

# Willingness of Medical versus Non-Medical Emergency Responders to Accept Post-Incident Intervention

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post-traumatic stress, emergency responders, first responders, critical incident stress, debriefing, defusing, post-incident intervention

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## ABSTRACT

**Introduction:** It has long been anecdotally held by emergency responders that non-medical emergency responders were less willing to accept post-incident intervention following a personally disturbing event than their medical counterparts.

**Methods:** Aspects of emergency responder stress were studied across multiple disciplines of the emergency services: pre-hospital emergency medical services (EMS), fire protection, law enforcement, and emergency department (ED) or emergency room (ER) personnel. Individual anonymous surveys were administered across the four disciplines to assess willingness to accept post-incident intervention. Eight agencies participated: two hospital ERs, three fire departments, two police departments, and the county EMS agency, for a total of 236 participants, of whom 107 were medical emergency responders and 129 were non-medical emergency responders.

**Results:** Across the 4 disciplines (including the two groups of medical and non-medical) the willingness to participate was > 70%.

**Conclusion:** The results of this study suggest that, statistically, there is an equal level of willingness to participate in post-incident intervention between medical and non-medical emergency responders. However, many reported that they can “handle their stress on their own” or that they fear being perceived as weak.

## INTRODUCTION

William Holland vividly described the work of emergency responders when he said, “Emergency services professionals work in an environment that includes frequent exposure to adults and children who are coping with life threatening and traumatic conditions... threats to their own and their partner’s personal safety, exposure to chemical and bio-hazardous materials, injuries and death of children and infants, repugnant crime victim scenes, body handling, completed suicides and homicides, and mass-casualty incidents. Emergency services providers must regularly cope with stress related to these exposures and are expected to manage it properly.”<sup>1</sup>

As early as the mid-1980s, it was recognized that further research and study was needed regarding critical incident stress and post-traumatic stress of first responder personnel such as firefighters, police officers, pre-hospital medical responders (EMS) and emergency department (ED) or emergency room (ER) personnel.<sup>2</sup> It was not until the early 1990s with Jeffrey Mitchell’s research into post-traumatic stress and his development of the critical incident stress management (CISM) paradigm<sup>3</sup> that this issue of responder stress was seriously addressed in a structured, clinical, and non-judgmental manner.<sup>4</sup> In McCammon’s study, it was noted that the emergency personnel would keep quiet and otherwise not disclose when dealing with issues of responder stress for fear of mockery or the perception that they would appear “weak” or unable to cope and “deal with it.”<sup>2</sup>

This assertion is also supported by anecdotal conjecture and personal experience. For example, James Jeannette, a mental health advisor and responder stress clinician, specifically refers to an incident that occurred at his fire station when it was discovered that he was “jumpy” and stressed. It was then that his partner advised him to “never show any kind of weakness or they will prey upon you until you break.”<sup>5</sup>

It has been the perpetuation and support of this type of atmosphere in the emergency services which has led emergency responders to bottle up their emotions and hide the emotional pain and discomfort accumulated over years of witnessed tragedy and human suffering. Responder stress is just as stigmatized in the emergency medical services. If a responder is perceived as too sensitive or needing psychological assistance of any kind,

nobody wants to work with that individual for fear that he or she would “choke” at a critical moment.<sup>6</sup>

The critical incident stress management process, although criticized in the past,<sup>7</sup> has held as a viable and useful tool to help mitigate the effects of critical incident stress, along with peer counseling, informal discussion, psychological first aid, debriefing, and professional psychological therapy.<sup>8</sup> Although Halpern points out that each subset of first responders has experienced a different array of critical incidents due to the diverse demands and daily tempo unique to each profession,<sup>9</sup> those diverse roads can, and often do, lead to the same destination: critical incident stress and post-traumatic stress. Although the terms have often been used interchangeably, there is a difference: mainly, post-traumatic stress disorder (PTSD) is a clinical diagnosis whose long-term sequelae are noted as lasting for at least a month.<sup>10</sup>

