

VIOLENCE INJURIES OF IRAQI CHILDREN

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SUMMARY: Iraqi Children suffered injuries during 1991 Gulf war. This was followed by suffering for 13 years from the effect of economic sanctions. The 2003 military invasion and occupation by coalition forces added more death and injuries.

We wanted to know how frequent physical injuries were to Iraqi children, and how inflicted and what the consequences were.

Mothers who were admitted with their children to the Children Welfare Hospital, Baghdad, in the period July 1–December 31, 2004, were interviewed about violence to their children, relatives, and neighbours that they had witnessed.

Of the 218 mothers interviewed, 50 witnessed injuries (23%); 28 of those who witnessed injuries were from the city of Baghdad and 22 from towns in the central part of the country. Twenty two injuries were by gunshots, 14 by aerial attack or tank bombs, and others were due to explosions. Head injuries were the most common. Twenty of the injured children recovered with no disability, two lost fingers, two got blind, two were limping, and one had persistent backache.

In conclusion, Iraqi Children were commonly victims of violence during invasion and occupation of Iraq. There seems to be inadequate protection for children during the years 2003–2004.

Key words: Violence, injuries, Iraqi children, war

INTRODUCTION

The children of Iraq suffered greatly from the Gulf war of 1991 (1-4). An estimated total of more than 46000 Iraqi children were killed between January and August 1991 (1). There was a threefold increase in malignancy (5,6), a rise of infectious fevers, and reduction of vaccination coverage (2,5).

This war was followed by economic sanctions for 13 years. The sanctions targeted nutritional materials, leading to widespread nutritional deficiencies (7,8). Health materials were also targeted so that there were deficiencies of

medications, medical equipment, and facilities (5,9). Children education was largely affected at different educational levels (10,11).

The death of more than 560000 children could be attributed to United Nations sanctions, and the death rate of children under 5 years of age increased fivefold (7,12). Economic sanctions were considered by many as worse than war, and were regarded as war against public health (13). If public health and medicine are dedicated to alleviation of pain and suffering, the war should be considered as public health problem (9).

Optimistic people thought that the end of economic sanctions and the change of the political regime might improve Iraqi children health and safety. These expectations

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were not fulfilled. On the contrary, they suffered more death, physical injury, and psychological trauma during the invasion and occupation by coalition forces during the year 2003 and after.

A study team from John Hopkins School of Public Health and Mustansyria University showed that the risk of death from violence in the period after invasion of the year 2003 (17 months) was 58 times higher than the period before the war. Most of the individuals reported killed by coalition forces were women and children (14).

The combination of long duration and tens of millions of people affected has made this the deadliest conflict of the 21st century, and should be a grave concern to everyone (15).

The idea of disaster is usually associated with human suffering caused by natural events like tsunami, hurricane, earthquake, or flood. However, human-created disaster stemming from war or sanctions represent an equally important disaster (16).

In this study, we wanted to know what sort of violence injuries were inflicted on children of Iraq, by what means, and what were the temporary effects and long term consequences.

MATERIALS AND METHODS

We interviewed mothers admitted with their children to the Children Welfare Hospital, Baghdad, in the period from July 1, 2004, to the end of December 2004. The interview was conducted by Numan Nafi Hameed and Emad Wisam Hassan according to a standardized questionnaire, explaining to the mothers that it was about the incidents of violence they witnessed themselves on their own children, and on their relatives' and neighbour's children, with no legal or political implication, and it had no relation to their children's medical condition.

The questions included age and sex of children, site of injury, parts of the body that were damaged, children activities during the incidents, mode of treatment and outcome, and the weapon used.

RESULTS

A total of 218 mothers were interviewed; fifty of them witnessed violence injuries, i.e., 23%. The age of injured children was from one year to 18 years. There were 35 boys and 15 girls. The sex ratio of males to females was 2.3. The highest incidence was at age 17 years due to the fact that some of these children were

actively involved in fighting against occupation forces as part of militias or they were trying to defend their family houses.

