

Child & Adolescent Mental Health Response and Recovery after Disasters

Melissa Brymer, Psy.D.

Manager, Terrorism and Disaster Branch
National Center for Child Traumatic Stress
UCLA

www.NCTSN.org

National Child Traumatic Stress Network Mission Statement

The mission of the National Child Traumatic Stress Network (NCTSN) is to raise the standard of care and improve access to services for traumatized children, their families and communities throughout the United States.

Range of Traumatic Events

- Trauma embedded in the fabric of daily life
 - Child abuse and maltreatment
 - Domestic violence
 - Community violence and criminal victimization
 - Medical trauma
 - Traumatic loss
 - Accidents/fires

Pynoos, Steinberg & Piacentini, 1999.

Range of Traumatic Events

- Humanitarian crises
 - Natural and man-made disasters
 - Earthquakes
 - Floods, mudslides
 - Hurricanes
 - Tornadoes
 - Volcanic eruptions
 - Major transportation accidents
 - Industrial accidents
 - Technological disasters
 - Catastrophes of human origin
 - Armed conflicts/wars
 - Genocide
 - Terrorist attacks

Pynoos, Steinberg & Piacentini, 1999.

I MIGHT HAVE BOASTED THAT AMIDST
DANGERS SO APPALLING,
NOT A SIGN OR EXPRESSION OF FEAR
ESCAPED ME,
HAD NOT MY SUPPORT BEEN FOUNDED
IN THAT MISERABLE, BUT STRONG
CONSOLATION, THAT ALL MANKIND WERE
INVOLVED IN THE SAME CALAMITY,
AND THAT I WAS PERISHING
WITH THE WORLD ITSELF

PLINY THE YOUNGER

(description of his experience of the eruption of Mt. Vesuvius, 79 A.D.)

Developmental Psychopathology Framework

- Traumatic Experience
 - Objective and Subjective Features
- Trauma and Loss Reminders
- Secondary Stresses and Adversities
- Acute Distress Reactions
- Child Intrinsic Factors
- Child Social Ecology
- Development & Psychopathology
- Repeated Exposure & Adversity

Characteristics that Impact Recovery

- Degree of exposure to the event
- Amount of family support available during the experience and in the aftermath
- Amount of life disruption (e.g. orphaned, refugee, school damage)
- Amount of social disorganized (e.g. social order collapse, emergency systems overwhelmed)

(Pine, Costello, Masten 2005)

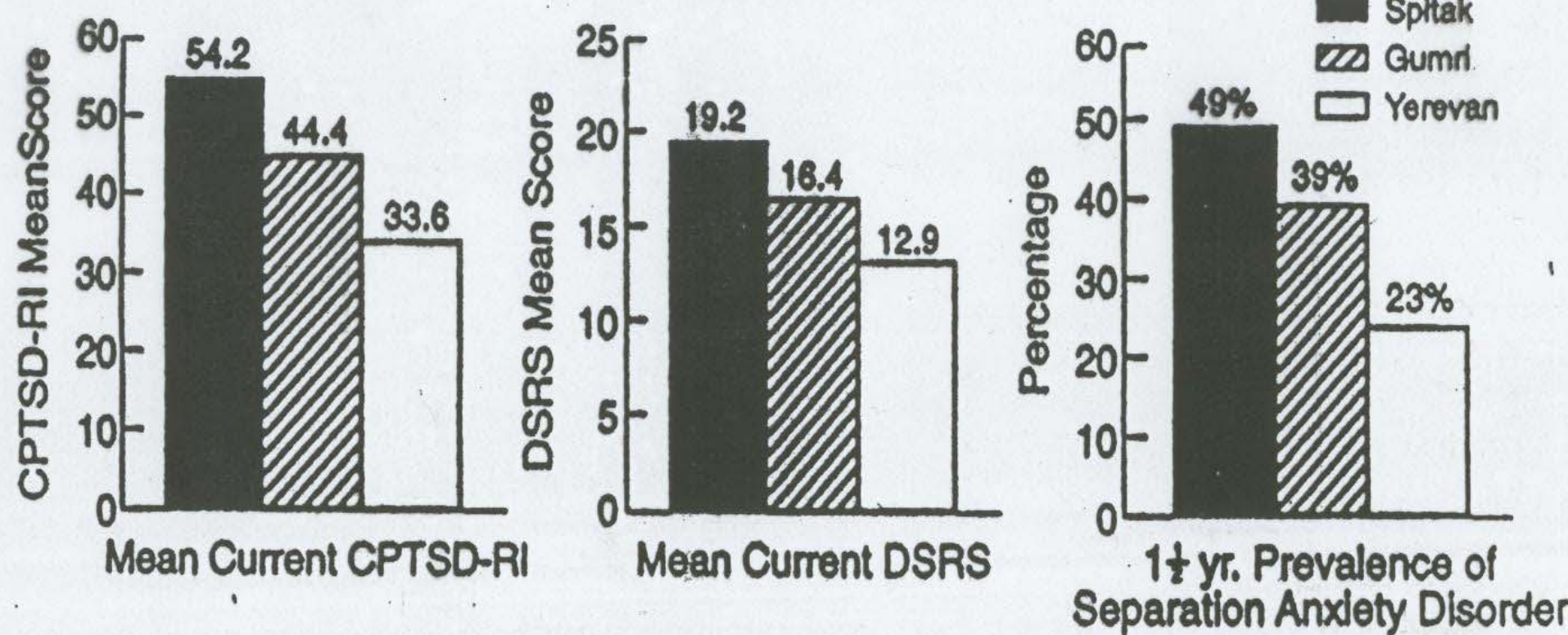
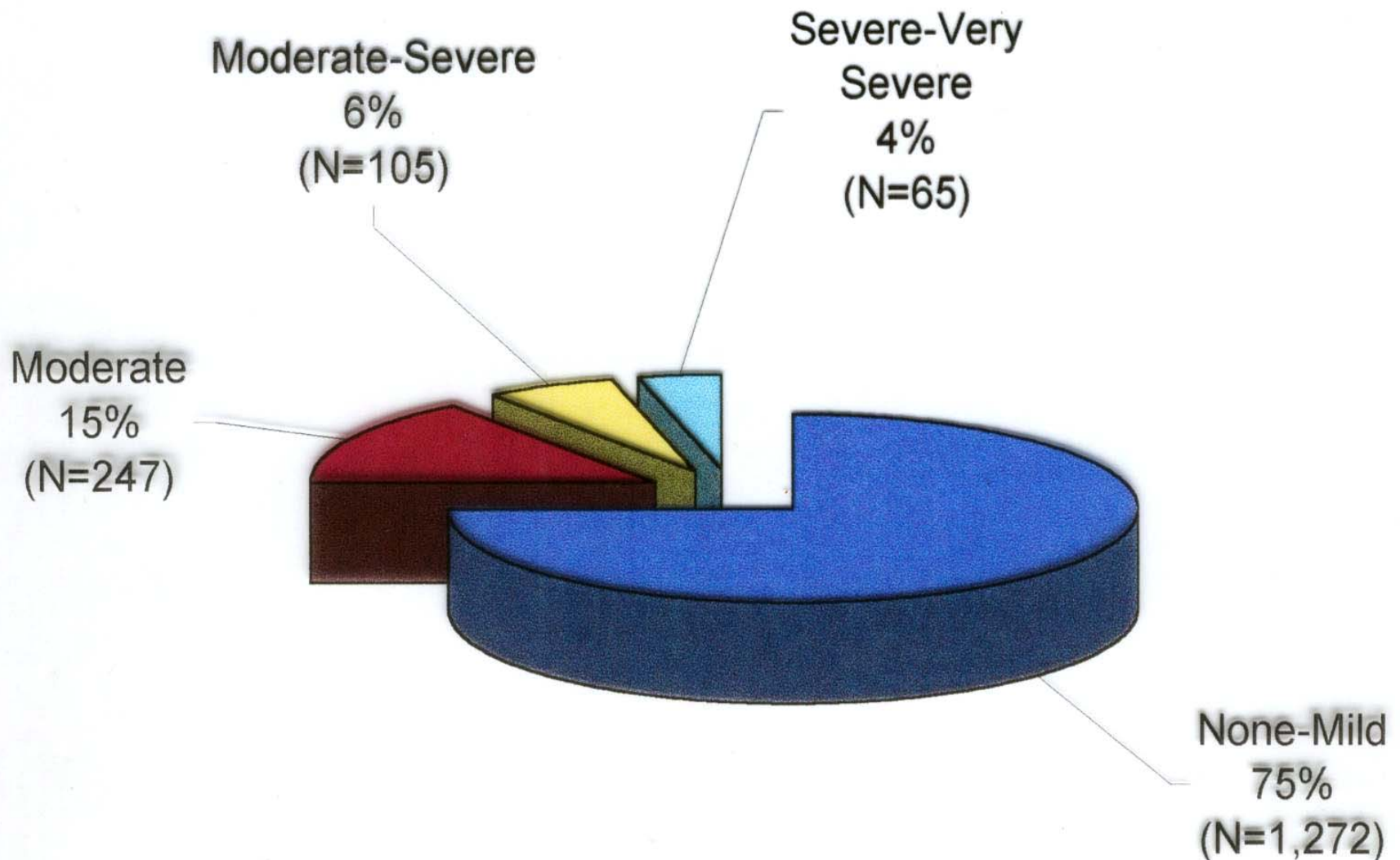


