

SECTION 2: PSYCHOLOGICAL RESPONSES TO TRAUMATIC STRESSORS

The following is a fictional account, but is representative of psychological response to a traumatic event.

“It was the last day of August when the sunset took on an eerie gloom. As I sat in my office on the fifth floor of the island’s largest commercial bank trying to complete another day’s chores, the building seemed to shake. But why? As I stopped to think about it, the shaking became more and more pronounced until finally amidst screams coming from everywhere I heard a loud crash.

“Where am I? What is happening? I can’t see very well but there is a stench pervading the air and I can’t hear anyone no matter how hard I listen. There is a large object on my left leg and a heavy piece of concrete on my chest. It is very difficult to breathe and words fail me to describe the pain that I am feeling. How long have I been here? I feel weak and unable to move. Surely, death can’t be far away!

“It is now two months since I have been in hospital recovering from my injuries. Despite the loss of my left leg, it is a miracle that anyone found me and that I was still alive. My relatives are grateful to the rescue workers and the nurses and doctors for saving my life but over the past few weeks I pray to die since life tortures me mercilessly.

“My mood keeps fluctuating and at times I become intensely anxious with bouts of sweating, palpitations, hyperventilation, screaming and hostility. At other times, I feel lost and empty. I can’t get rid of the horrifying memories and the vivid images that remain in my mind. These memories, some of which are very patchy, seem to haunt me all the time and I become very distressed whenever anything—a sound, a smell or a sight—remind me of my ordeal. I dislike talking about my experiences and avoid anything that reminds me of them. In addition, I feel very guilty that I have survived and so many of my work colleagues died in the incident.



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"I have only been recently weaned off the ventilator and yesterday Dr. Browne, a psychiatrist, visited me for the first time. He thinks that I'm suffering with that PTSD thing and he has started me on medication and assured me that I'll be better. Well, I've heard him but how can I really believe him? He can't possibly understand what is happening to me!"

What is a traumatic stressor?

Any event which is outside of the realm of normal human experience and very distressing is a traumatic stressor or critical incident. Such events usually involve a perceived threat to the physical integrity of the individual and evoke reactions of intense fear, horror and/or helplessness. *It should be noted, nonetheless, that tragedies have frequently been the source of new ideas, discoveries and technologies.*

Examples of traumatic stressors include:

- Line of duty injury or death,
- Injury or death of children,
- Serious automobile accidents,
- Fires,
- Floods,
- Hurricanes,
- Mud slides,
- Volcanic eruptions,
- Earthquakes,
- Major explosions.



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What is psychotraumatology?

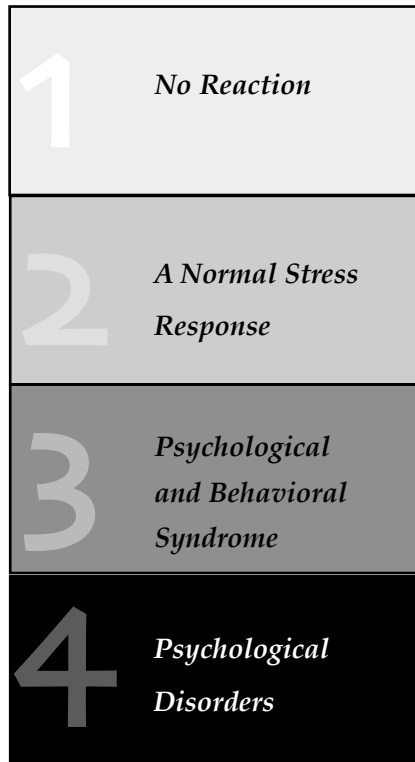
Psychotraumatology refers to the study of psychological trauma. Four major influences can be identified as having set the foundation for this field; they are disaster psychology, the psychology of violence and war, law enforcement psychology and the occupational health considerations of persons who routinely work in traumatic situations.

Who are the potential victims of a traumatic stressor?