Children were largely from the city of Baghdad (28), where the hospital was located, including 1–3 from each district except 6 were from the Al-Sader city (formerly Saddam city), a district which was the site of frequent confrontations with the occupation forces and under repeated air strikes.

The other 22 children were injured in towns of the central part of the country where they could have access to our hospital, with an average of 1–3 children from each town including Kirkuk, Sammurra, Baquba, Djail, Ramadi, Karbala, Hilla, Najaf, Diwanyia, and Nasyrria, and 5 from Falluja—the site of fierce battles.

The injury rate was higher during March and April 2003 during the attack of invasion on the city of Baghdad. The peak of the year 2004 was in August.

A total of 64% incidents took place in the street, one child was injured in a gas station while the family was traveling to escape to a less dangerous location, 26% were injured inside their houses, two children had their injuries in a farm where they were helping their parents, one child was injured inside the school, another child was injured in a cemetery during confrontation with coalition soldiers (Table 1), and so on.

What was the child doing during the incident? Thirty-two children were injured in the street while playing, shopping, or travelling with their families. Three children were fighting against coalition forces; one of them was in a cemetery (Table 2).

As for the weapons that injured children, gunshots from machine gun injured 23 (44%) children whereas hand gun injured 1 child during a wedding ceremony. Of these children, 11 (50%) died. Six children were injured by explosions, two of whom had the injury as a

Table 1: The site of injury of 50 injured children.

Site of injury	Number of children	Per cent %
Street	32	64
House	13	26
Farm	2	4
Gas	1	2
School	1	2
Cemetery	1	2
Total	50	100

Table 2: What was the child doing during the incident?

Child activity during incident	Number of Children	Percent (%)
Playing in street, shopping, traveling	30	60
Sitting, playing or sleeping inside house	10	20
Playing in family house garden	3	6
Working in a farm	2	4
Studying at school	1	2
Fighting against occupation forces	4	8
Total	50	100

result of explosion of army ammunition store and one from a car bomb. Other sources of injury were as follows: 29 (40%) were hit by aerial attacks (rocket or bomb) while 2 (4%) were hit by tank bombs (Table 3).

Single organs were injured in 38 children, of whom 22 (58%) children got injured with gunshots (five in the head, two in the neck, three in the arm, one in the back, one in the abdomen, and five in uncertain sites). The laceration of tissues affected the head in 5, the abdomen in 3, the back in two, and undetermined sites in 5. Two children had fractured legs, and one a burn all over the body as a result of a gunshot (Table 4).

Those who sustained multiple injuries were 12, of whom 1 had laceration of neck and ear; 2 had laceration of fingers and legs leading to their loss; 1 had laceration of face, abdomen, and all limbs; 1 had laceration of the abdomen and legs, 2 had laceration of head and leg, 1 had laceration of neck and chest, 1

Table 3: The types of weapons as a cause of injury.

Weapon	Number of fatal cases (%)	Number of non-fatal cases (%)	Total Number (%)
Gunshot	11(50)	11(50)	22(44)
Aerial attack	6(32)	14(70)	20(40)
Tank bomb	1(50)	1(50)	2(4)
Explosion	2(33)	4(67)	6(12)
Total	20(40)	30(60)	50(100)

Note: All fatal cases died outside hospital except one

Table 4: Single organ injuries and the weapon caused it.

Organ involved	Total number of children	Gunshot wound	Type of injury and weapon		
			Explosion	Laceration	Tank bomb
Head	10	5	2	3	
Neck	2	2			
Arm	3	3			
Abdomen	4	1	1	2	
Back	3	1		2	
Leg	4	3		1	
All body burn	1	1			
Uncertain organ	11	6	1	3	1
Total	38	22	4	11	1

Table 5: Multiple organ injuries and the weapon caused it.

Organ involved	Total number of children	Lesion	Weapon
Neck and ear	1	laceration	explosion
Finger and leg loss	2	laceration	explosion
Head, abdomen, legs, and arms	1	laceration	explosion
Face, abdomen, legs and arms	1	laceration	explosion
Abdomen and legs	1	laceration	explosion
Head and leg	2	laceration	aerial attack
Neck and chest	1	laceration	aerial attack
Leg	2	laceration, burn, fracture	aerial attack
Chest and abdomen	1	laceration	aerial attack
Total	12		

had laceration chest and abdomen; and 2 children had laceration, burn, and fracture of legs (Table 5).