Fig. 1 Mean current Child Posttraumatic Stress Disorder Reaction Index (CPTSD-RI) and Depression Self-Rating Scale (DSRS) scores and 1½-year prevalence of separation anxiety disorder across groups.

Percent of Students in Severity Levels of PTSD after the 1999 Earthquake in Athens (N=1,676)

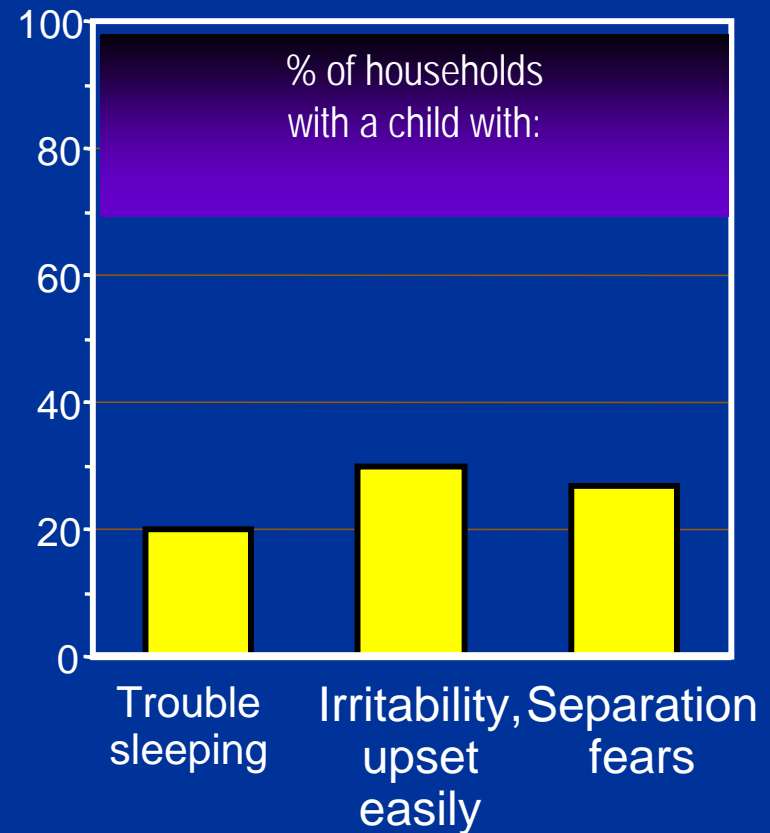
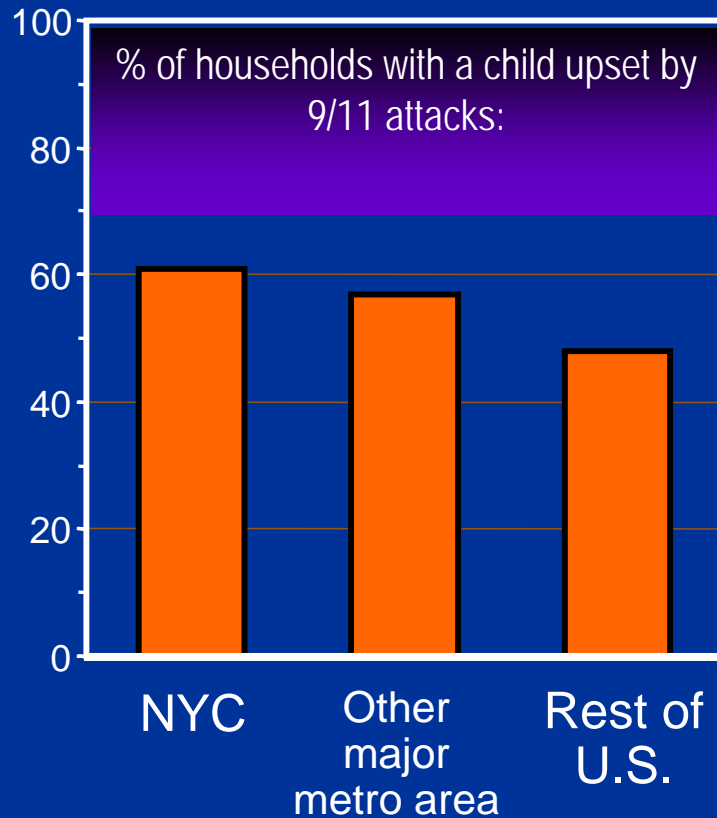


