this review, ASReview (ASReview LAB developers., 2025) was used. For clarity, title-abstract entries from ASReview are referred to as 'records', while each full-text article is considered a 'study'. If a study reported trajectories for multiple mental health outcomes, each outcome was extracted as a separate 'outcome entry', which serves as the unit of analysis in this review. The deduplicated records were exported into ASReview for screening based on title and abstract. For the primary and the systematic reviews, screening started from scratch, without adding prior knowledge to ASReview. When screening the references found through citation tracking, screening decisions from the primary records were included as prior knowledge. The primary and the systematic review records were all assessed for inclusion. As for the citations, screening was stopped using the SAFE procedures after

screening at least 20% of the data and 100 irrelevant items since the last relevant item, based on recommendations from Boetje and van de Schoot (2024) and van de Schoot et al. (2021). SAFE-procedures (Screening Approach for Full Exhaustiveness) are stopping rules designed to determine when citation screening can be halted without compromising the comprehensiveness of the review. The two independent reviewers screened each of three datasets in separate ASReview projects. After screening, conflicts were solved in Excel through discussion.

Initial title/abstract screening yielded a selection of studies that were then screened on full text in Excel. Conflicts between reviewers were resolved, like for the title/abstract screening. Only primary studies were included in the final data extraction and analysis. Systematic reviews were used exclusively to identify additional studies through citation tracking. Final inclusion decisions were documented, and the corresponding flowchart was constructed in line with PRISMA guidelines (Page et al., 2021); see figure 1.

Quality assessment

Deliberate methodological choices were made regarding measurement instruments and sample selection. In line with these choices, methodological quality indicators were systematically extracted for each included study. In particular, studies were categorized according to their use of probability or non-probability sampling methods, as this distinction can significantly influence prevalence estimates and generalizability (Stratton, 2021; Comtesse et al., 2024). Additional indicators included analytic approach and attrition rates. However, due to substantial missing data on attrition, this variable could not be included in the quantitative analyses. Sampling method and analytic approach were included as study-level moderators in the meta-analytic models to partially account for methodological heterogeneity.

Data extraction

Following the full-text screening, data were extracted (PK) using a standardized Excel template. The preliminary extraction variable list was developed and refined through discussion with the supervisor (MD). The final variable set included bibliographic details, study and sample characteristics, event and contextual factors, analytic methods, and main trajectory findings for each mental health outcome. This meant that studies were split into outcome entries, when they performed trajectory analyses for multiple mental health outcomes. For example, Lui et al. (2024) conducted trajectory analyses for three mental health outcomes, PTSS/PTSD, depression, and anxiety, and there were therefore represented as three separate outcome entries. Detailed information on the extracted variables is provided in Appendix C.

Statistical analysis

A multilevel (meta-analysis) logit-logistic regression model was used to generate pooled estimates of mental health trajectories across all outcome entries. Pooled estimates are summary measures that combine results from multiple studies or outcome entries, providing an overall effect size by assigning greater weight to more precise or larger studies (Dettori et al., 2022). This approach distinguishes fixed effects from random effects. Fixed effects capture specific characteristics that remain constant across outcomes, while random effects account for variability and differences between clustered outcomes.

Fixed effects. The model first estimated the overall pooled prevalence of each trajectory. Subsequently, it tested specific study-level moderators:

- Disaster type (natural/human-made/pandemic)

- Population gender distribution (% female)

- National socioeconomic population context (Human Development Index)

- Sampling method (probability vs. non-probability)

- Analytical approach (latent growth mixture modelling, latent class analysis, etc.)

Random effects. The model consisted of three levels, with level 1 being the individual estimates per study; at this level, binomial error variance (constrained to 1) was modelled. Level 2 modelled the variance between different mental health categories, e.g., PTSD, depression, stress, and level 3 modelled the variance between different studies.

All fixed effects and random effects were estimated simultaneously in a single model. Thus, effect estimates were controlled for the other effects in the model. All models were estimated in MLwiN version 3.01 using restricted iterative generalized least squares with first-order penalised quasi-likelihood. The overall pooled prevalence of mental health trajectories was equally weighted for the fixed effects factors and for categories within a factor (indicator scoring (0,1) minus 1/N(cat), N(cat) = number of categories in factor). No weight was added for differences in sample size, as is often done in meta-analyses, primarily because the heterogeneity between individual measures and studies was so large that weighting for sample size would make the different model estimates significantly more difficult to interpret.

Results

After the search, 313 primary records were found for title/abstract screening and 174 systematic review records. After screening the primary records, 95 studies were deemed relevant for full text screening. Of the systematic review 22 studies were deemed relevant. These systematic reviews were used for citation tracking which resulted in 1550 records for title/abstract screening. Citation tracking was done to identify additional relevant studies not captured in the initial database search. Screening citation tracking records identified 42 relevant studies for full-text review. Screening both primary records and citation tracking records by titles

and abstracts resulted in 137 records selected for further assessment. The full text of the retrieved 137 studies was read and screened on the basis of the same inclusion and exclusion criteria as for the titles and abstracts. After full-text screening, 35 studies were ultimately included. The numbers of retrieved, duplicate and screened items from the literature search are shown in Appendix B. The numbers of retrieved, duplicate, excluded and included items are shown in Figure 1. Any uncertainties during data extraction were flagged and resolved in consultation with the supervisor (MD). To ensure accuracy, the supervisor independently verified 10% of the initial extractions.

Following full-text screening, reviewers PK and MV initially included 40 studies. However, during data extraction, an additional 5 studies were excluded based on pre-defined criteria. Aafjes-van Doorn et al. (2024) and Johnson et al. (2023) were both excluded, since in both studies, participants from multiple countries were included, but the analyses did not differentiate between these groups. As a result, the trajectories were calculated as though there were no meaningful differences across countries. After discussion with the supervisor (MD), these were considered to represent comorbid trajectories, which are an exclusion criterion in the current review. In addition, two articles, Lu et al. (2022) and Mayerl et al. (2022), were excluded upon closer inspection because their analyses featured comorbid trajectories for mental health outcomes. Lastly, Chen et al. (2017) was excluded because the authors used latent transition analysis, a method for which it was not possible to extract the required trajectory proportions. For this reason, the article was excluded for methodological incompatibility. As a result, 35 studies were included, yielding 53 outcome entries as shown in Table 1).

Table 1

Overview of outcome entry characteristics

Authors & publication date	Country	Event Type	N	Gender proportion female %	Sampling	Outcome & measure	Number of trajectories	Study Design
X. Liu et al. (2024)	China	Flood	376	64.6	Non-probability sampling	PTSS/PTSD, PCL-5	3	Latent growth mixture model
X. Liu et al. (2024)	China	Flood	376	64.6	Non-probability sampling	Depression, PHQ-0	2	Latent growth mixture model
X. Liu et al. (2024)	China	Flood	376	64.6	Non-probability sampling	Anxiety, GAD-7	3	Latent growth mixture model
L. Liu et al. (2023)	China	Pandemic	13494	71.0	Non-probability sampling	Depression, PHQ-9	5	Growth mixture model
L. Liu et al. (2023)	China	Pandemic	13494	71.0	Non-probability sampling	Anxiety, GAD-7	5	Growth mixture model
X. Qiao et al. (2023)	China	Pandemic	3834	47.2	Non-probability sampling	Insomnia, PSQI	4	Growth mixture model
G. Shahar et al. (2021)	Israel	Pandemic	1018	51.0	Non-probability sampling	Anxiety, SAI	4	Latent mixture modelling
A. La Greca et al. (2021)	United States	Hurricane	568	55.0	Non-probability sampling	PTSS/PTSD, PTSD-RI	3	Latent growth mixture model
Y. Liang et al. (2021)	China	Earthquake	301	47.8	Non-probability sampling	PTSS/PTSD, UCLA PTSD-RI	3	Latent growth mixture model

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Y. Liang et al. (2021)	China	Earthquake	301	47.8	Non-probability sampling	Depression, CDI	2	Latent growth mixture model
S. Hong et al.(204)	Korea	Public safety accident	167	42.5	Probability sampling	PTSS/PTSD, CPTSD-RI	4	Growth mixture model
C. Park et al. (2024)	United States	Pandemic	1108	54.3	Non-probability sampling	Anxiety, DASS-21	5	Latent growth mixture model
D. Reis et al. (2022)	Germany	Pandemic	2203	78.2	Non-probability sampling	Depression, DASS-21	4	Latent class growth model
D. Reis et al. (2022)	Germany	Pandemic	2203	78.2	Non-probability sampling	Anxiety, DASS-21	4	Latent class growth model
D. Reis et al. (2022)	Germany	Pandemic	2203	78.2	Non-probability sampling	Stress, DASS-21	4	Latent class growth model
M. Harigane et al. (2021)	Japan	Nuclear Accident	24177	56.8	Probability sampling	Distress, K6	5	Growth mixture model
X. Zhang et al. (2023)	China	Pandemic	605	56.2	Non-probability sampling	Depression, PHQ-9	3	Latent class growth model
Y. Zhao et al. (2023)	China	Pandemic	883	48.8	Non-probability sampling	PTSS/PTSD, PCL-5	2	Latent growth mixture model
Y. Zhao et al. (2023)	China	Pandemic	883	48.8	Non-probability sampling	Depression, CES-DC	2	Latent growth mixture model
Y. Zhou et al. (2016)	China	Earthquake	1501	55.0	Non-probability sampling	Depression, DSRSC	4	Growth mixture model
E. Iob et al. (2020)	United Kingdom	Pandemic	51417	51.1	Non-probability sampling	Depression, PHQ-9	3	Latent growth mixture model