Depending on the type of exposure to a traumatic event, we can classify potential victims into three categories:

1 Primary Victims	<p>Those individuals most directly affected by the event, e.g., the persons whose houses are blown down in a hurricane.</p>
2 Secondary Victims	<p>Those individuals who in some way observe the consequences of the traumatic event on the primary victims, e.g., bystanders, rescuers and emergency response personnel.</p>
3 Tertiary Victims	<p>Those individuals who are indirectly affected by the traumatic event as a result of later exposure to the scene of the trauma or to the primary or secondary victims of the trauma, e.g., family members of primary or secondary victims or passers by.</p>

What are some of the possible psychological and behavioral responses of persons after they have been exposed to a traumatic situation?



Exposure to any serious event can have negative short- or long-term consequences which may include deterioration in one's physical and/or psychological well-being, impaired social and occupational functioning, relationship breakdowns, and attempted and successful suicides.

The possible range of reactions are very complex and they vary enormously in severity and type. They are also very dependent on the individual affected. Such reactions range from negative feelings to psychiatric disorders and they pass through a series of phases. One third of those exposed to a traumatic stressor experience little or no distress, one third experience moderate distress and the remaining one third have severe distress. Such reactions may be immediate or delayed and other stressors in one's life may influence this process.

It should be noted that there are persons who, when exposed to traumatic stressors like a natural disaster may experience distress but retain their ability to objectively appraise the situation and decide how to manage it. Such persons tend to lead and console others and organize rescues.

Sometimes exposure to traumatic stressors can produce very intense arousal which may overwhelm the individual's coping mechanisms. Such hyperarousal is thought to come about because of the dysfunction of a number of inter-related neurochemical systems in the brain, e.g., the noradrenergic system, the opiate system and the hypothalamic-pituitary-adrenal axis. Minimization of the intensity and duration of such arousal decreases the resultant neurochemical dysfunction which in turn decreases the risk of a post-traumatic stress syndrome developing.

Like adults, children and adolescents who are exposed to traumatic stressors show a wide range of complex reactions which may also be immediate or delayed. These reactions tend to differ from those of adults in that they are age-dependent, they can have a profound effect on the child or adolescent's future development and they are strongly influenced by the adults with whom the child or adolescent may come into contact. Nonetheless, the majority of children and adolescents do quite well after exposure to traumatic situations.

Of those people who experience a distress reaction:

1. Some may recover on their own with only minimal assistance from their support network;
2. Some benefit from the services of a stress management team; and
3. Some need professional assistance to achieve maximal recovery.

By whatever means, the majority of persons exposed to such stressors achieve satisfactory levels of recovery. The memories of a traumatic incident may persist, but even in such cases the impact can be significantly reduced if managed appropriately. Obtaining appropriate assistance can make the difference between a fairly short, painful reaction and a prolonged, complex, more painful one.



What are the possible phases of such responses with respect to disaster situations?

PRE-INCIDENT <i>(if appropriate)</i>	PRE-IMPACT PHASE:	The majority of persons make some effort to prepare for the potential impact of a disaster. Others become indifferent and deny that there is any impending danger and still others become anxious and somewhat disorganized. A few persons remain quite calm and focused.
	WARNING PHASE:	During this phase a greater proportion of persons tend to become agitated and over-react but a few continue to remain calm and purposeful.
IMPACT PHASE		Persons tend to be fearful and they attempt to cope by either giving up, running away or rescuing others.
POST-INCIDENT	HEROISM PHASE:	During this phase, efforts are made to survive and to recover property. This is a time of great altruism and overwork with possible irritability and exhaustion.
	HONEYMOON PHASE:	Persons tend to share their experiences. Good outcomes are anticipated and hope and elation prevails.
	DISILLUSIONMENT PHASE:	Disappointment occurs when aid is not as readily forthcoming as was anticipated and some people are seen as less fortunate than others. Depression often follows.
	REBUILDING PHASE:	People need to accept that they must depend on themselves if they are going to move on and rebuild their lives. Failure to do this leads to bitterness and animosity.

What constitutes a normal distress response after exposure to a traumatic stressor?