Post-Earthquake Needs Assessment: Greece

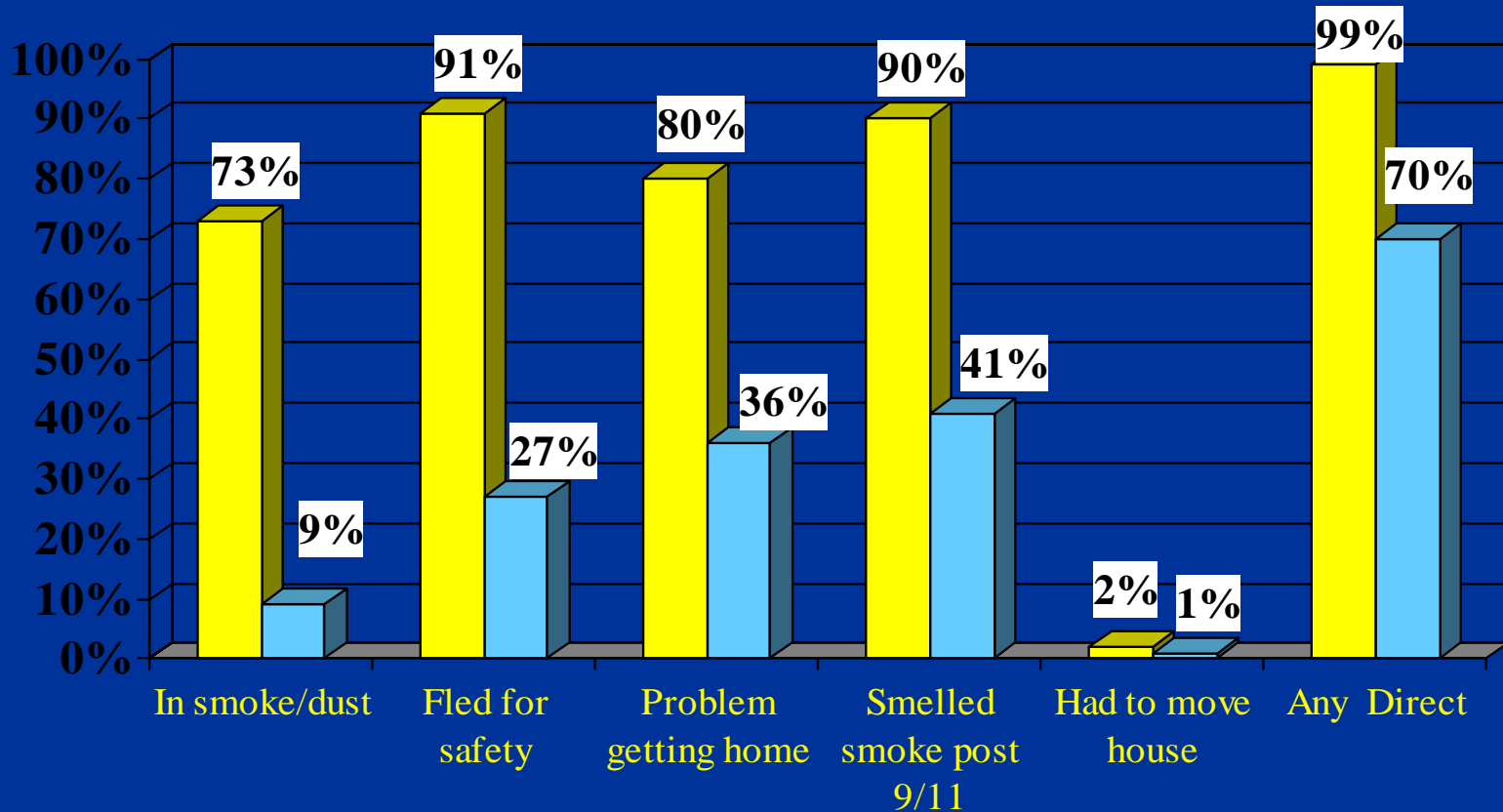
| | PTSD-RI |
|-------------|-------------|
| Male | 11.8 ±10.4 |
| Female* | 15.3 ± 11.6 |
| Primary* | 17.6 ±13.2 |
| Junior High | 13.2 ± 11.1 |
| Senior High | 12.5 ± 10.1 |

NATIONAL SURVEY POST-9/11

Web-based study 1-2 months post-9/11: 729 children of nationally representative sample of adults reporting about their children:

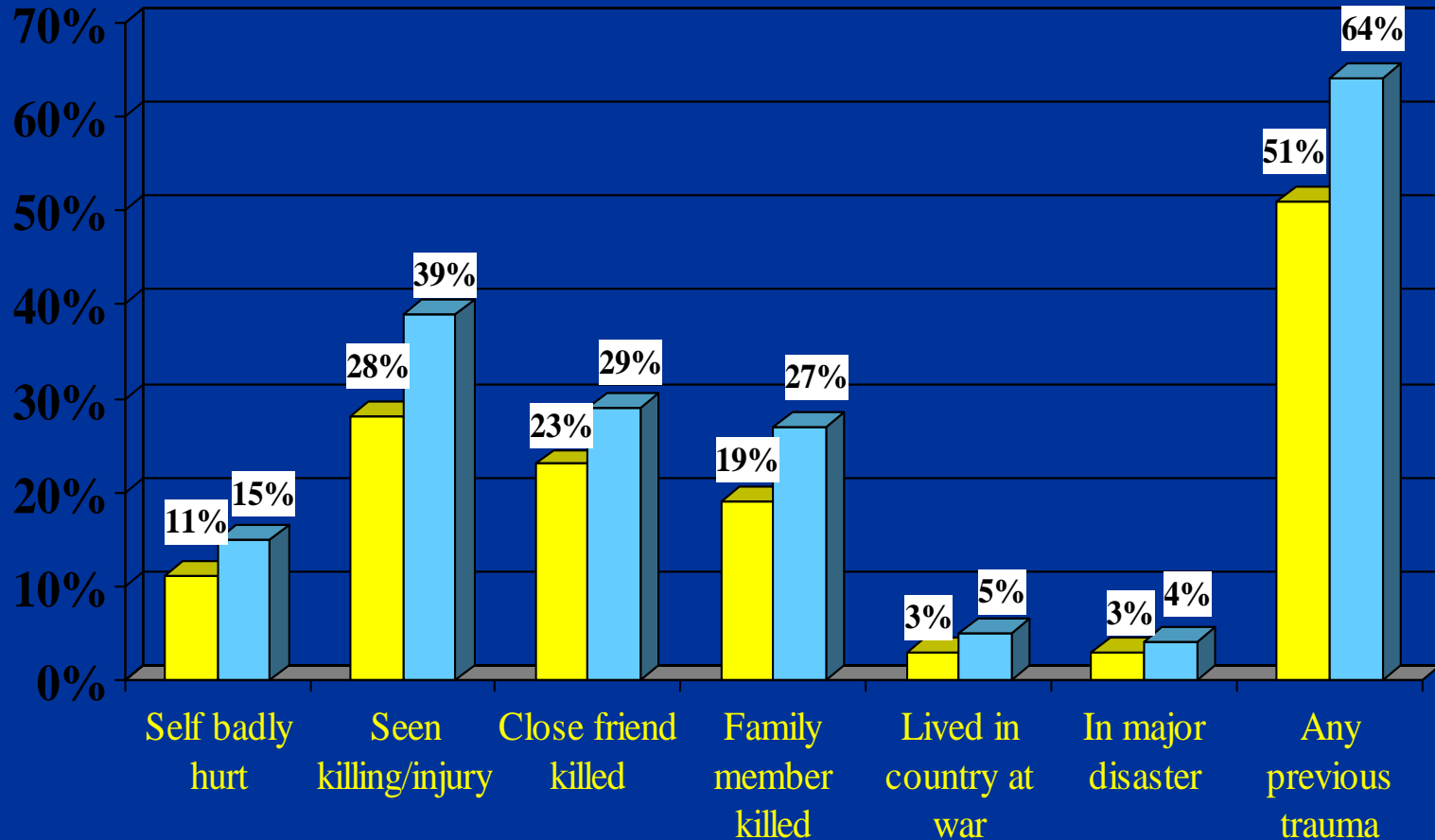


Type of Personal Physical Exposure to the WTC Attack Among NYC Public School Students, Grades 6-12: Ground Zero Compared to the Remainder of the City (New York City Board of Education, 2002)