Author	Country	Event	N	%	Sampling	Outcome, Measure	Classes	Method
K. McPherson et al. (2021)	United Kingdom	Pandemic	1958	70.5	Non-probability sampling	Depression, PHQ-9	4	Growth mixture model
K. McPherson et al. (2021)	United Kingdom	Pandemic	1958	70.5	Non-probability sampling	Anxiety, GAD-7	4	Growth mixture model
X. Shi et al. (2016)	China	Earthquake	1573	54.2	Non-probability sampling	Anxiety, SCARED	4	Growth mixture model
F. Norris et al. (2009)	Mexico	Flood	561	55.0	Probability sampling	PTSS/PTSD, CIDI	5	Semi-parametric group-based
R. Rong et al. (2023)	China	Pandemic	1393	46.7	Non-probability sampling	Depression, PHQ-9	5	Longitudinal latent class
R. Rong et al. (2023)	China	Pandemic	1393	46.7	Non-probability sampling	Anxiety, GAD-7	5	Longitudinal latent class
R. Rong et al. (2023)	China	Pandemic	1393	46.7	Non-probability sampling	Insomnia, ISI	3	Longitudinal latent class
H. Jiang et al. (2022)	China	Pandemic	1987	68.4	Non-probability sampling	PTSS/PTSD, PCL-5	3	Growth mixture model
S. Self-Brown et al. (2013)	United States	Hurricane	426	51.0	Non-probability sampling	PTSS/PTSD, UCLA PTSD-RI	3	Latent class growth model
T. Lin et al. (2021)	China	Pandemic	241	29.5	Non-probability sampling	PTSS/PTSD, IES	4	Latent class growth model
R. Fernández et al. (2022)	Argentina	Pandemic	832	79.8	Non-probability sampling	Distress, BSI-53	4	Growth mixture model

N. Pellerin et al. (2022)	France	Pandemic	1399	87.8	Non-probability sampling	Depression, HADS	4	Growth mixture model
N. Pellerin et al. (2022)	France	Pandemic	1399	87.8	Non-probability sampling	Anxiety, HADS	3	Growth mixture model
S. Chen et al. (2022)	China	Pandemic	326	75.1	Non-probability sampling	PTSS/PTSD, PDS-C	2	Latent growth mixture model
S. Chen et al. (2022)	China	Pandemic	326	75.1	Non-probability sampling	Depression, CES-D	3	Latent growth mixture model
S. Chen et al. (2022)	China	Pandemic	326	75.1	Non-probability sampling	Anxiety, SAI	3	Latent growth mixture model
M. Shevlin et al. (2021)	United Kingdom	Pandemic	2025	51.8	Non-probability sampling	PTSS/PTSD, ITQ	5	Latent class growth model
D. Joshi et al. (2021)	Canada	Pandemic	579	79.4	Non-probability sampling	Depression, CESD-10	2	Growth mixture model
S. Kimhi et al. (2021)	Israel	Pandemic	804	48.0	Probability sampling	Depression, BSI	4	Latent growth mixture model
S. Kimhi et al. (2021)	Israel	Pandemic	804	48.0	Probability sampling	Anxiety, BSI	4	Latent growth mixture model
P. Batterham et al. (2021)	Australia	Pandemic	1296	50.1	Non-probability sampling	Depression, PHQ-9	3	Growth mixture model
P. Batterham et al. (2021)	Australia	Pandemic	1296	50.1	Non-probability sampling	Anxiety, GAD-7	4	Growth mixture model

E. Carr et al. (2022)	United Kingdom	Pandemic	2241	57.0	Non-probability sampling	Depression, PHQ-9	4	Growth mixture model
E. Carr et al. (2022)	United Kingdom	Pandemic	2241	57.0	Non-probability sampling	Anxiety, GAD-7	4	Growth mixture model
X. Wang et al. (2023)	China	Typhoon	242	83.0	Non-probability sampling	PTSS/PTSD	4	Latent growth mixture model
Y. Liang et al. (2019)	China	Earthquake	301	47.8	Non-probability sampling	PTSS/PTSD, PCL-5	3	Latent growth mixture model
R. Pietrzak et al. (2013)	United States	Hurricane	206	46.4	Probability sampling	PTSS/PTSD, PCL-S	3	Latent growth mixture model
W. Shi et al. (2023)	China	Typhoon	362	66.1	Non-probability sampling	PTSS/PTSD, PCL-5	3	Latent class growth model
R. Saunders et al. (2021)	United Kingdom	Pandemic	21938	76.0	Probability sampling	Depression, PHQ-9	4	Growth mixture model
R. Saunders et al. (2021)	United Kingdom	Pandemic	21938	76.0	Probability sampling	Anxiety, GAD-7	5	Growth mixture model
R. Saunders et al. (2024)	United Kingdom	Pandemic	33703	76.0	Non-probability sampling	Depression, PHQ-9	5	Growth mixture model
R. Saunders et al. (2024)	United Kingdom	Pandemic	33703	76.0	Non-probability sampling	Anxiety, GAD-7	5	Growth mixture model

Figure 1

Flowchart of the retrieval, deduplication, exclusion, and inclusion of publications.
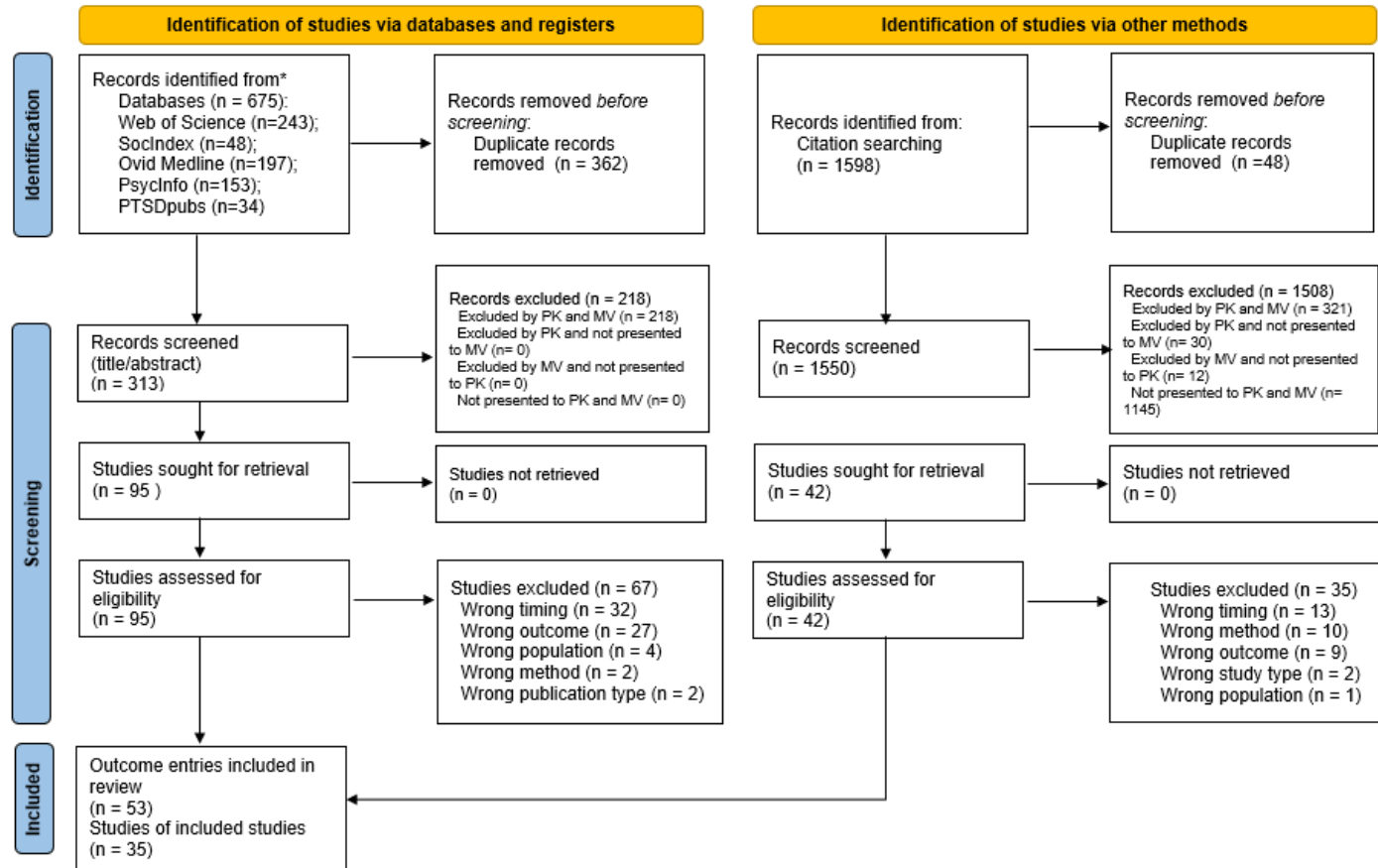
The Flowchart is adapted from Boetje and van de Schoot (2024).