Critical incidents are typically sudden, intensely distressing events which are outside of the realm of normal human experience. Because they are so sudden and unusual, they can have a strong emotional effect on even well-trained, experienced people.

Approximately 86% of individuals exposed (directly or indirectly) to a traumatic event or critical incident tend to have some kind of reaction within 24 hours of the incident but such reactions may be delayed for days to weeks. Stress reactions of this kind constitute “traumatic stress” or “critical incident stress” and they may be mild, moderate or severe.

These are *common reactions of normal people* in response to an *abnormal situation* and their occurrence does not indicate that the person has developed a psychiatric disorder.

Such reactions may range from negative feelings to a wide range of physical, cognitive, emotional and behavioral signs and symptoms to post-traumatic stress syndromes. Any combination of these manifestations may go together to constitute a normal distress response.

Depending on the nature of their involvement with the traumatic event persons may experience various negative feelings. Survivors of the trauma may experience feelings of shock, uncertainty, helplessness, isolation, guilt, fear and anxiety, and they may blame themselves and/or others for what happened. In contrast, responders to the trauma tend to experience feelings of inadequacy, frustration, powerlessness, fear, insecurity and guilt. Finally, relatives of both survivors and the injured or deceased may experience feelings of shock, uncertainty, helplessness, separation anxiety, grief and guilt; they may also blame themselves and/or others for what happened.

Below is a list of some of the most common physical, cognitive, emotional and behavioral signs and symptoms which may follow exposure to a traumatic event.

Physical:

- Rapid heart rate
- Elevated blood pressure
- Increased perspiration
- Difficulty breathing
- Feeling faint
- Tremor



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Cognitive:

- Racing thoughts and/or feeling confused
- Memory impairment
- Poor attention span and concentration
- Difficulty making decisions
- Intrusive memories and/or flashbacks
- Change of one's awareness of one's surroundings



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Emotional:

- Feeling overwhelmed and/or detached
- Hopelessness and/or helplessness
- Fear and/or avoidance of similar situations
- Irritability
- Anger and/or hostility
- Grief
- Questioning of one's religious values



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Behavioral:

- Hyperarousal
- Social withdrawal
- Sleep disturbances
- Change in eating habits
- Loss of interest in previously pleasurable activities
- Substance use
- Absent-mindedness and being prone to accidents



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Finally, exposure to a traumatic stressor may result in post-traumatic stress syndromes which are characterized by three clusters of signs and symptoms and which do not meet the diagnostic criteria for a diagnosis of post-traumatic stress disorder (PTSD). Below is a list of the three clusters of signs and symptoms.

Re-experiencing:

- Recurrent, intrusive and distressing recollections of the event
- Recurrent and distressing dreams about the event
- A sense of reliving the experience
- Illusions
- Hallucinations

- Dissociative flashback episodes
- Intense physiological and psychological distress on exposure to internal or external cues that symbolize or resemble the traumatic event in any way

Hyperarousal:

- Restlessness
- Difficulty falling or staying asleep
- Irritability or outbursts of anger
- Racing thoughts
- Inability to concentrate
- Hypervigilance
- Exaggerated startle response



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Avoidance:

- Avoidance of thoughts, feelings or conversations associated with the trauma
- Avoidance of activities, places or people that arouse recollections of the trauma
- Inability to recall an important aspect of the trauma
- Markedly diminished interest or participation in significant activities
- Feelings of detachment or estrangement from others—social withdrawal
- Restricted range of feelings—numbing
- Sense of a foreshortened future

If unmanaged, approximately 22% of persons who experience critical incident stress will still be symptomatic for 6 - 12 months after the event and approximately 4% will be at risk for developing post-traumatic stress disorder (PTSD).

What are some of the possible psychological and behavioral syndromes associated with traumatic events?

- Denial and/or indifference
- Resistance to evacuation
- Excessive substance use
- Despair and “paralysis”
- Panic
- Survival guilt
- Post-incident dependence



What are some of the possible psychiatric disorders which may be associated with exposure to a traumatic event?