■ **Ground Zero**
■ **NYC Remainder**

Type of Previous Traumatic Exposure Among NYC Public School Students, Grades 6-12: Ground Zero Compared to the Remainder of the City (New York City Board of Education, 2002)



■ Ground Zero ■ NYC Remainder

Prevalence¹ of Mental Health Problems (probable) Post WTC Attack Among NYC Public School Students², Compared to Pre 9/11 Non-NYC Community Estimates³, Grades 4-12



1 Weighted to reflect sampling design. Maximum number of missingly disorder never exceeded 6%.

2 Assessed 6 months post-9/11.

3 Shaffer, D. et al (1996). MECA Study, American Academy of Child and Adolescent Psychiatry.

Prevalence of Mental Health Problems Post 9/11

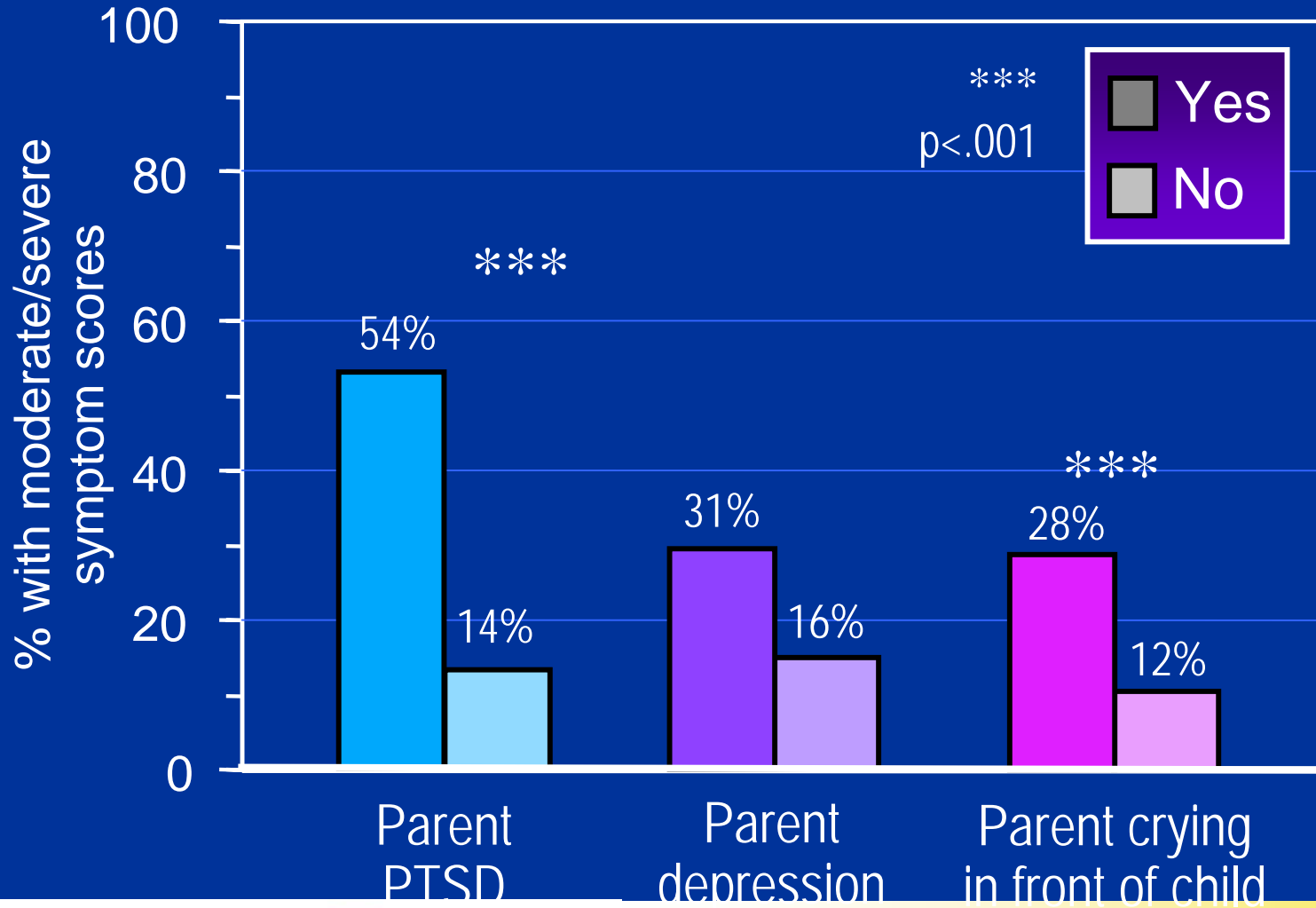
- 64% of students had been exposed to one or more traumatic events BEFORE 9/11
- 10.5% of students were estimated to have PTSD (75,000)
- Previous exposure to traumatic event or exposure of a family member were more important than personal physical exposure in predicting who developed PTSD
- 26.5% have at least one of the seven assessed mental health problems, excluding alcohol abuse (190,000 students)
- *At least 66% of students with probable PTSD following the 9/11 attacks had not sought out ANY mental health services!*

POST-9/11 STUDY OF NYC CHILDREN

- Random-digit dial telephone survey of >2,000 NYC household adults conducted 4 months post-9/11
- 434 parents or primary caretakers of one or more children between ages 4-17 years in the household provided information about one child

Fairbrother et al 2003; *Ambul Pediatrics* 3:304-11

NYC PARENTAL REACTION TO 9/11 ATTACKS AND CHILD RESPONSE



Lessons Learned

- Significant PTSD symptoms can occur without loss of life
- Needs change over time (depression emerging later)
- Disaster exposure, loss, reminders and secondary stresses produce enduring symptoms years beyond the disaster
- School-based collaborative mental health services need to be available *long term*

Disaster Plans

1. Include and integrate the emotional and behavioral needs of children and families
2. Increase the capacity of professionals to understand and respond to the mental health needs of children and families
3. Assess and monitor the emotional and behavioral indicators of child populations and identify disaster-related resources for children and families
4. Develop an effective risk communication strategy to address the mental health needs of children and families
5. Promote resilience building strategies and activities prior to an event to help prevent or mitigate adverse emotional and behavioral effects in children and families after disaster