Sample characteristics

The 53 outcome entries encompassed studies from 12 countries, most frequently China (n = 24, 45.3%) and the United Kingdom (n = 10, 18.9%). Pandemics were the most commonly studied event type (n = 37, 69.8%), all related to COVID-19, followed by earthquakes (n = 5, 9.4%), all focused on the Wenchuan Earthquake. Across studies, the average Human Development Index (HDI) of the countries was 0.866. The mean age of participants was 28.23 years, with an average of 61.16% female participants. The average study duration was 12.2

months, with a mean of 6.2 measurement points. The interval between measurements varied across studies. Depression was the most frequently assessed mental health outcome (n = 18, 34%), followed by post-traumatic stress symptoms/disorder (PTSS/PTSD; n = 15, 28%) and anxiety (n = 15, 28%).

Results analysis

Prevalence of Mental Health Trajectories

The overall pooled prevalence estimate for the trajectories was calculated across all included studies and outcome entries, regardless of disaster type, mental health outcome, population characteristics, or methodological approach. This estimate reflect the average proportion of individuals following a trajectory in the entire sample synthesized by the review. Five mental health trajectories were identified: resilience, moderate stable, recovery, chronic and delayed onset. Pooled prevalence estimates and confidence intervals (CIs) for each trajectory are summarized in Table 2. These estimates indicate substantial between-study heterogeneity, with the random effect for "study" accounting for significant variance.

Table 2

Pooled estimates of mental health trajectories.

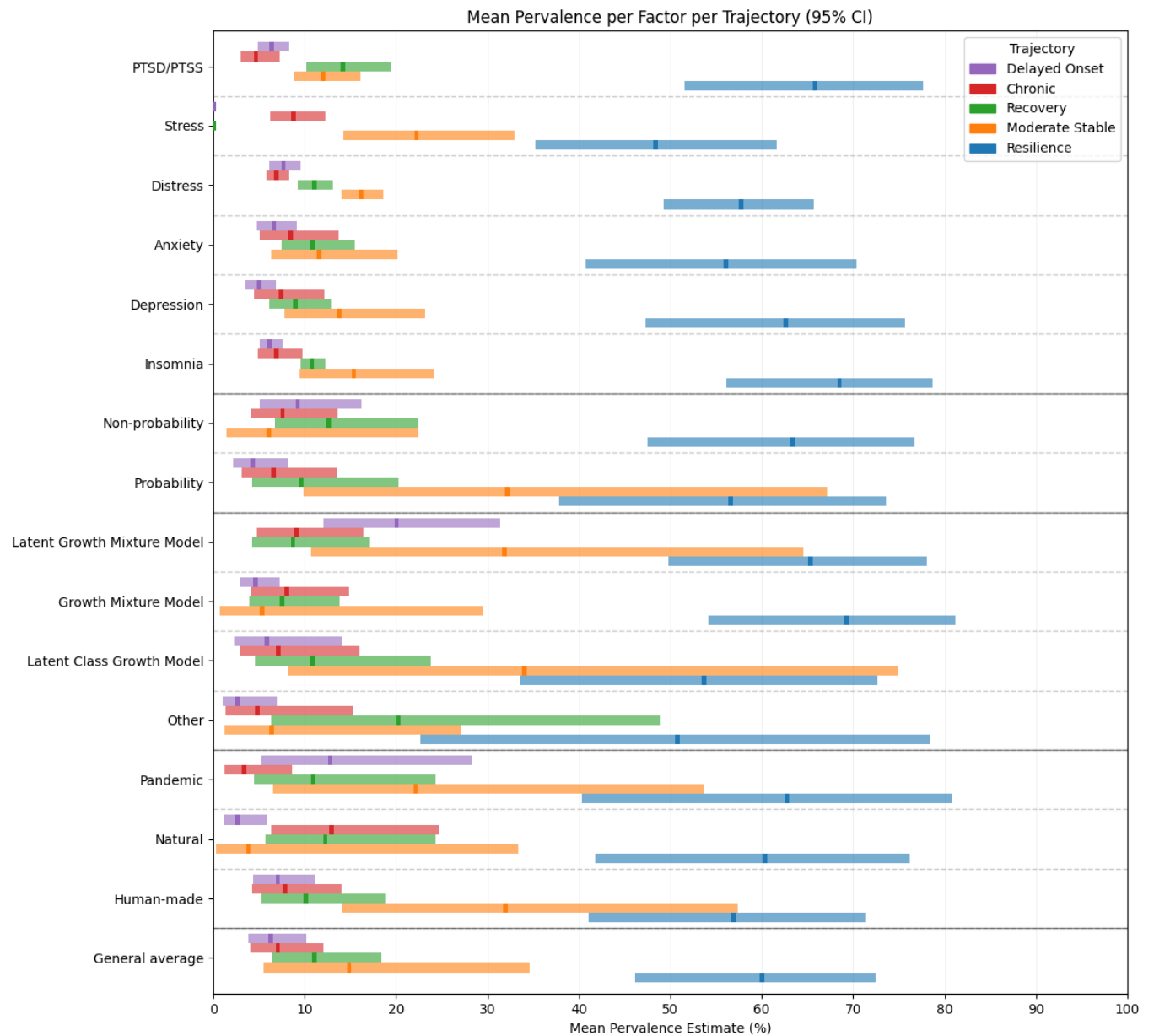| Trajectory	Prevalence (%)	95% CI
Resilience	60.0	46.1-72.5
Moderate stable	14.9	5.5-34.6
Recovery	11.1	6.4-18.4
Chronic	7.1	4.0-12.1
Delayed onset	6.3	3.9-10.1

Analysis of Predicting Factors

Analysis of potential predictors revealed that most methodological and sociodemographic factors, including mental health outcome, gender, event type, and Human Development Index, did not significantly affect the likelihood of following a particular trajectory after statistical adjustment. For the resilience and recovery trajectories there were no effects. For the moderate stable trajectory prevalence was higher in case of probability sampling (p = 0.046).

For the chronic trajectory individuals exposed to pandemics were significantly less likely to follow a chronic course compared to those exposed to natural disasters (p = 0.016). For the delayed onset trajectory, several significant predictors emerged: female gender was associated with a lower prevalence (p = 0.017), and both the type of disaster and the analytic method used influenced estimates. Specifically, delayed onset was more common following pandemics and human-made disasters than after natural disasters (p = 0.010 and p = 0.003, respectively), and studies employing latent growth mixture modelling reported higher delayed onset rates than those using other analytic approaches (p < 0.001).

Although some descriptive variation in trajectory prevalence was observed across mental health outcomes and disaster types, these differences were not statistically significant in the models. Similarly, while there was a trend for moderate stable and delayed onset prevalence to decrease with higher HDI, these effects did not reach statistical significance (p = 0.084 and p = 0.093). Notably, the largest source of variance in trajectory prevalence was attributable to differences between studies themselves, underscoring the importance of unmeasured study-level factors. For a comprehensive overview of prevalence rates by event type, mental health outcome, analytic method and sampling type see figure 2.

Figure 2

Prevalence and 95 % CI per factor per trajectory

note. This figure gives an overview of the similarities of factors within trajectories and the differences between trajectories. In this figure the coloured bars are the 95% CI and the darker stripe in the middle is the pooled prevalence estimate.

Discussion

The present systematic review set out to address three central research questions concerning mental health trajectories following disaster exposure: (1) What are the most common mental health trajectories observed during disasters, and to what extent do they occur? (2) How do mental health trajectories differ across various types of disasters and mental health outcomes when accounting for methodological and demographic factors? (3) How do mental health trajectories differ across socio-demographic and methodological factors while controlling for disaster type and context? In synthesizing evidence from 53 outcome entries across 35 studies, this review provides a comprehensive statistical evaluation of trajectory prevalence and their determinants, drawing on the strengths of recent meta-analytic approaches in the field.

Consistent with previous research on psychological responses to adversity, the current findings demonstrate a consistent structure in post-disaster mental health trajectories. Across various disaster types and populations, five distinct trajectories were identified: resilience, moderate stable, recovery, chronic, and delayed onset. Resilience was the most common trajectory, with approximately 60% of individuals maintaining stable mental health after disaster. This closely mirrors earlier reviews, such as Galatzer-Levy et al. (2018), who reported a pooled resilience prevalence of 65.7% in trauma-exposed populations. The predominance of resilience across studies, disaster types, and mental health outcomes underscores its role as a fundamental human stress response, rather than an artifact of measurement or sampling. However, it is important to note that nearly 40% of individuals follow non-resilient trajectories, including moderate stable (14.9%), recovery (11.1%), chronic (7.1%), or delayed onset (6.3%). In the context of large-scale disasters, this minority can represent a substantial absolute number of

people in need of support, placing significant demands on mental health systems. Thus, these groups should be a central focus for intervention and policy, rather than an afterthought.