- Acute stress disorder
- Post-traumatic stress disorder (PTSD)
- Generalized anxiety disorder (GAD)
- Panic disorder
- Adjustment disorders
- Major depression
- Substance-related disorders
- Brief psychotic disorder
- Somatoform disorders
- Dissociative disorders
- Personality disorders



What is post-traumatic stress disorder (PTSD)?

PTSD is a formally recognized psychiatric disorder which may result from exposure to a traumatic event, where a traumatic event is any event which would be markedly distressing to almost anyone and which often produces intense fear, terror or helplessness (American Psychiatric Association, 1994). *However, recent research in this field has placed greater emphasis on a person's subjective response to the trauma than on the severity of the trauma itself.*

The lifetime prevalence of PTSD is 1%-3% in the general population, 15%-20% in emergency response personnel and 26%-30% in Vietnam War Veterans.

Despite these high figures, it is still believed that the prevalence of PTSD is significantly under-reported. With respect to emergency response personnel it is even further under-reported for the following reasons:

1. The destruction of the personal illusion of invulnerability,
2. The fear of alienation by peers, and
3. The fear that concerns will be raised about the possibility of a previously undiagnosed or undisclosed weakness.

J.L. Herman (1992) has described a variant of PTSD referred to as "*Complex*" PTSD which may result from chronic traumatization or repeated bouts of acute traumatization.

PTSD is characterized by impaired functioning and three clusters of symptoms that follow a psychologically distressing event which is considered outside of the range of ordinary human experience:

1. Re-experiencing,
2. Hyperarousal, and
3. Avoidance.

What factors increase one's vulnerability to developing post-traumatic stress disorder?

1. Exposure to severe injury or abuse;
2. Associated feelings of intense fear, horror or helplessness;
3. Socioeconomic background;
4. Background levels of stress;
5. Genetic - constitutional vulnerability;
6. Dysfunctional personality traits, cognitions or behaviors;
7. Perception of an external locus of control;
8. A history of childhood trauma;
9. Inadequate social support or family dysfunction;
10. Associated fatigue, starvation, dehydration or extremes of temperature;
11. Exposure to various substances, e.g., recent excessive alcohol use;

12. Associated feelings of severe guilt or shame;
13. Associated feelings of inadequacy, betrayal or spiritual conflict.

What is the risk of emergency response personnel developing post-traumatic stress syndromes?

Emergency response professionals (emergency response personnel, public safety personnel, nurses, doctors and disaster workers) are at a higher than normal risk for developing post-traumatic stress syndromes because they routinely find themselves working in very traumatic situations. Although the majority of emergency response workers because of their training, experience and mental preparation usually respond to traumatic situations without emotional reactions, various studies have estimated their life-time prevalence of developing post-traumatic stress disorder (PTSD) at 15%-20%.

It is generally accepted that the psychological well-being of emergency response personnel dealing with an emergency greatly affects its overall outcome, including the health of the primary victims of the trauma. Clearly, the development of potentially disabling syndromes in emergency response personnel need to be prevented at all cost.

Apart from repeated exposure to traumatic situations, what other factors might predispose emergency responders to experience critical incident stress?

Emergency response workers tend to have personality traits that help them to do a good job, but these same traits may increase their vulnerability to stress reactions. These traits include:

1. High levels of internal motivation;
2. An action-oriented approach to challenges;
3. A dedication to their jobs which they view as life-long careers;
4. A need for stimulation and excitement;
5. A rescue personality with a willingness to take risks;
6. A need to see quick results;
7. A strong need to be needed;
8. A tendency to deny the possibility of being affected emotionally by traumatic incidents;
9. Reluctance to accept change;
10. A need to be in control and to do a perfect job.

It must also be noted that organizational stressors can raise the job-related stress levels of emergency response personnel which would in turn increase their susceptibility to critical incident stress reactions. Below is a list of possible organizational stressors:

1. Inappropriate reward for the job done;
2. Unreasonable demands;
3. Lack of opportunity for participation in the decision-making process;
4. Problems with feedback;
5. Too much uncertainty;
6. Poor organizational style;
7. An unsupportive or threatening work environment;
8. Poor staff relations;
9. Lack of opportunity for self-actualization and career development.

