

## The impact of explosive violence on mental health and psycho-social well-being

Major disasters, such as war, have a significant impact on mental health and psycho-social well-being.<sup>1</sup> Events like physical assault, serious bodily harm, experiencing or witnessing horrific injury, carnage or fatalities, or hearing about violence to or sudden death of someone close can lead to psychological trauma.

Rates of mental disorder tend to double after war and other emergencies,<sup>2</sup> as exposure to extreme stressors is a risk factor for mental health and social problems. Although, during war, it is challenging to isolate the specific impact of a particular event on mental health, events involving explosive weapons are likely to be an important risk factor for mental health and social problems. Bombing is one of the major stressors of modern war.<sup>3</sup>

“Obviously what is abnormal is the bombing itself and not the reactions to it.”<sup>4</sup>

This paper makes three main arguments regarding the relationship between explosive weapons and emotional harm:

- × People affected by explosive weapon use are at a high risk of suffering psychological trauma;
- × The use of explosive weapons in populated areas will tend to increase the number of people suffering emotional harm;
- × The use of heavy explosive weapons in populated areas, and sustained patterns of such use, will tend to increase both the numbers experiencing emotional harm and the severity of that harm.

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## Explosive violence

An explosion is a sudden, loud, and extremely violent event, and people experiencing the detonation of an explosive weapon are, thus, likely to suffer an acute stress reaction. The level of fear and distress experienced after a bombing depends on several factors, including injury of self, injury or death of family members or friends, separation from or lack of knowledge about loved ones, and the witnessing of horrific and frightening scenes.<sup>5</sup>

It has been shown that an event will most likely lead to emotional or psychological trauma if it happened unexpectedly, the person experiencing it was unprepared for it, the person felt powerless to prevent it, the event happened repeatedly, someone was intentionally cruel, or the event happened in childhood.<sup>6</sup> Both isolated explosive events, such as an improvised explosive device (IED) attack, and the repeated use of explosive weapons through shelling or bombardment, put affected people at grave risk of suffering psychological trauma.

Explosive weapon use is associated with a particular pattern of physical injury.<sup>7</sup> Injuries from explosive weapons can also result in a constellation of temporary and permanent impairments to body organs and systems. Compared to firearms, explosive weapons bear a higher risk of causing traumatic amputation of limbs.<sup>8</sup> Limb loss due to an explosive event is sudden and devastating.<sup>9</sup> It involves loss of function, sensation and body image. The ensuing change in one's capacities, loss of health and independence, and bodily disfigurement put the affected person at risk for a host of psychological problems, including post-traumatic stress disorder (PTSD). The treatment of severe and complex injuries can be an additional source of emotional suffering as it may require repeated and invasive medical procedures. The treatment of burn injuries, in particular, tends to be extremely painful and can require prolonged isolation of the burn victim, adding emotional distress.

For survivors, threatened loss of life and serious injury are traumatic events and a risk factor for the development of PTSD. Recent research has highlighted traumatic brain injury (TBI) from bomb blasts, and one study finds that "there is substantial overlap between post-concussive syndrome and post-traumatic stress disorder, and blast-related mild TBI seems to increase the risk of post-traumatic stress disorder."<sup>10</sup>

Powerful explosive weapons can rip people apart. Collecting body pieces, discovering disfigured remains and identifying mangled bodies is extremely distressing for relatives and first responders. In some instances, it may not be possible to recover or identify the dead. This is likely to be an additional source of pain to relatives and friends. Death cannot be established with certainty and therefore cannot be formally acknowledged. Without a body, a family may not be able to complete traditional mourning rituals. Research has shown that not being able to see the body of the dead person can make grieving more difficult.<sup>11</sup>

## Explosive violence in populated areas

The use of explosive weapons in a populated area puts a great number of people at risk of psychological harm. Most of them are likely to be civilians who do not participate in the hostilities. Because

the use of an explosive weapon in a populated area tends to cause multiple casualties, an explosion in a residential area can result in survivors suffering multiple bereavements, often of close relatives, including children. Testimonies of those who have lost multiple family members in an explosive event convey a sense of an overwhelming loss that cannot be absorbed.<sup>12</sup>