A central aim of this review was to identify factors that explain variability in trajectory prevalence. The greatest source of heterogeneity was between-study differences rather than sampling error or bias, suggesting that unmeasured contextual, methodological, or cultural factors may substantially influence observed prevalence rates. Nevertheless, several moderators did emerge. Notably, unlike research by Newnham et al. (2022) mental health outcome was not a predictor for any of the trajectories. Disaster type influenced the likelihood of chronic and delayed onset trajectories: natural disasters were associated with a higher prevalence of chronic trajectories, while pandemics and human-made disasters were linked to increased delayed onset. These findings are consistent with the notion that the nature and duration of disaster-related stressors can shape the unfolding of psychological symptoms (Newnham et al., 2022).

Methodological factors also influenced observed patterns. Studies using latent growth mixture modelling (LGMM) tended to identify more delayed onset trajectories, highlighting the sensitivity of advanced analytic approaches to subtle variations in symptom emergence. Similarly, the use of probability sampling was associated with higher prevalence of moderate stable trajectories, suggesting that sampling strategies may influence the detection of less common patterns. These findings echo Galatzer-Levy et al. (2018), who emphasized the importance of modelling approach and study design in shaping trajectory estimates.

Sociodemographic variables, such as gender and national development, were also examined as potential moderators. Female gender was associated with a lower likelihood of delayed onset, a finding that diverges from some prior studies (Bondjers et al., 2018; Smid et al., 2018; Yang et al., 2011) and may reflect the unique context of pandemic-related disasters, which

dominated the sample. The role of the HDI as a continuous moderator approached significance for certain trajectories, suggesting that socioeconomic context may exert a complex influence on psychological adjustment. However, these effects were modest and did not reach conventional levels of statistical significance. This might have to do with the fact that countries included in our analyses all had a 'high' or 'very high' HDI.

Limitations and Future Research

This review also highlights several methodological and conceptual challenges in studying mental health trajectories after disaster. A notable methodological decision was the strict application of inclusion and exclusion criteria, particularly the exclusion of studies reporting comorbid trajectories. This approach was adopted to ensure analytic clarity and comparability across studies, as comorbid trajectories—where individuals are classified into patterns based on multiple, overlapping mental health outcomes, introduce additional complexity to trajectory modelling. However, recent studies by Lu et al. (2022) and Mayerl et al. (2022) have demonstrated that it is feasible to identify and report prevalence rates for comorbid trajectories across various mental health outcomes. These studies suggest that comorbidity is not only common but may provide important insights into the heterogeneity of post-disaster psychological responses.

In the current review, the exclusion of comorbid trajectories was not associated with significant differences in trajectory prevalence across the different mental health outcomes assessed. This finding suggests that the inclusion of comorbid trajectories might not distort overall prevalence estimates and could, in fact, enrich our understanding of the complexity of post-disaster mental health. Thus, there may be little justification for their exclusion in future research, provided that appropriate analytic methods are used and results are reported with

sufficient clarity. Including comorbid trajectories could allow for a more nuanced characterization of risk and resilience, and better inform intervention strategies for individuals experiencing multiple, intersecting forms of psychological distress. Additionally, the predominance of pandemic-related studies may limit the generalizability of findings to other disaster contexts. Most included studies were conducted in high-income countries and during the COVID-19 pandemic, which may not capture the full range of risk and resilience factors present in low- and middle-income countries or in the context of other disaster types. Another limitation concerns the considerable variation in follow-up duration across studies. While some studies included relatively short-term follow-up periods, others spanned several months or up to a few years; however, none of the included studies captured truly long-term trajectories with multiple assessments over several years. This lack of extended longitudinal data makes it difficult to determine the stability and evolution of mental health trajectories in the long run.

Future research should address these gaps to better inform global disaster mental health strategies. The substantial between-study heterogeneity observed further underscores the need for greater methodological harmonization in future research, including standardized time points, consistent use of validated measures, and more diverse samples. To improve comparability and cumulative knowledge, future trajectory research should adopt standardized reporting practices, including clear documentation of time points, analytic methods, and the reporting of comorbid trajectories.

Despite these limitations, the implications of the findings are clear. The predominance of resilience should not overshadow the needs of those with chronic or delayed onset trajectories. Early identification and sustained monitoring of at-risk individuals, especially those exposed to natural or human-made disasters, are essential for timely intervention. At the system level,

integrating long-term mental health services into disaster response frameworks and establishing

surveillance systems to monitor mental health trajectories could be essential steps to ensure that

both immediate and delayed needs are addressed. Policymakers should prioritize the

development of scalable, sustainable mental health infrastructure as part of disaster preparedness

and recovery planning. Moreover, the dynamic interplay of individual, contextual, and

methodological factors revealed in this review points to the necessity of multifaceted, context-

sensitive approaches to disaster mental health. Practitioners and policymakers should integrate

these insights into disaster preparedness and response frameworks, ensuring that interventions

are tailored to the diverse needs of affected populations and are sustained over the long term.

Conclusion

In conclusion, this systematic review provides robust evidence for both the consistency

and heterogeneity of mental health trajectories following disasters. While resilience is the most

common response, significant minorities experience moderate stable, recovery, chronic, or

delayed onset trajectories. The determinants of these trajectories are multifactorial,

encompassing disaster type, analytic approach, and, to a lesser extent, sociodemographic context.

Future research should strive for greater methodological rigor and inclusivity, with particular

attention to underrepresented population. A deeper understanding of the patterns and predictors

of psychological adjustment after disaster will better inform targeted interventions and promote

mental health resilience in the face of collective adversity.

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Appendices

Appendix A, Search strategies

The databases were searched on January 8, 2025. The searched literature was also used for another project, the relevant final set for this project is printed in bold type.

Web of Science (via RUG)

Web of Science does not have thesaurus terms like in Ovid etc., but they have the field Topic. You use this to search the following fields within a record: Title, Abstract, Author Keywords and Keywords Plus®.

#	Search Query	Results
1	TS= (victim* or surviv* or exposed or resident* or male or males or female* or affected or adult* or child* or adolescent*) Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	11967387
2	TS= (disaster* or catastrophe* or calamit* or crisis or crises or earthquake* or Eruption* or erosion or Collapse* or flood* or hurricane* or tornado* or cyclon* or twister* or typhoon* or landslide* or Mudslide* or fire* or bushfire* or wildfire* or tsunami* or volcano* or eruption* or avalanche* or blizzard* or lightning* or drought* or frack* or hydraulic or cbrn or collaps* or contaminat* or explosion* or famine* or oil-spill* or aircrash* or shipwreck* or terror* or shooting* or bombing* or killing* or hostage* or epidemic* or zoonos* or Pandemic* or epizootic* or Fukushima or Chernobyl or (critical NEAR/2 incident*) or ((environmental or seismic* or Meteorolog* or climate or Biolog* or Nuclear or natural or Fault* or gravity or wind* or Precipitation or sun or Bacteria* or Virus* or Fungi or fungal or Toxin* or Radium or water or rain* or snow* or ice or hail* or sleet or Radiation) NEAR/2 (hazard* or exposure* or incident* or accident*)) or (storm NEAR/1 (surge* or tide*)) or (wind* NEAR/1 high) or ((heat or cold) NEAR/1 (excess* or wave*)) or (mass NEAR/2 (casualty or casualties)) or ((chemic* or oil or nuclear or biologic*) NEAR/2 (Explosion* or Fire* or contamination or release* or spill*)) or ((transport or road or train or rail or airplane or ferry or flight or traffic or freeway or road or tunnel) NEAR/2 (accident* or crash*)) or ((Technolog* or human or man-made or Chemic* or Electric* or Transport or nuclear or reservoir* or biological) NEAR/2 (hazard* or exposure*)) or (power NEAR/2 failure*) or (reservoir NEAR/1	3212262