The following account is fictional, but is an illustration of a situation in which organizational stressors exist and put staff performance at risk.

The Quality Assurance Committee of the Hopetown General Hospital called an urgent meeting with the Chief of the Medical Staff, the Matron and all medical and nursing staff attached to the Accident and Emergency Department of the hospital.

The Committee was very concerned that despite there having been no increase in the number or change in the spectrum of cases being handled by the Department, the number of acutely ill persons dying in the Department, the number of complaints from users of the Department and the number of medico-legal settlements related to the Department had increased steadily over the past year, with an all time high last month.



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The problem seemed to have started about two years before when a new style of management was implemented in the Department. Staff who attended the meeting appeared to be quite frustrated, demoralized and disillusioned. They complained about:

1. *Inadequate staffing of the Department;*
2. *Frequent staff changes;*
3. *Unreasonable working hours;*
4. *Very poor staff relations;*
5. *Unhealthy competitiveness among staff at all levels;*
6. *A very dictatorial and ill-defined management hierarchy;*
7. *Over-emphasis of the status quo;*

8. *Lack of opportunity for staff to participate in the decision-making process;*
9. *Feedback only about poor performance;*
10. *Gross insensitivity of senior management;*
11. *Clear evidence of favoritism;*
12. *Lack of accountability for all;*
13. *Verbal abuse from the public and poor security;*
14. *Lack of cooperation from interfacing departments.*

At the end of the emotionally charged four hour meeting, the Chairperson of the Committee thanked staff for their frankness and expressed surprise at the majority of information that had come to light. She then pledged to have the matter thoroughly investigated during the upcoming month. In the meantime, she promised that there would be urgent recruitment of 8 doctors and 20 nurses, even if only on a part-time basis initially.

Before the official closure of the meeting, one young nurse who was new to the Department advised that there was also an urgent need for a comprehensive stress management program to be put in place for staff in the Department.

Is it possible for emergency responders to be overwhelmed by the magnitude of some traumatic events?

Emergency responders can sometimes be so overwhelmed by the nature and/or magnitude of a traumatic event and by the conditions under which they have to function that their performance is significantly impaired. If this does happen, the affected person must be allowed to withdraw from the scene.

It must be understood by everyone that if an emergency responder feels the need to withdraw from a situation this does not mean that he/she has “copped out” or that he/she is ineffective. Instead, withdrawal should be viewed as a form of mature and responsible behavior which should be highly commended. Such an individual may still be able to function effectively in routine situations.

All emergency responders should be trained to recognize when they have become dysfunctional. If such a situation does occur the responder should report to their supervisor and withdraw from duty.

Exercise:

What impact did exposure to a recent traumatic stressor have on you?



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Try to remember the most recent traumatic event to which you were exposed within the last 24 months.

What was your involvement with that incident?

What was the date of the incident?

Read each symptom below carefully, then circle the answer which best describes the frequency of any of the symptoms that you may have experienced after exposure to the traumatic event. Please see Appendix 1 for an interpretation of the total score.

	<i>Never</i>	<i>Sometimes</i>	<i>Often</i>	<i>Always</i>
1. Any reminder brought back feelings about the experience.	1	2	3	4
2. I felt afraid of and avoided similar situations.	1	2	3	4
3. I tried not to think of and/or talk about the incident.	1	2	3	4
4. I felt numb and detached from the incident.	1	2	3	4
5. Pictures of the incident kept popping into my mind.	1	2	3	4
6. I would try to deny that the incident did really happen.	1	2	3	4
7. I would dream about the incident.	1	2	3	4
8. I would think about the incident even when I didn't want to.	1	2	3	4
9. I would get very strong feelings about the incident.	1	2	3	4
10. I would find it difficult to fall asleep because of pictures or thoughts about the incident that would keep entering my mind.	1	2	3	4
11. I would try very hard not to get upset when I remembered or thought about the incident.	1	2	3	4
12. I became irritable and hostile for no good reason.	1	2	3	4
13. I lost interest in my job and in previously pleasurable activities.	1	2	3	4
14. I started using substances, e.g., nicotine, caffeine, sedatives, hypnotics, cannabis, cocaine, etc.	1	2	3	4
15. My eating habits changed.	1	2	3	4