Family Preparedness Card and Instructions

Steps to help families be prepared in the event of a disaster or other emergency

- EDUCATE YOURSELF AND YOUR FAMILY
- CREATE A FAMILY EMERGENCY PLAN
- HAVE A FAMILY COMMUNICATION PLAN
 - Fill out and carry the Family Preparedness Wallet Card
- MAKE AN EMERGENCY SUPPLY KIT
- BE INFORMED
- PRACTICE

General Recommendations

- Effective disaster planning must include:
 - _ Addressing physical and mental health needs of newborns through adolescents
 - _ Preparing to meet needs of children and adolescents in schools and other congregate care settings where children normally are
 - _ Ensuring coordination and integration of response efforts among organizations and government agencies at all levels
 - _ Ensuring children and adolescents can return to normal routines with appropriate supports after a disaster

Risk Communication & Public Education

- Develop clear, concise, and situation-specific guidance for parents, caregivers and teachers concerning helping children to cope with terrorism and disasters
- Develop and support a translational research initiative to develop more effective methods of communicating to the public and to health and human services professionals that recognize the unique needs of children
- Maintain a toll-free number for public information pertaining to children and terrorist events

THE MEDIA

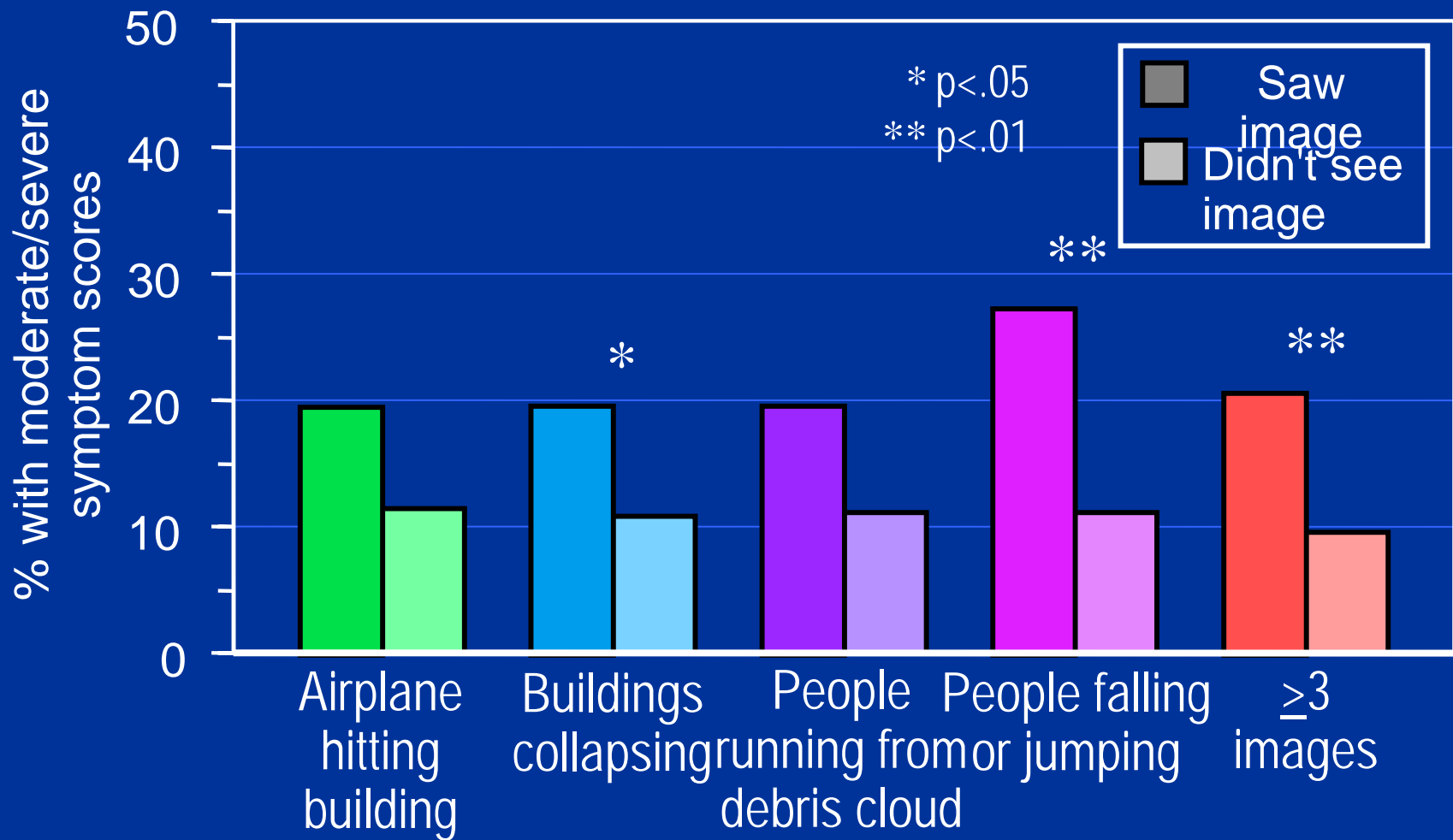
- Children, parents, and other adults need to know about the potential for overstimulation by media coverage
- Developmental stages vary in ability to process media material
- Parents can watch news with their children and help them process the material
- Media serve essential purpose of informing the public

OKLAHOMA CITY BOMBING MEDIA STUDIES

- >2,000 OKC middle school students studied 7 weeks post bombing (1995)
- Self-reported amount of bombing-related television coverage viewed
- Those who scored higher were:
 - ▶ Girls
 - ▶ Those who knew someone in the bombing
 - ▶ Higher amounts of TV coverage viewed

Pfefferbaum et al 2001; *Psychiatry* 64:202-11

SELF-REPORT OF SYMPTOMS AND VIEWING TELEVISION BOMBING COVERAGE



MANAGING MEDIA IN THE HOME

- Parents should monitor media contact at home
 - especially TV and Internet
 - ▶ Be nearby when child views TV news or surfs the internet
 - ▶ Limit media contact if it becomes excessive or overstimulating
- Discuss media coverage with children:
 - ▶ Set aside time to address reactions and concerns
 - ▶ Clarify misperceptions
 - ▶ Help process emotions stimulated by media coverage

CHILDREN ARE RESILIENT

- ▶ Most children do not develop psychiatric illness

POSITIVE OUTCOMES (challenges):

- ⚡ Grow, find meaning, gain new perspective
 - ▶ Disasters present challenges to stimulate growth
 - ▶ Some positive outcomes may follow catastrophic events (overlooked)

Arousal and fear

- Increased sensitivity to sounds
- Increased activity
- Irritability
- Concentration problems
- Fears of disaster recurrence
- Concerns about safety
- Separation anxiety

DISTRESS IN CHILDREN

Mood

- Depressed mood
- Irritability
- Appetite disturbance
- Sleep disturbance

DISTRESS IN CHILDREN

Behavior

- Hyperactivity
- Acting out
- Aggression
- Social withdrawal
- Temporary "little angel"