	rupture*) or (complex NEAR/2 emergency)) Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	
3	TS= (mental or psychopatholog* or psycholog* OR psychiatry* OR insane OR insanity or DMDD OR psychotrauma* or PTSD or DES*NOS or multitrauma or traumatised or traumatized or "Enduring Personality Change after Catastrophic Experience*" or depression or depressive or depressed or dysthymia or dysthymic or melancholi* OR Hypersomni* or Insomni* or Narcolep* or Parasomni* or Sleepwalk* or nightmare* OR Somnambulis* OR sleepless* OR Anxiet* or angst or Anxious* or Panic OR addict* or alcoholis* or Amphetamine or Cannabis or Cocaine or Drunkenness* or Ethanol or Glue or Hashish or Heroin or Marihuana or Morphine or Narcotic* or Nicotine or Phencyclidine or smoker* or Smoking* or Tobacco or Withdrawal or ((Nervous) NEAR/3 (Breakdown)) OR ((affecti* OR mood*) NEAR/3 (disorder* OR disturbance*)) OR (Stress NEAR/3 disorder*) or ((emotional) NEAR/3 (Trauma*)) or (acute NEAR/3 Stress) or ((Stress or Crisis) NEAR/3 Reaction*) or ((Post-Traumatic or posttraumatic or Trauma*) NEAR/3 (stress or neurosis or neuroses or syndrome* or Disorder* or psychosis or psychoses or distress*)) or (Compassion NEAR/3 Fatigue) or ((sleep*) NEAR/3 (disorder* or problem* or walk* OR syndrome*)) or (Night NEAR/3 (Terror* or mare*)) or ((Paroxysmal) NEAR/3 (Sleep*)) OR ((Alcohol* or Drug* or substance* or Inhalant or PCP) NEAR/3 (abuse* or Dependen* or habit* or overdose* or psychos* or disorder* or Withdraw* or Abstinence or Induced or "use" OR Related)) or (Angel NEAR/3 Dust) or (Binge NEAR/3 Drinking) or (Delirium NEAR/3 Tremens) or (Neonatal NEAR/3 Abstinence)) Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	3820759
4	TS= (cohort* or longitudinal or prospective or retrospective or timeserie* or followup or (repeated NEAR/1 measure*) or (pre NEAR/1 post) or (time NEAR/1 serie*) or (follow NEAR/1 up) or (panel NEAR/3 stud*)) Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	4172004
5	#4 AND #3 AND #2 AND #1 Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	20726
6	TS=("Severe Acute Respiratory Syndrome" or "SARS Virus" or ((Coronavirus or "Coronavirus Infections" or "pneumonia virus*" or cov) and ((outbreak or wuhan) or novel or "19" or "2019" or epidem* or epidemy or epidemic* or pandem* or new)) or coronavirus* or "corona virus*") Editions: WOS.SCI,WOS.SSCI,WOS.ESCI Timespan: 2019-12-01 to 2030-01-01	236915
7	TS=(ncov or 2019ncov or covid* or sars* or "severe acute respiratory syndrome" or "sudden acute respiratory syndrome" or mers or "middle east respiratory syndrome") Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	635419
8	#7 OR #6 Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	649625

9	TS=(trajector*) Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	347163
10	TS=("Latent Class Analys*" OR "latent class growth analys*" OR "trajectory analys*" OR "latent growth*" OR "latent class*" OR "growth mixture*" OR lgmm OR gmm OR lcgm OR lca) Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	74917
11	**#1 AND (#2 OR #8) AND #3 AND #9 AND #10 Editions: WOS.SCI,WOS.SSCI,WOS.ESCI**	**243**

We also want additional aggregate studies:

#	Search Query	Results
12	TS=((systematic adj2 review) or meta?analys?s OR guideline* OR "clinical protocol*") Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	794660
13	#1 AND (#2 OR #8) AND #3 AND #9 AND #12 Editions: WOS.SCI,WOS.SSCI,WOS.ESCI	54
14	**#13 NOT #11 Editions: WOS.SCI,WOS.SSCI,WOS.ESCI**	**50**

SocIndex (via RUG)

#	Query	Limiters/Expanders	Last Run Via	Results
S1	DE("VICTIMS" OR "BLAMING the victim" OR "CHILD victims" OR "CRIME victims" OR "GENOCIDE survivors" OR "HOLOCAUST survivors" OR "HOLOCAUST victims" OR "MASSACRE survivors" OR "TORTURE victims" OR "VICTIM assistance" OR "VICTIM compensation" OR "VICTIMS of abuse" OR "VICTIMS of bullying" OR "WAR victims" OR "GENOCIDE survivors" OR "HOLOCAUST survivors" OR "CHILDREN of Holocaust survivors" OR "MASSACRE survivors") OR TI(victim* or surviv* or exposed or resident* or male or males or female* or affected or adult* or child* or adolescent*) OR AB(victim* or surviv* or exposed or resident* or male or males or female* or affected or adult* or child* or adolescent*)	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	659,194
S2	(DE "BOMBINGS" OR DE "CHURCH work with disaster victims" OR DE "CIVIL defense" OR DE "CIVILIAN evacuation" OR DE "CYBERTERRORISM" OR DE "DISASTER medicine" OR DE "DISASTER psychology" OR DE "DISASTER relief" OR DE "DISASTER relief" OR DE "DISASTERS & society" OR DE "DRINKING & traffic accidents" OR DE "DROUGHTS" OR DE "DRUG use & traffic accidents" OR DE "EARTHQUAKES & society" OR DE "EMERGENCY drills" OR DE "EMERGENCY housing" OR DE "EMERGENCY management" OR DE "EMERGENCY medical services" OR DE "EMERGENCY medicine" OR DE "ENVIRONMENTAL degradation" OR DE "FLOODS & society" OR DE "HAZARD mitigation" OR DE "HOMELESS shelters" OR DE "HURRICANES" OR DE "INTERNATIONAL	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	173,182

cooperation on disaster relief" OR DE "NATURAL disasters & psychology" OR DE "NATURAL disasters & society" OR DE "NATURAL disasters" OR DE "PANDEMIC preparedness" OR DE "PARAMEDICINE" OR DE "PUBLIC shelters" OR DE "PUBLIC shelters" OR DE "SABOTAGE" OR DE "SAFETY education" OR DE "SEPTEMBER 11 Terrorist Attacks, 2001" OR DE "STATE-sponsored terrorism" OR DE "TERRORISM" OR DE "TERRORIST plots" OR DE "TRAFFIC accidents" OR DE "TSUNAMI relief" OR DE "WOMEN in disaster relief" OR DE "WOMEN'S shelters" OR DE "YOUTH shelters" OR TI(disaster* OR catastrophe* OR calamit* OR crisis OR crises OR earthquake* OR Eruption* OR erosion OR Collapse* OR flood* OR hurricane* OR tornado* OR cyclon* OR twister* OR typhoon* OR landslide* OR Mudslide* OR fire* OR bushfire* OR wildfire* OR tsunami* OR volcano* OR eruption* OR avalanche* OR blizzard* OR lightning* OR drought* OR frack* OR hydraulic OR cbrn OR collaps* OR contaminat* OR explosion* OR famine* OR oil-spill* OR aircrash* OR shipwreck* OR terror* OR shooting* OR bombing* OR killing* OR hostage* OR epidemic* OR zoonos* OR Pandemic* OR epizootic* OR Fukushima OR Chernobyl OR (critical n2 incident*)) OR AB(disaster* OR catastrophe* OR calamit* OR crisis OR crises OR earthquake* OR Eruption* OR erosion OR Collapse* OR flood* OR hurricane* OR tornado* OR cyclon* OR twister* OR typhoon* OR landslide* OR Mudslide* OR fire* OR bushfire* OR wildfire* OR tsunami* OR volcano* OR eruption* OR avalanche* OR blizzard* OR lightning* OR drought* OR frack* OR hydraulic OR cbrn OR collaps* OR contaminat* OR explosion* OR famine* OR oil-spill* OR			

	aircrash* OR shipwreck* OR terror* OR shooting* OR bombing* OR killing* OR hostage* OR epidemic* OR zoonos* OR Pandemic* OR epizootic* OR Fukushima OR Chernobyl OR (critical n2 incident*)))			
S3	(DE "MENTAL illness" OR DE "GENDER dysphoria" OR DE "INSANITY (Law)" OR DE "PARAPHILIAS" OR DE "SCHIZOPHRENIA" OR DE "PATHOLOGICAL psychology" OR DE "ADDICTIONS" OR DE "AFFECTIVE disorders" OR DE "ATTACHMENT disorder" OR DE "BEHAVIOR disorders in children" OR DE "CODEPENDENCY" OR DE "COMPULSIVE behavior" OR DE "CONDUCT disorders in adolescence" OR DE "CULTURE-bound syndromes" OR DE "DEPERSONALIZATION" OR DE "DEVELOPMENTAL psychopathology" OR DE "DISPLACEMENT (Psychology)" OR DE "EATING disorders" OR DE "ELECTRA complex" OR DE "EMOTIONAL incest" OR DE "EMOTIONAL trauma" OR DE "INTELLECTUAL disabilities" OR DE "MENTAL illness" OR DE "NARCISSISM" OR DE "NEUROSES" OR DE "NEUROTICISM" OR DE "OEDIPUS complex" OR DE "PERCEPTUAL disorders" OR DE "PERSONALITY disorders" OR DE "PSYCHOSES" OR DE "PSYCHOSOMATIC medicine" OR DE "SELF-destructive behavior" OR DE "STEREOTYPY (Psychiatry)" OR DE "SUBSTANCE abuse") OR TI(mental or psychopatholog* or psycholog* OR psychiatry* OR insane OR insanity or stress or strain OR Distress* or DMDD OR psychotrauma* or PTSD or DES*NOS or C*PTSD or EPCACE or multitrauma or traumatised or traumatized or DTD or "Enduring Personality Change after Catastrophic Experience*" or depression or depressive or depressed or dysthymia or dysthymic or mdd or melancholi* OR Hypersomni*	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	2,873,588