The mode of treatment included surgical operations for 18 children (60%), while 7 (23%) needed dressings and five had suturing that was done without analgesia. The hospital stay for the admitted children was for 1 week or less for five, four stayed for 2 weeks, two stayed for 3 weeks, two for 4 weeks, while one was in the hospital for 4 months. Eleven stayed in hospital for undetermined period.

Of the injured children, 19 (38%) died immediately and 1 died in the hospital after admission, i.e., the total death was 20 (40%). Twenty-one (42%) of the injured children recovered with no permanent physical disability. The remaining 18 had residual effects including finger loss (4%), limping (4%), foreign body under the skin (4%), blindness (4%), and persistent backache (2%).

DISCUSSION

Children suffered physical and psychological injuries in armed conflicts in Palestine, Bosnia, Afghanistan, and more than one African country. In Iraq, children repeatedly suffered during the last three decades: during the war with Iran in the eighties of the last century, the first Gulf war of 1991 and the economic embargo that followed for 13 years, and the year 2003 invasion and occupation by coalition forces and afterward.

The economic sanctions targeted food, so that one-fifth of Iraqi children under 5 years of age were malnourished, targeted health material hence health care deteriorated, and targeted educational material, badly affecting children education (5). These children continued to be injured by landmines, unexploded ordnance, and depleted uranium ammunition (6,11).

There was a documented increase in mental illnesses, juvenile delinquency, begging, and prostitution (9).

The invasion by coalition forces of the year 2003 increased the chance of death from violence to 58-fold (14). In the year 2004, an estimated 600000 Iraqis were killed; more than half of them were women and children (14).

Burnham et al. found that up to July 2006, more than 654000 excess deaths were due to a sequence of war, including 600000 due to violence.

Most violent deaths were due to gunshots (56%), air strike, car bombs, and other explosions, each accounting for 13–14% of violent death (14).

Al-Khuzai *et al.* in the year 2008 found that the proportion of death from injuries increased from 10.5% before invasion to 23.2% after the invasion (17).

Our study shows a sharp rise of injuries during March and April 2003 corresponding to the time of invasion of the city of Baghdad.

Children of all ages were involved including 1-year-olds. Adolescents were more likely to be injured as they were asked to join fighting militias. Boys were more commonly injured as they were more likely to be in the street, and out of curiosity they gathered near uniformed soldiers and got injured when these soldiers were targeted (18).

However, no place was safe for children, as they were injured in the family house garden, inside the house and at school, whether they were playing, sleeping, or studying.

Different weapons were responsible for the children injuries. Gunshots were the most common (46%) leading to death of half of them. Hicks *et al.* estimated that 52 % violent death of children was due

to gunshots; deaths by unknown perpetrators included 16.5% by anti-coalition forces and 21.8% by coalition forces (19).

A total of 272 children under 16 years of age were found injured by Al-Anbaki *et al.* in the casualty department of Al-Kadhimiya Hospital in the period March 2003–March 2005; , 79.4% of them were injured by explosion, 19.8% by gunshot, and 0.7% by burns (20).

In a combat support hospital, McGuigan *et al.* found that of the children under 17 years of age 44% had gunshot wounds and 22% explosive injuries (21).

The other deadly weapon, that is, the aerial attack (rockets and bombs) produced 40% of injuries, and almost a third of them died (Table 3).

Aerial bombs killed an average of 9 more civilians per attack than aerial missiles (22).

Although tanks are supposed to be used in battle fields outside residential areas yet children died by their bombs (Table 3).

As a single-organ injury of these children, the head was mostly injured. The gunshots also targeted all parts of the body (Table 4).

Multiple injuries involved 12 children (24%), mostly due to air strikes and explosions (Table 5). In a combat hospital in Iraq, Matos *et al.* found that the severity of injury of children 8 years of age or less compared to adults and older children, that resulted from explosions, affected larger areas of body surface and had an increased risk of hemorrhagic shock (18).