**"The three weeks of intense bombardment and military ground action added new, serious psychological traumas, especially noticeable in children ... over 20 per cent of Palestinian children in Gaza suffer from post-traumatic stress disorders, the symptoms of which 'will appear over the days, months, years, or decades to come'."**<sup>13</sup>

Explosive violence in populated areas can affect a large number of people beyond those suffering physical harm or bereavement. Physical effects of the explosion can affect people over a very wide area. Damage, sometimes the complete collapse of large structures, is a visible reminder of the traumatic event, often for a long time. Severe mental health impacts can also be caused by narrowly escaping an explosive event, by the fear of future attacks, including by hearing warning sirens, spending time in a bomb shelter, hearing planes or drones fly overhead, or fearing for the safety of one's friends and relatives.<sup>14</sup> Witnesses, first responders, family members, friends, the wider community and society can, thus, suffer individual and collective trauma from explosive violence.

## Heavy explosive weapons in populated areas – causing unacceptable emotional suffering to civilians

The use, in populated areas, of heavy explosive weapons – those likely to affect a wide area with blast and fragmentation – is likely to be particularly traumatizing.<sup>15</sup> Such explosive weapons can cause great material devastation, reducing the built environment to rubble. People may be buried alive or crushed to death under collapsed structures. Damage from the explosion can make it difficult for first responders to access the site, evacuate and rescue survivors or recover dead bodies. The search for survivors, protracted digging in the rubble, and the uncertainty about whether those trapped can be rescued alive from the debris also takes a serious emotional toll on survivors, relatives and first responders.

In situations where the use of explosive weapons is not an isolated event, typically where multiple explosive weapons are launched at an area, or where shelling or bombardment is ongoing over some time, multiple trauma experiences can be interwoven in complex ways. An accumulation of stressors can increase the risk of severe and long-lasting reactions to trauma, including disorders, such as PTSD.<sup>16</sup>

“A friend of mine and another man were sitting at a café [in Mogadishu] when they were killed by shelling. When you live in a town where there is fighting, you have an uncertain future. You don’t know when you will be killed.”<sup>17</sup>

The use of explosive weapons with wide area effects in a populated area can give rise to a sense in the affected population that there is no safe place, a feeling of entrapment and total helplessness. In a populated area, it is often difficult for civilians to assess whether a place in their surroundings may become the target of an attack with explosive weapons. The use of multiple explosive weapons over an area, or of explosive weapons that are (perceived as being) inaccurate is likely to heighten the sense of helplessness in the face of seemingly arbitrary and unforeseeable disaster. As people may not be able to flee or access locations that would effectively protect them and their loved ones against the extremely destructive effects of heavy explosive weapons, a feeling of extreme insecurity can arise.

At the same time, devastation of the built environment from the use of heavy explosive weapons in populated areas can further erode the systems of support that an individual would ordinarily turn to (at the individual, family, community and societal levels) and thereby increase the risk of mental health and psycho-social problems developing. Coupled with the loss of loved ones and of one’s possessions, and the erosion of inter-personal and community-based support structures through forced displacement, the devastation brought about by explosive violence can negatively affect peoples’ capability of dealing with trauma.

## Conclusion

Emotional and psycho-social harm needs to be recognised as an important component of the overall impact from the use of explosive weapons and it should be addressed under the wider responsibility to respond to the rights of victims of armed violence. The use of heavy explosive weapons in populated areas, and especially sustained patterns of such use, present a particularly high risk of causing severe emotional harm to a great number of people who should be protected against the effects of hostilities. In order to prevent and reduce suffering to civilians, heavy explosive weapons should not be used in populated areas.

### END NOTES

<sup>1</sup> Common conditions that may occur following a traumatic event include physical reactions (e.g. exhaustion, somatic complaints, racing heartbeat); emotional reactions (e.g. depression, anxiety, numbness); cognitive reactions (e.g. confusion, shortened attention span, memory loss); and behavioral reactions (e.g. hyper-vigilance, social withdrawal, excessive activity). These symptoms are normal reactions to a traumatic event and are usually transient. But they can also give rise to longer term emotional suffering that manifests over some time, and can create lasting difficulties in a person’s life, including depression, severe anxiety disorders, and post-traumatic stress disorder (PTSD). Social problems induced by major disasters can include deterioration in inter-personal relationships and the disruption of social networks, sexual problems, the inability to work and learning difficulties in children. Anyone can become traumatized, but not everyone affected by an emergency has or develops significant psychological or social problems. Many people show resilience, that is, the ability to cope relatively well in situations of adversity. There are numerous interacting social, psychological and biological factors that influence whether people develop problems or exhibit resilience.