	or Insomni* or Narcolep* or Parasomni* or Sleepwalk* or nightmare* OR Somnambulis* OR sleepless* OR Anxiet* or angst or Anxious* or Panic OR addict* or alcoholis* or Amphetamine or Cannabis or Cocaine or Drunkenness* or Ethanol or Glue or Hashish or Heroin or Marihuana or Morphine or Narcotic* or Nicotine or Opiate* or Opioid* or Phencyclidine or smoker* or Smoking* or Tobacco or Withdrawal) OR AB(mental or psychopatholog* or psycholog* OR psychiatry* OR insane OR insanity or stress or strain OR Distress* or DMDD OR psychotrauma* or PTSD or DES*NOS or C*PTSD or EPCACE or multitrauma or traumatised or traumatized or DTD or "Enduring Personality Change after Catastrophic Experience*" or depression or depressive or depressed or dysthymia or dysthymic or mdd or melancholi* OR Hypersomni* or Insomni* or Narcolep* or Parasomni* or Sleepwalk* or nightmare* OR Somnambulis* OR sleepless* OR Anxiet* or angst or Anxious* or Panic OR addict* or alcoholis* or Amphetamine or Cannabis or Cocaine or Drunkenness* or Ethanol or Glue or Hashish or Heroin or Marihuana or Morphine or Narcotic* or Nicotine or Opiate* or Opioid* or Phencyclidine or smoker* or Smoking* or Tobacco or Withdrawal)			
S4	DE "COHORT analysis" OR TI(cohort* or longitudinal or prospective or retrospective or timeserie* or followup or (repeated N1 measure*) or ("pre" N1 "post") or (time N1 serie*) or (follow N1 "up") or (panel N3 stud*)) OR AB(cohort* or longitudinal or prospective or retrospective or timeserie* or followup or (repeated N1 measure*) or ("pre" N1 "post") or (time N1 serie*) or (follow N1 "up") or (panel N3 stud*))	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	119,325

S5	S1 AND S2 AND S3 AND S4	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	2,862 (maar ik exporteerde 2865)
S6	(DE "COVID-19 pandemic" OR DE "SARS disease" or ((DE "COVID-19 pandemic" OR TI(pneumonia virus*) OR AB(pneumonia virus*) OR SU(pneumonia virus*) OR KW(pneumonia virus*) OR TI(cov) OR AB(cov) OR SU(cov) OR KW(cov)) AND (TI(outbreak OR wuhan OR 19 OR 2019 OR new) OR AB(outbreak OR wuhan OR 19 OR 2019 OR new) OR SU(outbreak OR wuhan OR 19 OR 2019 OR new) OR KW(outbreak OR wuhan OR 19 OR 2019 OR new) OR XX(novel OR OR epidem* OR epidemy OR epidemic* OR pandem*))) OR TI(coronavirus* OR "corona virus*") OR AB(coronavirus* OR "corona virus*") OR SU(coronavirus* OR "corona virus*") OR KW(coronavirus* OR "corona virus*"))	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	19,044
S7	(DE "COVID-19 pandemic" OR DE "SARS disease" or ((DE "COVID-19 pandemic" OR TI(pneumonia virus*) OR AB(pneumonia virus*) OR SU(pneumonia virus*) OR KW(pneumonia virus*) OR TI(cov) OR AB(cov) OR SU(cov) OR KW(cov)) AND (TI(outbreak OR wuhan OR 19 OR 2019 OR new) OR AB(outbreak OR wuhan OR 19 OR 2019 OR new) OR SU(outbreak OR wuhan OR 19 OR 2019 OR new) OR KW(outbreak OR wuhan OR 19 OR 2019 OR new) OR XX(novel OR OR epidem* OR epidemy OR epidemic* OR pandem*))) OR TI(coronavirus* OR "corona virus*") OR AB(coronavirus* OR "corona virus*") OR SU(coronavirus* OR	Limiters - Publication Date: 20191201-20300131 Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	18,744

	"corona virus*") OR KW(coronavirus* OR "corona virus*"))			
S 8	TI(ncov or 2019ncov or covid* or sars* or "severe acute respiratory syndrome" or "sudden acute respiratory syndrome" or mers or "middle east respiratory syndrome") OR AB(ncov or 2019ncov or covid* or sars* or "severe acute respiratory syndrome" or "sudden acute respiratory syndrome" or mers or "middle east respiratory syndrome") OR SU(ncov or 2019ncov or covid* or sars* or "severe acute respiratory syndrome" or "sudden acute respiratory syndrome" or mers or "middle east respiratory syndrome") OR KW(ncov or 2019ncov or covid* or sars* or "severe acute respiratory syndrome" or "sudden acute respiratory syndrome" or mers or "middle east respiratory syndrome")	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	27,335
S 9	S7 OR S8	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	27,599
S 1 0	TI(trajector*) OR AB(trajector*) OR SU(trajector*) OR KW(trajector*)	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	19,874
S 1 1	TI("Latent Class Analys*" OR "latent class growth analys*" OR "trajectory analys*" OR "latent growth*" OR "latent class*" OR "growth mixture*" OR lgmm OR gmm	Search modes - Proximity	Interface - EBSCOhost Research Databases	4,797

	OR lcgm OR lca) OR AB("Latent Class Analys*" OR "latent class growth analys*" OR "trajectory analys*" OR "latent growth*" OR "latent class*" OR "growth mixture*" OR lgmm OR gmm OR lcgm OR lca) OR SU("Latent Class Analys*" OR "latent class growth analys*" OR "trajectory analys*" OR "latent growth*" OR "latent class*" OR "growth mixture*" OR lgmm OR gmm OR lcgm OR lca) OR KW("Latent Class Analys*" OR "latent class growth analys*" OR "trajectory analys*" OR "latent growth*" OR "latent class*" OR "growth mixture*" OR lgmm OR gmm OR lcgm OR lca)		Search Screen - Advanced Search Database - SocINDEX	
S 1 2	**S1 AND (S2 OR S9) AND S3 AND S10 AND S11**	**Search modes - Proximity**	**Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX**	**48**

We also want additional aggregate studies:

#	Query	Limiters/Expanders	Last Run Via	Results
S13	TI((systematic N2 review) or meta-analys* OR guideline* OR "clinical protocol*") OR AB((systematic N2 review) or meta-analys* OR guideline* OR "clinical protocol*")	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	38,084
S14	S1 AND (S2 OR S9) AND S3 AND S10 AND S13	Search modes - Proximity	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX	11
S15	**S14 NOT S12**	**Search modes - Proximity**	**Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - SocINDEX**	**11**

#	Searches	Results	Type			
1	exp Survivors/ or (victim* or surviv* or exposed or resident* or male or males or female* or affected or adult* or child* or adolescent*).ti,ab.	7635328	Advanced			
2	exp Disasters/ or accidents/ or exp "Accidents, Aviation"/ or exp "biohazard release"/ or exp "chemical hazard release"/ or exp "accidents, traffic"/ or exp drowning/ or exp "radioactive hazard release"/ or exp terrorism/ or (disaster* or catastrophe* or calamit* or crisis or crises or earthquake* or Eruption* or erosion or Collapse* or flood* or hurricane* or tornado* or cyclon* or twister* or typhoon* or landslide* or Mudslide* or fire* or bushfire* or wildfire* or tsunami* or volcano* or eruption* or avalanche* or blizzard* or lightning* or drought* or frack* or hydraulic or cbrn or collaps* or contaminat* or explosion* or famine* or oil-spill* or aircrash* or shipwreck* or terror* or shooting* or bombing* or killing* or hostage* or epidemic* or zoonos* or Pandemic* or epizootic* or Fukushima or Chernobyl or (critical adj2 incident*) or ((environmental or seismic* or Meteorolog* or climate or Biolog* or Nuclear or natural or Fault* or gravity or wind* or Precipitation or sun or Bacteria* or Virus* or Fungi or fungal or Toxin* or Radium or water or rain* or snow* or ice or hail* or sleet or Radiation) adj2 (hazard* or exposure* or incident* or accident*)) or (storm adj1 (surge* or tide*)) or (wind* adj1 high) or ((heat or cold) adj1 (excess* or wave*)) or (mass adj2 (casualty or casualties)) or ((chemic* or oil or nuclear or biologic*) adj2 (Explosion* or Fire* or contamination or release* or spill*)) or ((transport or road or train or rail or airplane or ferry or flight or traffic or freeway or road or tunnel) adj2 (accident* or crash*)) or ((Technolog* or human or man-made or Chemic* or Electric* or Transport or nuclear or reservoir* or biological) adj2 (hazard* or exposure*)) or (power adj2	1442246	Advanced			