INFANTS AND TODDLERS

- Sleeping problems
- Feeding problems
- Irritability
- Failure to meet developmental milestones

SPECIFIC DEVELOPMENTAL FEATURES

PRESCHOOL CHILDREN

- Behavioral regression
- Separation anxiety, clinging, and dependence
- Irritability, temper tantrums, and behavior problems
- Sleep disturbance; nightmares
- Repetitive play re-enactment
- Withdrawal: subdued or even mute

SCHOOL CHILDREN

- Excessive questions or discussion about the incident
- Irritability
- Negative behaviors (reflecting adults)
- Somatic complaints/separation anxiety
- Changes in school performance

ADOLESCENTS

- Irritability
- Isolation and withdrawal
- Guilt and self-blame
- Anger and hate
- Anxiety about the world and their future
- Fascination with death and dying
- Absenteeism
- Age of risk for substance abuse/alcohol use
- Poor impulse control and high-risk behaviors

Traumatic Stress vs. Bereavement Reactions

Raphael (2003)

| | Posttraumatic Stress | Bereavement |
|-----------|---|--|
| Cognitive | Focus on death and images of horror | Focus on lost person and images of person |
| Affect | Longing for security/safety Anxiety about threat Anger, irritability and reminders of threat Numbing | Yearning for lost person Separation anxiety Anger (externalizing) Sadness |
| Arousal | Arousal focused on potential further threat Response to stimuli with startle reactions | Arousal to scan for lost person Response to cues of that person |

Symptoms of Childhood Traumatic Grief

- Being overly preoccupied with how the loved one died
- Reliving or re-enacting the traumatic death through play, activities, and/or artwork
- Signs of distress when reminded of the loss
- Avoidance
- Withdrawing
- Numbing
- Lack of meaning in one's life

The School in the Community



Advantages of School Based Programs

- Schools are “de facto” mental health system for many children
- Large numbers of at Risk/disadvantaged children
- Existing Specialized Education Programs
 - SED/ED students with “counseling” mandated by IEP
 - School-based health clinics
 - Co-location of community mental health providers
 - Expanded school mental health programs
- Surgeon General’s National Action Agenda for Children’s Mental Health and President’s New Freedom Commission call for increase in school mental health programs

Recommendations for Mental Health Services in Schools

- Engage Experts for Mental Health Response
- Gather Accurate Data and Information
- Ensure Quality Control
- Address Mental Health Services For Staff
- Pre-plan for Mental Health Crisis Teams is Critical
- Focus on the Needs of the Entire Family

Uncommon Sense, Uncommon Courage: How the New York City School System, its Teachers, Leadership, and Students Responded to the Terror of September 11

Mental Health Objectives in School Settings

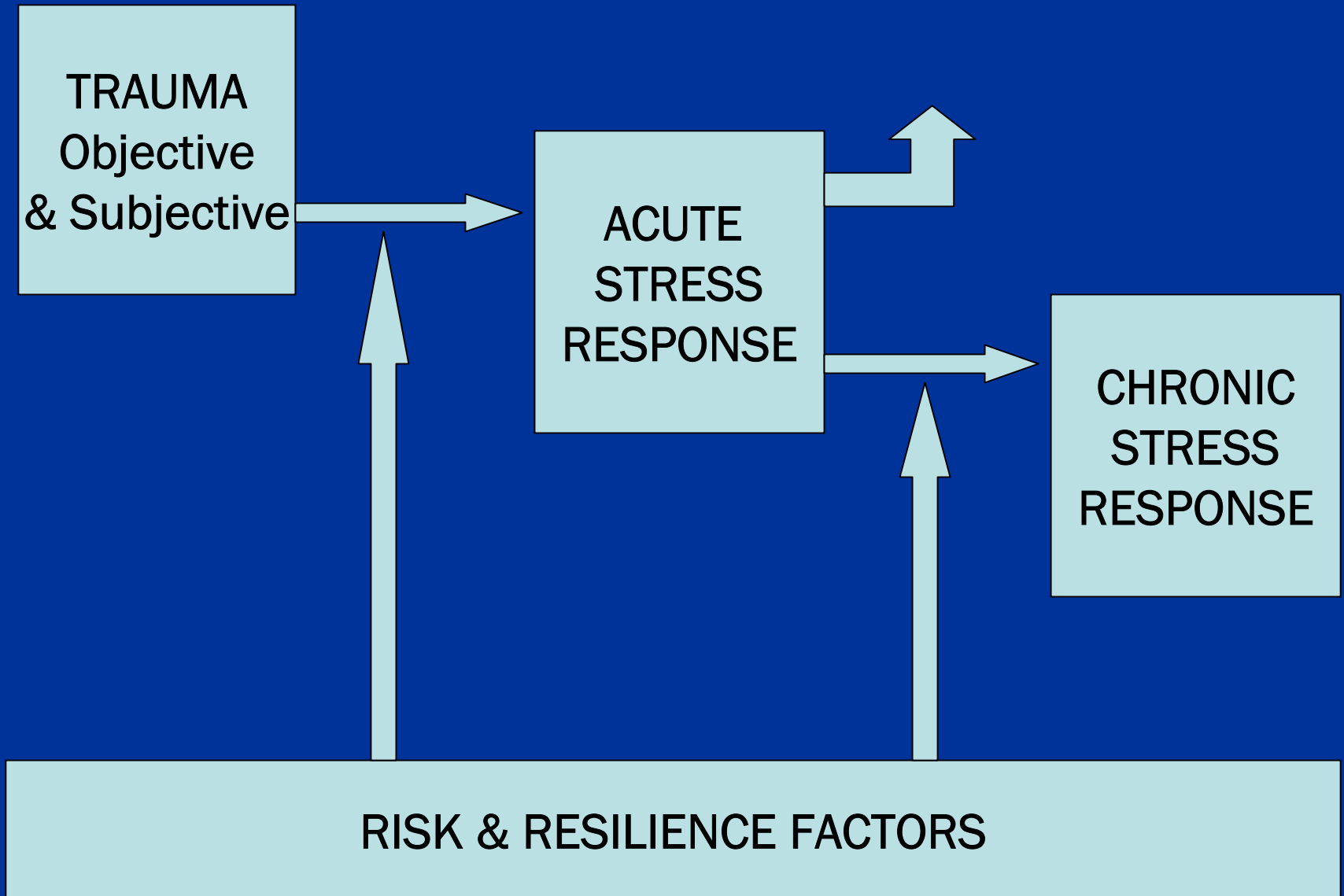
- Restore the Learning Environment
- Re-establish Calm Routine
- Assist with Coping and Understanding of Reactions to Danger and Traumatic Stress
- Re-unite Students with Caregivers ASAP
- Support the Emotional Stabilization of Teachers and Parents

Public Health Approach

- Screening
- Intervention
- Community Recovery

Selected Risk Assessment Indices

1. Trauma Exposure
 - Objective Features*
 - Subjective Features*
2. Loss Exposure
3. Acute Difficulties
4. Ongoing Adversities
5. Trauma and Loss Reminders
6. Trauma/Loss Exposure in the Past Year
7. Current Level Of Distress
8. Current Level of Behavioral and Functional Impairment