<sup>2</sup> WHO describes mental health ‘as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.’ See, WHO, ‘Mental health: a state of well-being’, 2011, <http://bit.ly/N4CNq8>; and WHO, ‘10 Facts on Mental Health’, <http://bit.ly/aiAEr2>.

<sup>3</sup> D. J. Somasundaram, ‘Post-traumatic responses to aerial bombing’, *Social Science & Medicine* 42(11) June 1996, <http://1.usa.gov/17n0Ed0>.

<sup>4</sup> Ibid

<sup>5</sup> Centers for Disease Control and Prevention (CDC), ‘Blast injuries: Bombings and Mental Health’, June 2009, <http://bit.ly/14JiM2i>.

<sup>6</sup> HealingResources.info, ‘Emotional and Psychological Trauma: Causes and Effects, Symptoms and Treatment’, <http://bit.ly/raFv9Z>.

<sup>7</sup> CDC, ‘Explosions and Blast Injuries: A Primer for Clinicians’, <http://1.usa.gov/451GuA>

<sup>8</sup> ‘Explosive blast causes a pattern of injury including ... traumatic amputation of limbs.’ J. B. Hull, ‘Traumatic amputation by explosive blast: pattern of injury in survivors’, *British Journal of Surgery Society*, 79(12) 1992, <http://1.usa.gov/15llrj>. Major traumatic amputation has been found to be rare in survivors, as it carries a high mortality.

<sup>9</sup> With respect to landmine injuries, see, A. D. Ferguson et al., ‘Psychological factors after traumatic amputation in landmine survivors: The bridge between physical healing and full recovery’, *Disability and Rehabilitation*, 26 (14-15) 2004, <http://bit.ly/1dsKQvB>.

<sup>10</sup> J. V. Rosenfeld et al., ‘Blast-related traumatic brain injury’, *Lancet Neurology*, 12 (9) 2013, <http://1.usa.gov/17Z2llm>.

<sup>11</sup> AOA, 100 Incidents of Humanitarian Harm, 2011, <http://bit.ly/iedwa7>.

<sup>12</sup> Ibid.

<sup>13</sup> UN doc. A/HRC/12/48, ‘Goldstone report’, §1259.

<sup>14</sup> ‘... the rockets and mortars have caused relatively few fatalities and physical injuries among the residents of southern Israel. Property damage, while by no means insignificant, has not been extensive. More widespread, however, has been the psychological trauma and the feeling of insecurity that living under rocket fire has caused and continues to cause, to people living in the affected towns and villages, as well as the erosion of the economic, social and cultural life of these communities.’ UN doc. A/HRC/12/48, ‘Goldstone report’, §1598.

<sup>15</sup> Heavy weapons include large calibre mortars, artillery and tank shells, rockets and aircraft bombs – explosive weapons that are likely to produce wide area effects due to an individual explosive weapon having a large blast or fragmentation radius, multiple explosive weapons being launched at an area, insufficient precision in the delivery of an explosive weapon, or a combination of these factors. Article 36, ‘Heavy Weapons and Civilian Protection’, 2012, <http://bit.ly/16VYwtl>.

<sup>16</sup> See for example, F. Neuner et al., ‘Psychological trauma and evidence for enhanced vulnerability for posttraumatic stress disorder through previous trauma among West Nile refugees’, *BMC Psychiatry*, 25 October 2004, <http://1.usa.gov/194laPE>: ‘there is a clear dose-effect relationship between traumatic exposure and PTSD in the studied populations with high levels of traumatic events. In this context, it is probable that any individual could develop PTSD regardless of other risk-factors once the trauma load reaches a certain threshold.’

<sup>17</sup> ‘A young man’ quoted in Amnesty International, ‘In the Line of Fire: Somalia’s Children under Attack’, 2009.

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