	failure*) or (reservoir adj1 rupture*) or (complex adj2 emergency)).ti,ab.				
3	exp Mental Health/ or "Stress, Psychological"/ or exp "Stress Disorders, Post-Traumatic"/ or exp "Stress Disorders, Traumatic"/ or exp "Depressive Disorder, Major"/ or exp Anxiety/ or exp Substance-Related Disorders/ or exp "Behavior, Addictive"/ or exp Sleep Wake Disorders/ or (mental or psychopatholog* or psycholog* or psychiatry* or insane or insanity or stress or strain or Distress* or DMDD or psychotrauma* or PTSD or DES*NOS or C*PTSD or EPCACE or multitrauma or traumatised or traumatized or DTD or "Enduring Personality Change after Catastrophic Experience*" or depression or depressive or depressed or dysthymia or dysthymic or mdd or melancholi* or Hypersomni* or Insomni* or Narcolep* or Parasomni* or Sleepwalk* or nightmare* or Somnambulis* or sleepless* or Anxiet* or angst or Anxious* or Panic or addict* or alcoholis* or Amphetamine or Cannabis or Cocaine or Drunkenness* or Ethanol or Glue or Hashish or Heroin or Marihuana or Morphine or Narcotic* or Nicotine or Opiate* or Opioid* or Phencyclidine or smoker* or Smoking* or Tobacco or Withdrawal or (Nervous adj3 Breakdown) or ((affecti* or mood*) adj3 (disorder* or disturbance*)) or (Stress adj3 disorder*) or (emotional adj3 Trauma*) or (acute adj3 Stress) or ((Stress or Crisis) adj3 Reaction*) or ((Post-Traumatic or posttraumatic or Trauma*) adj3 (stress or neurosis or neuroses or syndrome* or Disorder* or psychosis or psychoses or distress*)) or (Compassion adj3 Fatigue) or (sleep* adj3 (disorder* or problem* or walk* or syndrome*)) or (Night adj3 (Terror* or mare*)) or (Paroxysmal adj3 Sleep*) or ((Alcohol* or Drug* or substance* or Inhalant or PCP) adj3 (abuse* or Dependen* or habit* or overdose* or psychos* or disorder* or Withdraw* or Abstinence or Induced or "use" or Related)) or (Angel adj3 Dust) or (Binge adj3 Drinking) or (Delirium adj3 Tremens) or (Neonatal adj3 Abstinence)).ti,ab.	4297687	Advanced		

4	exp Cohort Studies/ or (cohort* or longitudinal or prospective or retrospective or timeserie* or followup or (repeated adj1 measure*) or (pre adj1 post) or (time adj1 serie*) or (follow adj1 up) or (panel adj3 stud*)).ti,ab.	4362296	Advanced			
5	1 and 2 and 3 and 4	20152	Advanced			
6	exp Severe Acute Respiratory Syndrome/ or exp SARS Virus/ or ((exp Coronavirus/ or Coronavirus Infections/ or pneumonia virus*.ti,ab,kf. or cov.ti,ab,kf.) and ((outbreak or wuhan).ti,ab,kf. or novel.af. or '19'.ti,ab,kf. or '2019'.ti,ab,kf. or epidem*.af. or epidemy.af. or epidemic*.af. or pandem*.af. or new.ti,ab,kf.)) or coronavirus*.ti,ab,kf. or 'corona virus*'.ti,ab,kf.	314043	Advanced			
7	limit 6 to dt="20191201-20300101"	298634	Advanced			
8	(ncov or 2019ncov or covid* or sars* or severe acute respiratory syndrome or sudden acute respiratory syndrome or mers or middle east respiratory syndrome).ti,ab,kf.	459367	Advanced			
9	7 or 8	474721	Advanced			
10	trajector*.mp.	126244	Advanced			
11	Latent Class Analysis/ or ("Latent Class Analys*" or "latent class growth analys*" or "trajectory analys*" or "latent growth*" or "latent class*" or "growth mixture*" or lgmm or gmm or lcgm or lca).mp.	32640	Advanced			
12	**1 and (2 or 9) and 3 and 10 and 11**	**197**	**Advanced**			

We also want additional aggregate studies:

13	exp "Review Literature as Topic"/ or review.pt. or exp "Meta-Analysis as Topic"/ or Meta-Analysis.pt. or Clinical Protocols/	3625963	Advanced	
14	1 and (2 or 9) and 3 and 10 and 13	119	Advanced	
15	**14 not 12**	**118**	**Advanced**	

#	Searches	Results	Type			
1	exp Survivors/ or (victim* or surviv* or exposed or resident* or male or males or female* or affected or adult* or child* or adolescent*).ti,ab.	2045037	Advanced			
2	exp Disasters/ or accidents/ or exp Transportation Accidents/ or exp terrorism/ or exp epidemics/ or (disaster* or catastrophe* or calamit* or crisis or crises or earthquake* or Eruption* or erosion or Collapse* or flood* or hurricane* or tornado* or cyclon* or twister* or typhoon* or landslide* or Mudslide* or fire* or bushfire* or wildfire* or tsunami* or volcano* or eruption* or avalanche* or blizzard* or lightning* or drought* or frack* or hydraulic or cbrn or collaps* or contaminat* or explosion* or famine* or oil-spill* or aircrash* or shipwreck* or terror* or shooting* or bombing* or killing* or hostage* or epidemic* or zoonos* or Pandemic* or epizootic* or Fukushima or Chernobyl or (critical adj2 incident*) or ((environmental or seismic* or Meteorolog* or climate or Biolog* or Nuclear or natural or Fault* or gravity or wind* or Precipitation or sun or Bacteria* or Virus* or Fungi or fungal or Toxin* or Radium or water or rain* or snow* or ice or hail* or sleet or Radiation) adj2 (hazard* or exposure* or incident* or accident*)) or (storm adj1 (surge* or tide*)) or (wind* adj1 high) or ((heat or cold) adj1 (excess* or wave*)) or (mass adj2 (casualty or casualties)) or ((chemic* or oil or nuclear or biologic*) adj2 (Explosion* or Fire* or contamination or release* or spill*)) or ((transport or road or train or rail or airplane or ferry or flight or traffic or freeway or road or tunnel) adj2 (accident* or crash*)) or ((Technolog* or human or man-made or Chemic* or Electric* or Transport or nuclear or reservoir* or biological) adj2 (hazard* or exposure*)) or (power adj2 failure*) or (reservoir adj1 rupture*) or (complex adj2 emergency)).ti,ab.	207279	Advanced			
3	exp Mental Health/ or exp Mental Disorders/ or exp Stress/ or exp Distress/ or exp Affective Disorders/ or exp Anxiety Disorders/ or exp Posttraumatic Stress Disorder/ or exp Emotional Trauma/ or exp "PostTraumatic Stress"/ or exp Stress Reactions/ or trauma/ or exp traumatic neurosis/ or exp Major Depression/ or exp Sleep Disorders/ or exp	2432519	Advanced			

	Nightmares/ or exp Anxiety/ or exp "Substance Use Disorder"/ or exp Drug Abuse/ or exp addiction/ or (mental or psychopatholog* or psycholog* or psychiatry* or insane or insanity or stress or strain or Distress* or DMDD or psychotrauma* or PTSD or DES*NOS or C*PTSD or EPCACE or multitrauma or traumatised or traumatized or DTD or "Enduring Personality Change after Catastrophic Experience*" or depression or depressive or depressed or dysthymia or dysthymic or mdd or melancholi* or Hypersomni* or Insomni* or Narcolep* or Parasomni* or Sleepwalk* or nightmare* or Somnambulis* or sleepless* or Anxiet* or angst or Anxious* or Panic or addict* or alcoholis* or Amphetamine or Cannabis or Cocaine or Drunkenness* or Ethanol or Glue or Hashish or Heroin or Marihuana or Morphine or Narcotic* or Nicotine or Opiate* or Opioid* or Phencyclidine or smoker* or Smoking* or Tobacco or Withdrawal or (Nervous adj3 Breakdown) or ((affecti* or mood*) adj3 (disorder* or disturbance*)) or (Stress adj3 disorder*) or (emotional adj3 Trauma*) or (acute adj3 Stress) or ((Stress or Crisis) adj3 Reaction*) or ((Post-Traumatic or posttraumatic or Trauma*) adj3 (stress or neurosis or neuroses or syndrome* or Disorder* or psychosis or psychoses or distress*)) or (Compassion adj3 Fatigue) or (sleep* adj3 (disorder* or problem* or walk* or syndrome*)) or (Night adj3 (Terror* or mare*)) or (Paroxysmal adj3 Sleep*) or ((Alcohol* or Drug* or substance* or Inhalant or PCP) adj3 (abuse* or Dependen* or habit* or overdose* or psychos* or disorder* or Withdraw* or Abstinence or Induced or "use" or Related)) or (Angel adj3 Dust) or (Binge adj3 Drinking) or (Delirium adj3 Tremens) or (Neonatal adj3 Abstinence)).ti,ab.					
4	exp Cohort Analysis/ or (cohort* or longitudinal or prospective or retrospective or timeserie* or followup or (repeated adj1 measure*) or (pre adj1 post) or (time adj1 serie*) or (follow adj1 up) or (panel adj3 stud*)).ti,ab.	469951	Advanced			
5	1 and 2 and 3 and 4	7377	Advanced			
6	exp Severe Acute Respiratory Syndrome/ or ((exp Coronavirus/ or Coronavirus Infections/ or pneumonia virus*.ti,ab,id. or cov.ti,ab,id.) and ((outbreak or wuhan).ti,ab,id. or novel.af. or '19'.ti,ab,id. or '2019'.ti,ab,id. or epidem*.af. or epidemy.af. or epidemic*.af. or pandem*.af. or new.ti,ab,id.)) or coronavirus*.ti,ab,id. or 'corona virus*'.ti,ab,id.	47268	Advanced			
7	limit 6 to up="20191201-20300101"	46976	Advanced			