We found that the eye was affected in two children. Mader *et al.*, who were a team of ophthalmologists working in Ibn Sina hospital during January–September 2004, reported different types of injuries of the eyes that included combatants and civilians. They found that the most common cause of ocular injuries was the use of improvised explosive devices (IED) which caused 51% of all eye injuries. Ramasami *et al.*, in a British Field Hospital in the south of Iraq, also found that IEDs were the predominant cause of injuries (23).

Of the children who survived the injuries, 18 (60%) underwent surgical operations. Of the rest, six had wound suturing that was done under no analgesia because of the overwhelming circumstances to medical personnel and scarcity of drugs and equipment. This was as a result of years of embargo that involved medical supplies, which were supposed to be exempted from UN sanctions (5,24).

Twenty-five of the injured children had to be admitted to hospital. One of them died in spite of medical care.

The hospital stay lasted between a week or less for 5 (20%) to 4 months for one (4%). During the hospital stay, children and their families were suffering, in addition to the loss of schooling and physical exercise. Matos *et al.* reported that 4% of those admitted for treatment of injuries to a US combat hospital were children (18).

Of the 30 children reported who survived injuries, 21 were left with no permanent physical disabilities, although they had a variable degree of psychological trauma. The other nine, had residual effects as follows: two lost fingers, two lost eyes, two were limping, and one had persistent backache.

As for the perpetrator, 29 mothers attributed the injuries to coalition forces—most commonly 19 (65.5%) being hit by air strike. Roberts *et al.* in their report, published in the *Lancet* in 2004, stated that most individuals reported killed by coalition forces were women and children. Of the 28 children killed by coalition forces (median age 8 years); 10 were girls, 16 were boys, and 2 were infants (sex was not reported) (14).

Donaldson *et al.* found that only 8.4% of injuries were intentional with 1.7% mortality. Other injuries, at least, partly attributed to conflict-induced breakdown of Iraqi infrastructure were extremely painful. These injuries were caused by electric shock, unintentional explosion, unintentional gunshots, and falls (25).

After invasion and during occupation, children of Iraq continued to receive injuries as a result of sectarian-based conflict, insurgency, and counter insurgency.

Death attributed to coalition forces account for 31% of post invasion violent death (15). Hicks *et al.* found that coalition forces identified by uniform caused 12% of deaths, anti-coalition insurgents caused 11% of deaths, and unknown perpetrators caused 74% of civilian deaths (19).

There were also victims of unexploded ordnance, ammunition containing depleted uranium (26), and landmines (11). Congenital malformations were doubled in the southern part of the country due to economic hardship, environmental factors, and mustard gas used in 1991 Gulf war (4,27).

In addition to physical injury, psychological trauma was very prominent among Iraqi children (28). Two international researchers found that the degree of psychological stress and pathological behavior among Iraqi children exceeded what they had reported in 10 years of research on conflict in different parts of the world (29).

A family study conducted in the year 2006 showed that 30% of adolescents and 15% of primary school children were still suffering from psychological stress (11).

Geneva Conventions have clear guidance about the responsibility of occupying armies to the civilian population they control (14).

CONCLUSIONS

Children of Iraq were the victims who suffered the effects of wars and economic sanctions over three decades. The last war of 2003 has an aftermath that is

still contributing to these children suffering. Children in the first place, and other civilians, according to international conventions, ought to be protected from injuries that follow armed conflicts. It appears that not enough was done to safeguard these children.

We recommend that a legal and humanitarian duty of governments that have sent their armed forces to occupy Iraq to compensate families of injured children especially those left with a disability. Children with a psychological distress are in need of treatment, and need correction of educational losses. Psychological intervention have been shown to have a positive outcome in reducing distress symptoms in children affected by political violence (30). It is the duty of the United Nations to make every effort to prevent armed conflicts and to protect smaller nations. An independent international body to monitor compliance with Geneva Conventions and other humanitarian standards in conflict is urgently needed (15).

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