The American Psychological Association’s Diagnostic and Statistical Manual of Mental Disorders defines post-traumatic stress as having developed following a traumatic stressor that threatens a person’s life or physical integrity, that invokes a response of fear, helplessness, or horror, and that is characterized by clinically significant intrusive reminders about the event, avoidance of such reminders, and autonomic hyper-arousal.<sup>10</sup> Emergency workers, according to Halpern’s study,<sup>9</sup> have exhibited an increased prevalence of post-traumatic stress disorder symptoms as compared to community samples to the order of 20% versus 1-3%. Declercq pointed out that some studies suggest a synergistic, cumulative effect which has led to responder stress,<sup>11</sup> while others suggest that low-magnitude stressors are as just as closely related to PTSD as high-magnitude stressors. However, Declercq’s study also indicated that the subjective experience of intense fear, helplessness, and horror experienced by emergency responders after a critical incident contribute to the development of PTSD symptoms. In a study of British emergency workers, it was found that the incidents that caused the most responder stress included incidents involving children, the handling of dead bodies, burn patients, dealing with the relatives of patients, and dealing with emergencies of individuals who were known to the emergency workers.<sup>12</sup> Another study that further defined critical incident stress involved feelings of helplessness, violent incidents, severe motor vehicle accidents, suicides, and medical emergencies.<sup>13</sup> These stressors and many more are experienced daily by emergency responders.

Whereas the emergency responder culture appears to have changed in that it is more accepting, tolerant, and understanding of critical incident stress and its symptomology,<sup>14</sup> anecdotal evidence within the emergency responder culture itself tells us that there is still some hesitation by certain emergency responders to accept post-incident interventions of any type. Jan Heglund, Chaplain for the West Coast Post-Trauma retreat noted, “First responders service society. Citizens rest more easily knowing that they are there, they are skilled, and they solve problems. In short, emergency responders are professional caregivers. But, who cares for the caregivers?”<sup>15</sup> Posing this question presupposes that the responders are, at least, receptive to assistance. In short, emergency responders must first be willing to accept it.

In the material reviewed, many questions were examined; however, the question of responder willingness to accept

post-incident intervention was examined by few. One study among Canadian firefighters found that different post-incident interventions of varying types were acceptable depending on the scope and magnitude of the incident.<sup>14</sup> However, no subjective data could be obtained regarding level of acceptance of post-incident intervention among EMS workers, law enforcement, or ED personnel. Again, anecdotal evidence within the emergency responder community holds that law enforcement and firefighter personnel are more hesitant to accept post-incident intervention, compared to EMS and ED personnel. Therefore, it will be the purpose of this study to determine the various levels of acceptance of post-incident intervention between non-medical first responders and medical first responders.

## METHODS

The study was approved by the Institutional Review Board (IRB) at the University of South Alabama, as well as the IRB of Singing River Hospital System. Individual written permission was obtained from each of the participating agencies. Each individual was given an Informed Consent sheet. A quantitative survey instrument was developed to collect data. In the first part of the survey, certain biographical data were obtained for categorization purposes (gender, age group, ethnic affiliation). The second part collected data regarding exposure to common stress-inducers, their potential after effects, and responder willingness to accept post-incident interventions of any type following a personally disturbing event. Finally, the third part used a modified Likert scale (0-10) to measure the individual’s perceived effects of work-related stress on various aspects of personal and professional life. The survey was voluntary and anonymous. Surveys were administered in person, on location, and lasted about 20 minutes per session. All the surveys were administered at the agency’s shift meeting or at shift change. The surveyor was on hand to make sure the participating individuals knew the purpose of the survey and participated with informed consent, and to clarify and answer questions regarding definitions of certain terms if questions arose.

### *Participants*

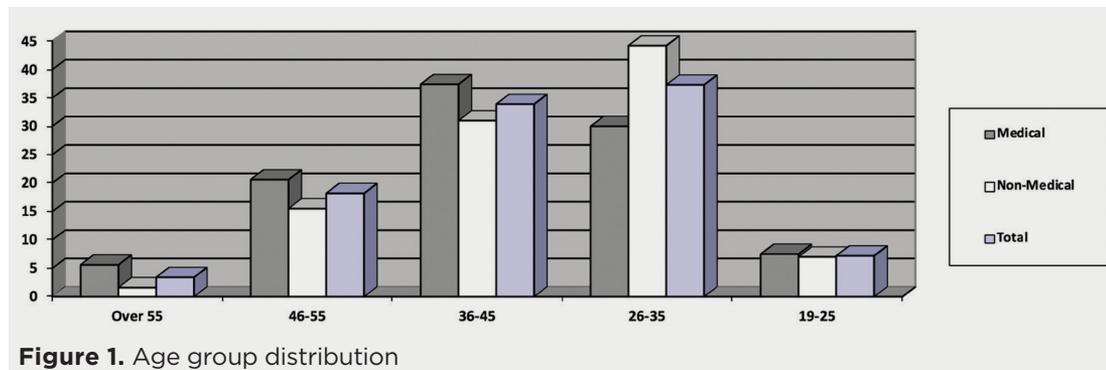
Cross-section samples of the population of emergency workers from eight agencies were selected out of 12 originally contacted from the geographic region, totaling 236 individual respondents. The four agencies who were contacted but not included were two fire departments (one expressing no interest and one not being able to complete qualifying paperwork prior to the study completion deadline) and two law enforcement agencies with similar issues.