Risk and Resilience Factors

RISK

- Prior trauma
- Preexisting anxiety or depression
- Devel. stage
- Family Conflict
- Trauma / Loss Reminders
- Secondary Adversities

RESILIENCE

- Temperament
- Competence
- Intelligence
- Familial & social support
- Stable care routines
- Religion

Multi-Level Intervention Options

Tier 1 – General School-Based Interventions

Psychoeducation

Coping Skills

Support

Tier 2 – Specialized School-Based Interventions

Trauma / Grief - Focused Counseling

Group, Individual, Family

Short-Term

Tier 3 – Specialized Community-Based Interventions

Referral to On or Off-Site MH Services

Three Tiers of Mental Health Intervention: A Public-Health Oriented Approach

Tier 1

- *Targeted population:* Disaster-exposed youths and parents, teachers, school administrators, government administrators
- *Implementation sites:* Shelters, family assistance centers, schools, community mental health agencies, religious institutions, etc.
- *Implementing personnel:* Teachers, school counselors, community mental health professionals, religious clergy, etc.
- *Program content:* Psychological First Aid, including psychoeducation regarding common distress reactions (e.g., PTSD, depression, grief), coping skills (e.g., support-seeking, problem-solving, relaxation skills, parenting skills), social support, and conflict resolution
- *Methods and modalities:* Individual, group, family, classroom activities, school-wide presentations, parent meetings, school staff meetings, mentorship programs, and supplemental after-school programs
- *Level of specialized training required:* Light (1 to 2-day seminars)
- *Level of supervision required:* Light (intermittent training and support, consultation as needed)

Three Tiers of Mental Health Intervention: A Public-Health Oriented Approach

Tier 2

- *Targeted population:* Adolescents with histories of severe trauma exposure and loss deemed at risk for chronic, severe posttraumatic distress reactions and developmental disturbance.
- *Implementation sites:* Schools or community mental health agencies
- *Implementing personnel:* School counselors or community mental health professionals
- *Program content:* Specialized trauma/grief-focused psychoeducation, coping skills training, and family intervention designed to facilitate post-trauma adjustment among highly traumatized youths
- *Methods and modalities:* Wide-scale screening surveys; individual triage interviews, individual counseling, group psychotherapy, and family-based therapeutic interventions
- *Level of specialized training required:* Moderately intensive
- *Level of supervision required:* Moderate to heavy (on-site visits, monthly or more frequent group supervision meetings, consultation as needed)

Three Tiers of Mental Health Intervention: A Public-Health Oriented Approach

Tier 3

- *Targeted population:* Youths with severe psychiatric disorders (severe depression, psychoses, high risk for suicide, etc.)
- *Implementation sites:* Community mental health agencies (e.g., hospitals, community clinics)
- *Implementing personnel:* Community mental health professionals (e.g., psychiatrists, psychologists, primary care professionals)
- *Program content, methods, and modalities:* Traditional psychiatric/psychological treatments; these may be supplemented by “Tier 2” interventions.
- Tier 3 intervention requires the organization of a referral network between schools and community agencies.

Strategies for Screening

- Brief Triage Screening:
 - Identified injured students
 - Identified those who had a close relationship to the shooter, deceased, and injured
 - Exposure
- Letter to Principal
- Developed a Referral Service & Trained Staff on Risk Factors
- Conducted School-wide Screening

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SCREENING INSTRUMENT

1. TRAUMATIC EXPOSURE:
 - OBJECTIVE
 - SUBJECTIVE
2. LOSS EXPOSURE
3. ACUTE DIFFICULTIES
4. ONGOING ADVERSITIES
5. TRAUMATIC REMINDERS
6. TRAUMATIC EXPOSURE/LOSS IN PAST YEAR
7. CURENT LEVEL OF DISTRESS

Exposure

| N=1160 | % (#) |
|--------------------------------------|----------|
| Physically Injured | .8 (9) |
| Shooter Spoke Directly at Me | .5 (6) |
| Directly Witnessed Someone Get Shot | 19 (219) |
| Shooter Shot Directly at Me | 4 (43) |
| Saw Someone Wounded or Killed | 39 (452) |
| Gave First Aid or Support to Injured | 2 (22) |
| Witnessed First Aid to Injured | 9 (100) |
| Only Saw People Running | 18 (205) |

