
Disaster Types, Phases, and Responses

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Review of Epidemiologic Research 1981 - 2001

- **Purpose was to determine what is known about:**
 - **the potential range, magnitude, and duration of disaster effects on mental health; and**
 - **factors that influence who is most likely to be adversely affected.**
- **250 articles, chapters, and books described results for 160 samples and 102 events**

(Norris, Friedman, Watson, Bryne, Diaz, and Kaniasty, 2002)

Outcomes Observed: % of Samples

77% specific psychological problems

68% PTSD

36% Depression

32% Anxiety

39% nonspecific distress

23% physical health problems and concerns

10% chronic problems in living

9% psychosocial resource loss

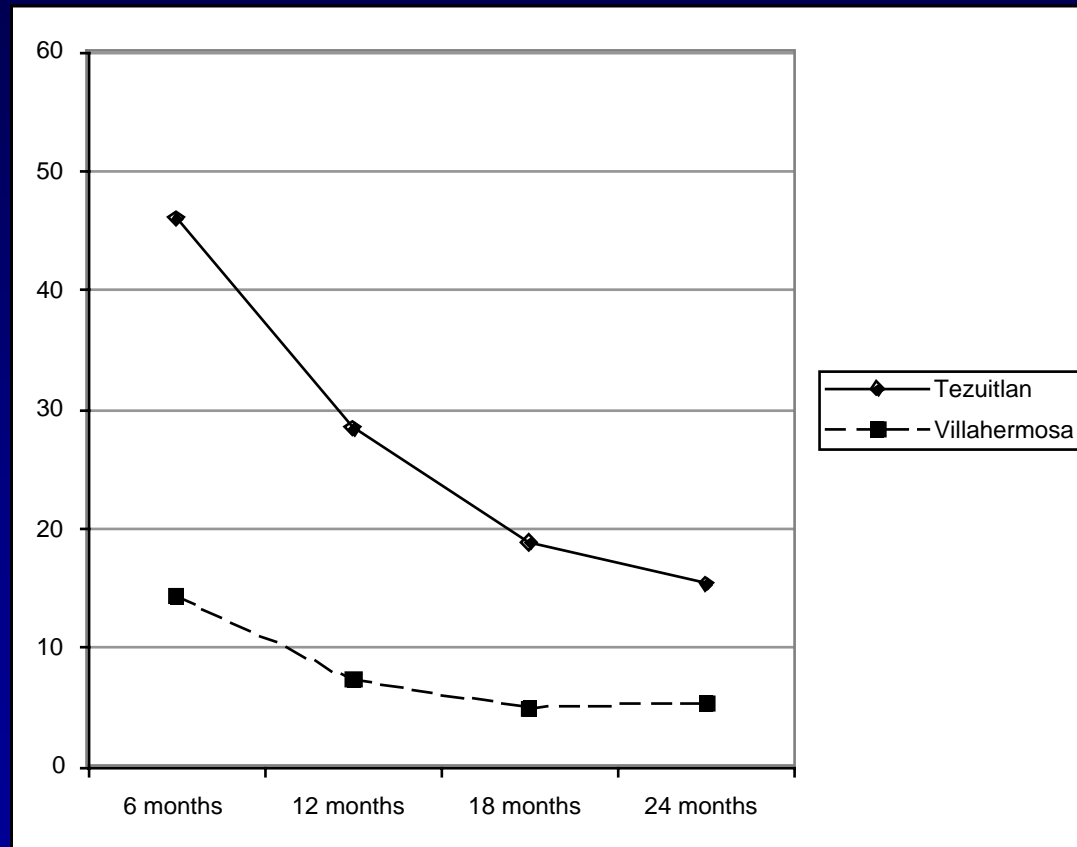
Magnitude of Effects: % of Samples

- **Very Severe -- 18%**
- **Severe -- 21%**
- **Moderate -- 50%**
- **Minimal or Transient -- 11%**

Longitudinal Trends

- 34 panel studies examined changes over time:
 - 79% Symptoms/effects declined.
 - 12% Symptoms/effects did not change.
 - 3% Symptoms/effects increased.
 - 6% Findings were mixed.
- Most people recover within a year.
- Nonetheless, significant minority may remain distressed for some time.

Illustration: PTSD over Time



Event-Level Risk Factors

- **Human causation**
- **Mass casualties**
- **High trauma**
- **Duration of the crisis / uncertainty**
- **Significant financial disruption**
- **Significant community disruption / displacement**

Population-Level Risk Factors

- **Women > men**
- **Children > adults**
- **Among adults, middle-aged > others**
- **Disaster location: developing countries > developed countries**
- **Ethnic minority populations > White**
- **Low SES > high SES**

Individual- & Family-Level Risk Factors

- Severe exposure, especially injury, life threat, and extreme loss
- High secondary stress
- If adult, presence of children in home
- If child, parental distress
- Predisaster psychiatric history
- Lacking or losing beliefs in one's ability to cope or control outcomes
- Possessing few, weak, or deteriorating social resources

Event Stress Reactions

Emotional Effects

shock
terror
overwhelmed
irritability
blame
anger
guilt
grief or sadness
emotional numbing
helplessness
loss of pleasure in familiar activities
can't feel happy
can't feel loving
can't feel secure

Cognitive Effects

impaired concentration
impaired decision-making ability
impaired memory
disbelief
confusion
nightmares
decreased self-esteem
decreased self-efficacy
self-blame
unwanted memories
can't stop worrying
dissociation (e.g., tunnel vision,
automatic pilot, dreamlike or “spacey”)

Event Stress Reactions

Physical Effects

fatigue, exhaustion
insomnia
cardiovascular strain
startle response
hyperarousal
physical pain
headaches
gastrointestinal upset
decreased appetite
decreased libido
vulnerable to illness
(immunocompetence)
achy and out of sorts
muscle tension

Interpersonal Effects

critical of others
social withdrawal
intimacy problems
feel/act alienated
job/work problems
school problems
feel distrustful
blaming others
feel vulnerable
feel abandoned
feel rejected
feel irritable
feel betrayed
overprotectiveness

Problematic Stress Responses

- **Severe Dissociation (depersonalization, derealization, fugue states, amnesia)**
- **Severe Intrusive Re-experiencing (flashbacks, terrifying screen memories or nightmares, repetitive automatic re-enactment)**
- **Extreme Avoidance (agoraphobic-like social or work withdrawal, compulsive avoidance)**
- **Severe Hyperarousal (panic episodes, terrifying nightmares, difficulty controlling violent impulses, inability to concentrate)**

Problematic Stress Responses

Debilitating Anxiety (ruminative worry, severe phobias, unshakable obsessions, paralyzing nervousness, fears of losing control/going crazy/dying/awful illness)

Severe Depression (anhedonia, worthlessness, self-blame, dependency, early wakenings)

Problematic substance use (abuse or dependency, self-medication)

Psychotic symptoms (delusions, hallucinations, bizarre thoughts or images)

Phases of Impact and Recovery

I. Emergency/Impact

- Shock
- Heroic

II. Early Post-Impact

- Honeymoon
- Disillusionment

III. Restoration vs. Breakdown

- Restabilization vs. Suppression
- Recovery vs. Avoidance

▶ Emergency Phase Intervention

PROTECT

safe haven, privacy, self-esteem

DIRECT

ensure safety, prioritize, organize

CONNECT

to family, peers, resources

SELECT

educate, screen, triage, refer