Staff that were chosen from the two local hospital emergency departments included MDs, RNs, LPNs, and ancillary staff that have “direct and intense” patient contact (for example, ER technicians could participate but not registration personnel, clerks, maintenance, housekeeping staff, etc.). Law enforcement from two municipal departments and firefighters from three municipal departments were surveyed, as well as pre-hospital EMS providers from the local 911 provider consisting of Nationally Registered EMT Basics and Paramedics, as well as supervisory staff. Only individuals classified as “full-time” active personnel could participate, not

part-time or volunteer staff. This was done to maintain consistency throughout the survey, as there is a higher volunteer ratio in some disciplines than others, as well as varying and unpredictable levels of experience, training, and volunteer participation in certain areas. The response rate was high; the only individuals in the eight participating entities not included were the individuals that were out sick or on vacation, which were very few.

**RESULTS**

A total of 236 individuals were surveyed: 45 EMS, 62 ED/ER, 42 law enforcement, and 87 fire protection. The totals for medical first responders (MFR) was 107, and for non-medical first responders (NMFR) was 129. The total number of men, which was extremely concentrated in the fire/police side of the responders (there was only one woman in that category) was 180, and the total number of women was 56, which were heavily concentrated on the EMS/ED side. Figure 1 breaks down the percentages and age groups into three categories: medical, non-medical, and total number.



**Figure 1.** Age group distribution

The highest concentration of medical and non-medical responders are concentrated in the 26-45 year old range, with the over-55 and under-25 categories accounting for much smaller percentages, approximately 10% of the emergency responders surveyed.

Stressors	n/%
No Stressors	29 / 12.3
Threat to your own life	68 / 28.8
Death/serious injury to a child	149 / 63.1
Provided care for immediate family or friends	67 / 28.4
Natural disaster or Mass casualty incident	78 / 33.1
General accidents / medical patients	107 / 45.3
Crime victims (shootings, stabbings, assaults)	113 / 47.9
Critical burn patients	60 / 25.4
Major trauma patient / mutilation	108 / 45.8
Feelings of helplessness or futility, inability to assist	66 / 28

**Table 1.** Stressors found to precipitate critical incident stress

Nine critical stressors that could lead to responder stress were also measured, reported as either occurring in the previous year or as standing out in the individual’s career as causing critical stress (Table 1). The percentages represent the total sample of all respondents surveyed and are not specific to a particular discipline. An individual could select as many as they wanted or none. More than 78% of the respondents checked more than 2 categories.

The next area to be measured was the percentage of likelihood of the responder to accept post-incident intervention of any type. It was noted on some occasions that the individuals were mandated by their institution or department to participate in post-incident debriefing; however, as it was explained to the participants, whether an individual was mandated to participate or not, the individual still could measure and indicate their willingness to participate in the activity. Using a modified Likert-style measuring system on a scale of 0 to 10, individuals were asked how likely they would be to accept any type of post-incident intervention. An indication of 0-2 was an

indication of “never” to “not likely.” Any responses >3 were indicative of “likely” to “always” to participate in post-incident debriefing. Figure 2 breaks down the willingness of the responder based on the above criteria, while Figure 3 combines the measures of MFRs and NMFRs.

The data suggest that across the board, regardless of discipline (EMS, ED/ER,

fire, or law enforcement) or grouping of medical or non-medical first responders, that most responders (at least 70%) maintain a willingness of at least “likely” to accept post- incident intervention following a personally disturbing event. The data may go up or down a few percentage points, but in general, a majority of first responders seem to be willing to accept post-incident intervention. The highest “not likely” category was EMS at 31%, with the lowest being ED/ER personnel at 16.1%. As for the MFS versus the NMFS, the percentages are so close as to be statistically non-significant.

The next question examined regarded reasons for which an individual would not seek out or participate in post-incident interventions. Several reasons were reported: not stressed, stressed but can handle it myself, fear of perception of weakness by peers or family, fear for possible career prospects in the future, and confidentiality concerns. The measurement tallied the entire sample of the population and was not broken down into various disciplines. Figure 4 represents the results for medical and non-medical first responders.