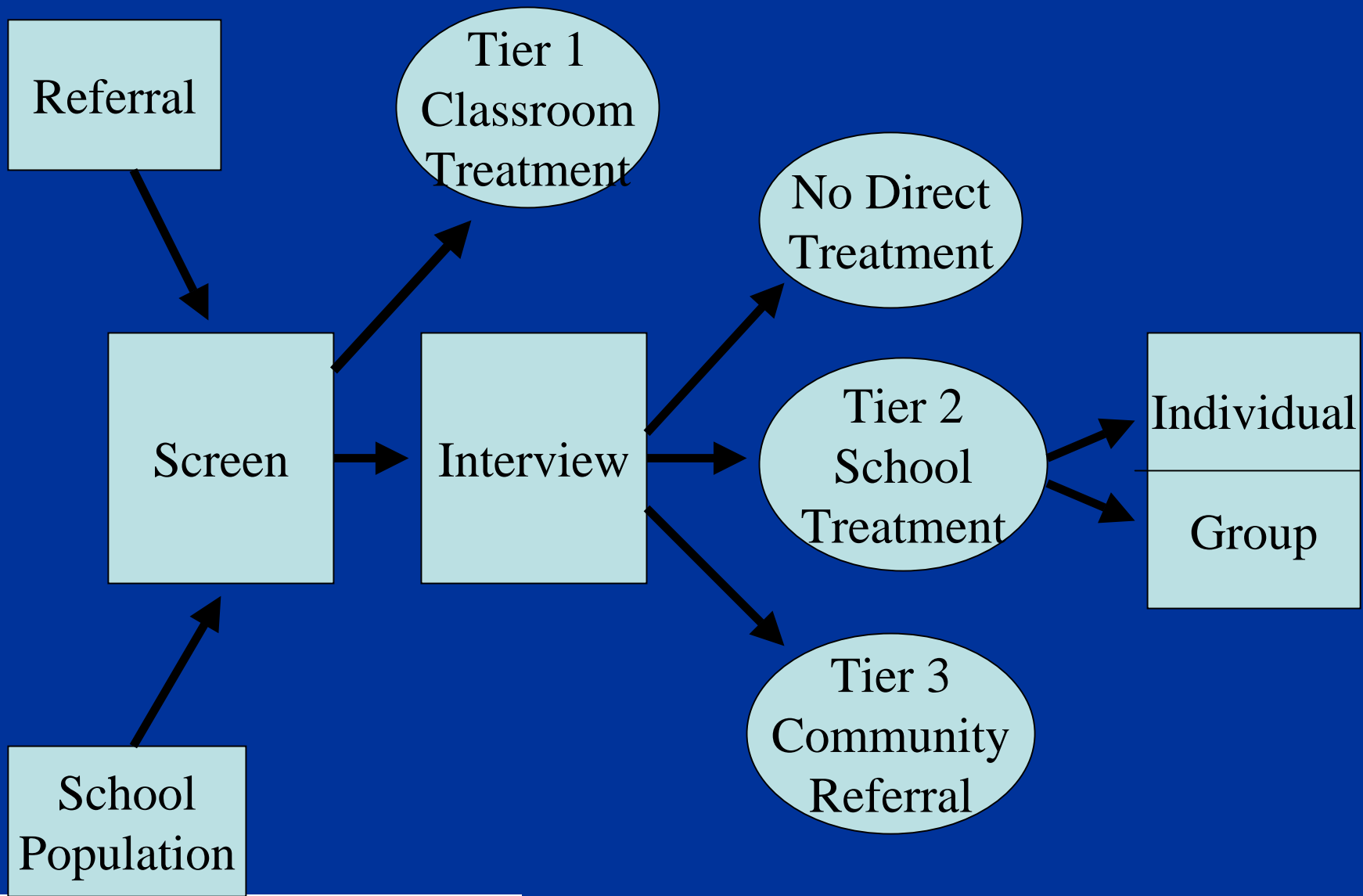
PTSD Scores

- Severe PTSD: 5% (56)
- Moderate to Severe: 13% (153)
- Moderate: 21% (242)
- Mild: 56% (647)
- Not Scored: 5% (62)

- 65 endorsed Feeling like Hurting Self Most of the Time or Sometimes

Re-experiencing symptoms after 9/11

- The people running, screaming, crying. I know how they felt when they weren't sure if their friends/relatives were ok
- The devastation, unexpectedness, the cries & screams & panic. Everyone saying "I never thought it that would happen"
- People running blindly not knowing what to do
- The panic that I saw in people's faces brought me right back
- All of my same feelings came back knowing the shooting was an act of terror along with the 9/11 attacks



Therapeutic Interventions: MODULE I: SKILL TRAINING

- Psychoeducation
- Emotional Awareness
- Trauma & Loss Reminders
- Personal Coping Plan
- Accessing Support

Therapeutic Interventions:

MODULE II: TRAUMA PROCESSING

- Reconstruct and reprocess the traumatic experience including worst moments and attributions of meaning
- Clarify distortions linked with excessive shame and guilt
- Address maladaptive behavior used to cope with distressing memories
- Increase tolerance for traumatic memories
- Exploration of intervention thoughts and traumatic expectations

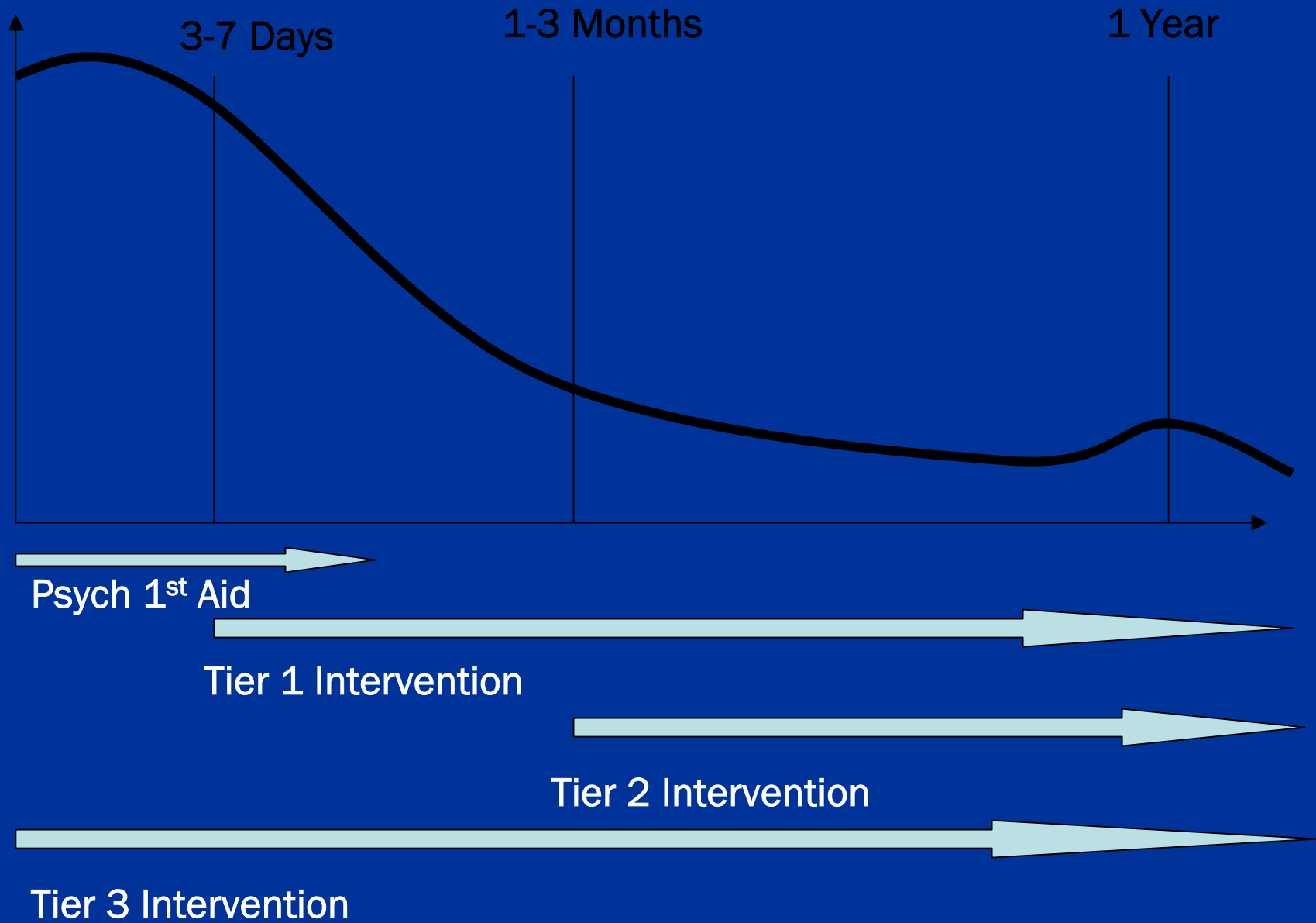
Therapeutic Interventions:

MODULE III: GRIEF PROCESSING

- Identify grief reactions and provide grief psychoeducation
- Explore grief-related emotions
- Work with loss reminders
- Reconstitute a non-traumatic representation
- Address conflicts over past interactions
- Develop social and communication skills
- Develop a plan for difficult days
- Say goodbye in a good way

Therapeutic Interventions: MODULE IV: RECONNECTING

- Identify missed developmental opportunities
- Support resumption of interrupted or delayed activities
- Challenge maladaptive core beliefs and expectations
- Promote effective problem solving
- Promote active citizenship, including leadership, advocacy, peer mentorship, etc.



Tolerance in the Recovery Environment:

Among those with different personal, family, and school levels of impact, courses of recovery, and levels of ongoing concern.