8	(ncov or 2019ncov or covid* or sars* or severe acute respiratory syndrome or sudden acute respiratory syndrome or mers or middle east respiratory syndrome).ti,ab,id.	57417	Advanced			
9	7 or 8	58415	Advanced			
10	trajector*.mp.	51502	Advanced			
11	Latent Class Analysis/ or ("Latent Class Analys*" or "latent class growth analys*" or "trajectory analys*" or "latent growth*" or "latent class*" or "growth mixture*" or lgmm or gmm or lcgm or lca).mp.	16773	Advanced			
12	**1 and (2 or 9) and 3 and 10 and 11**	**153**	**Advanced**			
13	exp Treatment Guidelines/ or exp Literature Review/ or exp Meta Analysis/	39333	Advanced			
14	1 and (2 or 9) and 3 and 10 and 13	0	Advanced			
15	**14 not 12**	**0**	**Advanced**			

This database has trouble handling big search strings and I made them much simpler by deleting redundant terms and only include the thesaurus-terms and the simple terms in all clusters. This means that this search is less exhaustive than the other searches.

Set#	Searched for	Databases	Results
S1	MAINSUBJECT.EXACT.EXPLODE("Survivors") or TI,AB(victim* or surviv* or exposed or resident* or male or males or female* or affected or adult* or child* or adolescent*)	PTSDpubs	51316
S2	MAINSUBJECT.EXACT.EXPLODE("Natural Disasters") OR MAINSUBJECT.EXACT("Disasters") OR MAINSUBJECT.EXACT.EXPLODE("Railroad Accidents") OR MAINSUBJECT.EXACT.EXPLODE("Ship Accidents") OR MAINSUBJECT.EXACT("Accidents") OR MAINSUBJECT.EXACT.EXPLODE("Air Traffic Accidents") OR MAINSUBJECT.EXACT.EXPLODE("Motor Traffic Accidents") OR MAINSUBJECT.EXACT.EXPLODE("Industrial Accidents") OR MAINSUBJECT.EXACT.EXPLODE("Technological Disasters") OR MAINSUBJECT.EXACT.EXPLODE("Terrorism") or MAINSUBJECT.EXACT.EXPLODE("Epidemics") OR TI,AB(disaster* or catastrophe* or calamit* or crisis or crises or earthquake* or Eruption* or erosion or Collapse* or flood* or hurricane* or tornado* or cyclon* or twister* or typhoon* or landslide* or Mudslide* or fire* or bushfire* or wildfire* or tsunami* or volcano* or eruption* or avalanche* or blizzard* or lightning* or drought* or frack* or hydraulic or cbrn or collaps* or contaminat* or explosion* or famine* or oil-spill* or aircrash* or shipwreck* or terror* or shooting* or bombing* or killing* or hostage* or epidemic* or zoonos* or Pandemic* or epizootic* or Fukushima or Chernobyl or (critical NEAR/2 incident*))	PTSDpubs	12278
S3	MAINSUBJECT.EXACT.EXPLODE("Psychiatric Disorders") OR TI,AB(mental or psychopatholog* or psycholog* OR psychiatry* OR insane OR insanity or stress or strain OR Distress* or DMDD OR psychotrauma* or PTSD or DES*NOS or C*PTSD or EPCACE or multitrauma or traumatised or traumatized or DTD or "Enduring Personality Change after Catastrophic Experience*" or depression or depressive or depressed or dysthymia or dysthymic or mdd or melancholi* OR Hypersomni* or Insomni* or Narcolep* or Parasomni* or Sleepwalk* or nightmare* OR Somnambulis* OR sleepless* OR Anxiet* or angst or Anxious* or Panic OR addict* or alcoholis* or Amphetamine or Cannabis or Cocaine or Drunkenness* or Ethanol or Glue or Hashish or Heroin or Marihuana or Morphine or Narcotic* or Nicotine or Opiate* or Opioid* or Phencyclidine or smoker* or Smoking* or Tobacco or Withdrawal)	PTSDpubs	63068

S4	(MAINSUBJECT.EXACT("Longitudinal Study") OR MAINSUBJECT.EXACT("Followup Study") or TI,AB(cohort* or longitudinal or prospective or retrospective or timeserie* or followup or (repeated NEAR/1 measure*) or ("pre" NEAR/1 "post") or (time NEAR/1 serie*) or (follow NEAR/1 "up") or (panel NEAR/3 stud*)))	PTSDpubs	12606
S5	[s1] and [s2] and [s3] and [s4]	PTSDpubs These databases are searched for part of your query.	2339
S6	(TI,AB,SU("pneumonia virus*" or cov) and (TI,AB,SU(outbreak or wuhan or "19" or "2019" or new) or novel or epidem* or epidemy or epidemic* or pandem*)) or TI,AB,SU(coronavirus* or "corona virus*")	PTSDpubs	163
S7	[S6] AND PD(20191201-20301010)	PTSDpubs These databases are searched for part of your query.	163
S8	TI,AB,SU(ncov or 2019ncov or covid* or sars* or severe acute respiratory syndrome or sudden acute respiratory syndrome or mers or middle east respiratory syndrome)	PTSDpubs	656
S9	[s7] or [s8]	PTSDpubs These databases are searched for part of your query.	657
S10	TI,AB,SU,MT(trajector*)	PTSDpubs	689

S11	TI,AB,SU,MT("Latent Class Analys*" OR "latent class growth analys*" OR ("trajectory analysis") OR ("latent growth") OR ("latent class") OR "growth mixture*" OR lgmm OR gmm OR lcgm OR lca)	PTSDpubs	445
S12	**[S1] AND ([S2] OR [S9]) AND [S3] AND [S10] AND [S11]**	**PTSDpubs** **These databases are searched for part of your query.**	**34**
S13	MAINSUBJECT.EXACT("Literature Review") OR MAINSUBJECT.EXACT("Systematic Review") OR MAINSUBJECT.EXACT("Meta Analysis") OR MAINSUBJECT.EXACT("Practice Guideline")	PTSDpubs	5929
S14	[S1] AND ([S2] OR [S9]) AND [S3] AND [S10] AND [S13]	PTSDpubs These databases are searched for part of your query.	8
S15	**[S14] NOT [S12]**	**PTSDpubs** **These databases are searched for part of your query.**	**7**

Citation Tracking

On April 16, 2025, PK used Scopus to find the references of the relevant Systematic Reviews and the like, and found 1598 items.

Appendix B; retrieved, duplicate, and unique items from each search system

Table 3

Primary research

Database	Platform	Coverage	Number retrieved	Duplicates before export	New articles added to screening
Web of Science	Clarivate (Groningen University)	1900 – present	243	180	63
SocIndex	EBSCO (Groningen University)	1895 – present	48	33	15
Ovid Medline	Ovid	1946 – present	197	125	72
PsycInfo	Ovid	1806 – present	153	0	153
PTSDpubs	ProQuest	1871 – present	34	24	10
Totals			675	362	313

Table 4

Aggregated research

Database	Platform	Coverage	Number retrieved	Duplicates before export	New articles added to screening
Web of Science - SR's	Clarivate (Groningen University)	*1900 – present*	50	9	41
SocIndex - SR's	EBSCO (Groningen University)	*1895 – present*	11	1	10
Ovid Medline - SR's	Ovid	*1946 – present*	118	0	118
PsycInfo - SR's	Ovid	*1806 – present*	0	0	0
PTSDpubs - SR's	ProQuest	*1871 – present*	7	2	5
Totals			186	12	174

Table 5

Citation Tracking

Name of search (database or type of search)	description	# retreived	duplicates	new articles added
Records identified from Citation searching using Scopus (Groningen University)	Searched the bibliographies of included Systematic Reviews etc.	1598	48	1550

Appendix C; Data extraction

Using the following link, the google sheets file used to extract data can be found. Here you can

find all data extracted and a legend.

The link:

https://docs.google.com/spreadsheets/d/1DPH8eO2aRBGkRFDuXWY7pn1QB0jE2b9Q/edit?us

p=sharing&ouid=102988189521894663695&rtpof=true&sd=true