These findings clearly indicate some of the reasons why first responders do not utilize post-incident assistance, if it is offered. The second column indicates that 60 to 70% of responders feel that they can handle their own stress; however, over 50% of the responders checked more than one stressor, including many of those who stated

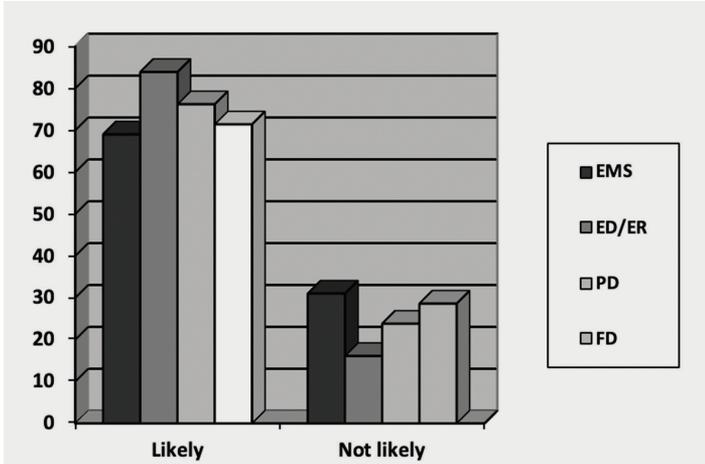


Figure 2. Breakdown of willingness by discipline

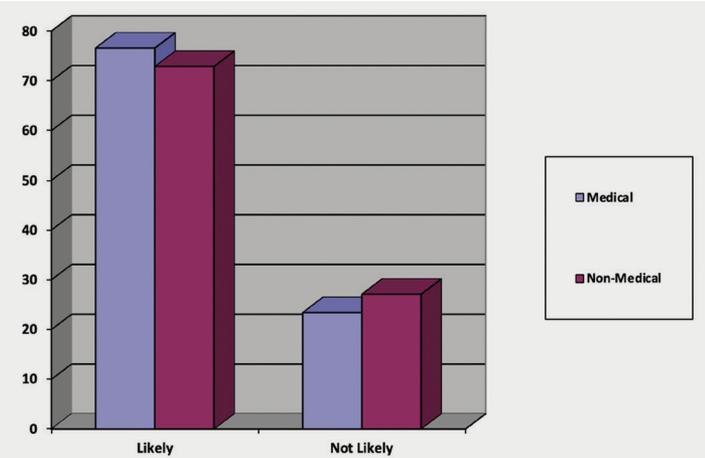


Figure 3. Breakdown of willingness of medical vs non-medical

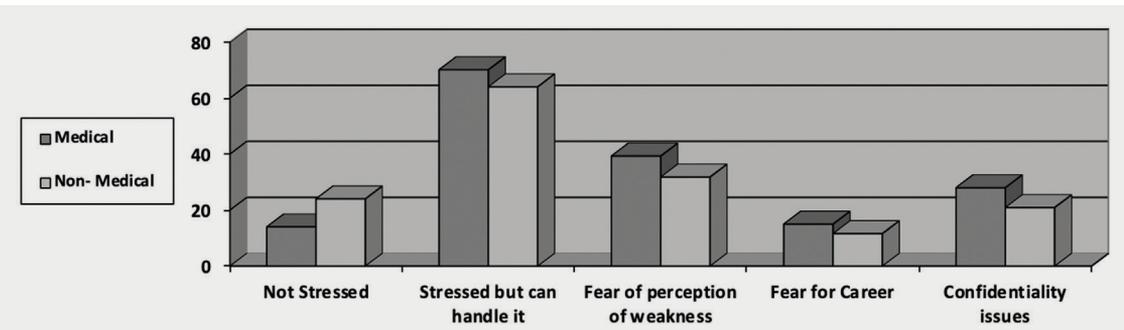


Figure 4. MFR versus NMFR and reasons for not utilizing post-incident intervention

that they felt no stress. The fear or perception of weakness plays a role for almost 30 to 40% of the sample, and confidentiality issues comprise 20-30% of their concerns as well. The concern for future prospects for their career brought up the last place with 11-15% of the individuals indicating that this was a concern.

Finally, when asked if they had ever experienced post-incident stress, 137 individuals (58% of respondents) indicated that they had experienced critical incident or post-traumatic stress. 94% of those respondents indicated that they had experienced the effects of a critical incident for at least several days to several weeks, with over 30% experiencing symptoms of critical incident stress for several

months to several years. 8.8% of responders indicated that they currently suffered from post-traumatic stress.