16.	I became socially withdrawn and found it difficult to relate to other people.	1	2	3	4
17.	I felt overwhelmed and helpless with no sense of a future.	1	2	3	4
18.	I had difficulty concentrating and/or making decisions.	1	2	3	4
19.	My thoughts would race and/or I felt confused.	1	2	3	4
20.	I felt guilty and/or started to question my religious values.	1	2	3	4
21.	I experienced memory impairment and/or became accident prone.	1	2	3	4
22.	I became preoccupied with possible unknown threats.	1	2	3	4
23.	I felt anxious.	1	2	3	4
24.	I felt "moody" and/or depressed.	1	2	3	4
25.	I experienced a number of unexplained physical complaints.	1	2	3	4

Total Score: _____

Exercise:**As a service provider, what is your level of work-related stress?**

Read each statement below carefully, then circle the best answer to each question as it relates to the preceding 12 months of your life and find the total score. Please see Appendix 1 for an interpretation of the total score. Note carefully that tests like these serve only to alert us that there may be a problem.

		Never	Sometimes	Often	Always
1.	I feel that too much is expected of me.	1	2	3	4
2.	Just thinking about going to work makes me feel angry.	1	2	3	4
3.	I view the persons whom I have to serve as objects.	1	2	3	4
4.	I feel as if my job is "eating away my flesh".	1	2	3	4
5.	I feel overwhelmed and helpless.	1	2	3	4
6.	I have become isolated at work.	1	2	3	4
7.	I feel frustrated with my job.	1	2	3	4
8.	I find it difficult to concentrate at work.	1	2	3	4
9.	I use coffee, tobacco, alcohol and/or other drugs to try and cope.	1	2	3	4
10.	My work no longer brings me satisfaction.	1	2	3	4
11.	I am unable to empathize with others.	1	2	3	4
12.	I no longer care about the quality of my work.	1	2	3	4
13.	My job leaves me feeling emotionally exhausted.	1	2	3	4
14.	I am unable to provide a personalized service.	1	2	3	4
15.	I find it difficult to make decisions at work.	1	2	3	4
16.	My work attendance is poor.	1	2	3	4

17.	I feel the need to resign my job.	1	2	3	4
18.	I have become irritable and confrontational on the job.	1	2	3	4
19.	I dislike my job but I work because I need the money.	1	2	3	4
20.	My work performance has declined and I seldom finish anything.	1	2	3	4
21.	My work relations with my co-workers and my boss have declined.	1	2	3	4
22.	I feel inadequate and/or like a failure with respect to my job.	1	2	3	4
23.	I get suicidal and/or homicidal ideas because of my job.	1	2	3	4
24.	I have become disorganized on the job.	1	2	3	4
25.	I have become absent-minded and accident prone at work.	1	2	3	4

Total Score: _____

End of Section Quiz

Please circle the correct answer.

- | | | | |
|-----|---|---|---|
| 1. | Major depression can occur after exposure to a traumatic stressor. | T | F |
| 2. | Re-experiencing, arousal and psychosis are the three basic signs and symptoms that may follow exposure to a traumatic stressor. | T | F |
| 3. | Emergency service personnel are usually eager to admit that they may be having a distress reaction. | T | F |
| 4. | The death of a child is not a very traumatic event. | T | F |
| 5. | A feeling of confusion may result after exposure to a traumatic stressor. | T | F |
| 6. | Exposure to traumatic stressors can produce very intense arousal. | T | F |
| 7. | PTSD is a formally recognized psychiatric disorder. | T | F |
| 8. | The intensity and duration of the stress reaction after exposure to a traumatic stressor can be minimized. | T | F |
| 9. | Memory impairment may follow exposure to a disaster situation. | T | F |
| 10. | The incidence of PTSD is believed to be significantly over-reported. | T | F |

Note: Answers to questions are on page 128.