**DISCUSSION**

This study set out to examine whether there was a significant statistical difference in the willingness of medical first responders to accept post-incident intervention versus their non-medical counterparts. The percentages suggest that there is not a significant statistical difference between those sets of emergency responders, and there is an approximately 70% chance that any critically-stressed individual is at least “likely” to accept post-incident intervention. This number is very promising given the anecdotal gossip which has circulated amongst the emergency services for several years, i.e., that firefighters and police officers do not want or need assistance with responder stress. Keeping in mind that 12% of surveyed individuals indicate that they had not had any significant stressors in the last year, it is extremely significant that the survey also demonstrated that 30% of responders indicate that they have had their life threatened in the line of duty, 63% experienced critical incident stress following responding to the death or severe injury of a child, 30% experienced stress symptoms after a mass-casualty incident or natural disaster, 45% indicate that severe motor-vehicle accidents or critical medical patients have caused them stress, 47% state that they have experienced responder stress following their interaction with victims of violent crimes, 30% have had post-incident stress following critical burn patient care, 45% have had symptoms following a patient with major trauma or a mutilated patient, and 30% of responders have had feelings of helplessness or futility which sparked critical incident stress sequelae. These statistics are startling when one considers that a majority of respondents marked more than one category. These percentages suggest that

at any given moment, approximately 30-60% of the emergency responders in our communities are dealing with the effects of post-incident stress.

Although approximately 70% of emergency responders are “likely” to accept post-incident assistance, the question remains as to why there is a resistance to either offer it or accept

it. Whereas 10-20% suggest that they are not stressed (which coincides with the percentage of individuals who state they were not exposed to some of the common emergency response stressors), 60-70% of individuals surveyed indicate that they are stressed but feel that they can handle the stress on their own. This may be true for some or most of these individuals but, as noted in the results, most respondents indicated that there were other reasons for not seeking out post-incident assistance as well. 30-40% indicated that they had a fear of the perception of weakness from their peers, a point made specifically in three of the referenced

studies.<sup>2,5,6</sup> Another fear is a concern for confidentiality, which 20-30% of the respondents indicated was a concern for them.

What this survey and the results mean for the responder and stress counselor is multi-faceted. Primarily, it can be seen as encouraging, in that a high percentage of individuals in the emergency services are willing to participate in post-incident interventions. Understanding that there is a higher likelihood that more individuals will participate in after-action debriefing if they do so should encourage counsellors to find different models of debriefing that are more acceptable and fitting to particular groups or individuals. For example, Halpern's study of EMS professionals suggested that in the EMS culture, supervisor understanding of post-incident stress and a "time out" period was sufficient post-incident action.<sup>16</sup> Secondly, if it is known and understood that certain stressors prompt post-incident stress, then the counselor, employer, and responder should be open to post-incident debriefings prior to the "showing of stress symptoms." For example, the premise of "psychological first aid" takes this into account so that the counselor can head off stress symptoms and suggest proper and productive coping mechanisms. Lastly, if the counselor or employer understands the major reasons for individuals not participating in or seeking out stress counseling, then a specific and targeted education initiative can be implemented at the department level, or perhaps even the squad level, to educate emergency responders about stress symptoms, positive coping mechanisms, and the complete confidentiality involved in the stress debriefing process. If counselors and employers were to take these concerns and issues into consideration, it is possible that aspects of their business model would improve as well—e.g., increased employee retention through reduced turnover and increased employee satisfaction.

There is another aspect to consider as well: the legal obligation of employers to provide easily accessible, completely confidential access to post-incident assistance. Three of the eight entities that were surveyed had no active program with which the employees were familiar to assist in the mitigation of post-incident stress. Both Freckelton<sup>17</sup> and Lindahl<sup>18</sup> point out that courts are taking a very dim view of this practice, given the overwhelming amount of data and literature available regarding the stress and stressors of emergency response, and those employers should have mechanisms in place for the mitigation of trauma stress symptoms. Two entities surveyed had an employee assistance program, but it wasn't advertised or posted anywhere for the employees to know about. One entity had a very outgoing, aggressive, and widely publicized employee-assistance telephone number to call to obtain further assistance. The two remaining entities had therapists come in after specific incidents for the purposes of evaluating the group, and it was unclear whether individuals were the focus of any after-event action.

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