

BMJ Paediatrics Open

BMJ Paediatrics Open is committed to open peer review. As part of this commitment we make the peer review history of every article we publish publicly available.

When an article is published we post the peer reviewers' comments and the authors' responses online. We also post the versions of the paper that were used during peer review. These are the versions that the peer review comments apply to.

The versions of the paper that follow are the versions that were submitted during the peer review process. They are not the versions of record or the final published versions. They should not be cited or distributed as the published version of this manuscript.

BMJ Paediatrics Open is an open access journal and the full, final, typeset and author-corrected version of record of the manuscript is available on our site with no access controls, subscription charges or pay-per-view fees (<http://bmjpaedsopen.bmj.com>).

If you have any questions on BMJ Paediatrics Open's open peer review process please email info.bmjpo@bmj.com

BMJ Paediatrics Open

Gaza, armed conflict and child health

Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2023-002407
Article Type:	Viewpoint
Date Submitted by the Author:	17-Nov-2023
Complete List of Authors:	Boukari, Yamina; University College London, Institute of Health Informatics Kadir, Ayesha; No institutional affiliation Waterston, Tony; Newcastle University, Institute of Health and Society Jarrett, Prudence; Barts Health NHS Trust Harkensee, Christian ; No institutional affiliation Dexter, Erin; Barts Health NHS Trust Cinar, Erva Nur; London School of Hygiene & Tropical Medicine Blackett, Kerry; No institutional affiliation Nacer, Hadjer; Royal Free Hospital Stevens, Amy; No institutional affiliation Devakumar, Delanjathan; University College London, Institute for Global Health
Keywords:	Mortality, Ethics

SCHOLARONE™
Manuscripts



I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our [licence](#).

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which [Creative Commons](#) licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Title: Gaza, armed conflict and child health**Corresponding Author:**

Dr Yamina Boukari, Institute of Health Informatics, University College London, UK,
yamina.boukari.19@ucl.ac.uk

Dr Ayesha Kadir, Paediatrician, UK

Dr Tony Waterston, Newcastle upon Tyne, tony.waterston@ncl.ac.uk

Dr Prudence Jarrett, Barts Health NHS Trust, London, UK, prudence.jarrett@nhs.net

Dr Christian Harkensee, Consultant Paediatrician, UK, c.harkensee@web.de

Dr Erin Dexter, Barts Health NHS Trust, London, UK. erin.dexter@nhs.net

Dr Erva Nur Cinar, Public Health MSc Student, London School of Hygiene and Tropical
Medicine, London, UK, cinarervanur@gmail.com

Dr Kerry Blackett, Paediatric Registrar, UK, kerry.blackett@doctors.org.uk

Dr Hadjer Nacer, Royal Free Hospital, London, UK, hadjer.nacer@nhs.net

Dr Amy J Stevens, Public Health Registrar, UK, amyjanestevens@doctors.org.uk

Professor Delan Devakumar, Institute for Global Health, University College London, London,
UK, d.devakumar@ucl.ac.uk

Word count: 1827

Gaza, part of the occupied Palestinian territory and home to almost 2.3 million people, has been under Israeli blockade for the past 16 years and under occupation for decades. On 7th October 2023, Palestinian armed groups in Gaza, launched an assault on Israel killing 1200 Israelis and foreign nationals, mostly civilians and including 33 children, and also the abduction of hostages, 30 of whom are children.¹ Israeli forces have since launched aerial bombardments and ground operations in Gaza. As of 10th November 2023, 11,078 civilians have been killed in Gaza, 68 percent of whom are women and children and a further 1500 children are reported as missing.¹ 47 children have been killed in the West Bank by Israeli forces or settlers.¹ The collective punishment of Gaza's extremely young population amounts to a child health catastrophe, with lifelong and intergenerational consequences. Furthermore, according to the UN Commission of Inquiry, which has been collecting and preserving evidence of war crimes committed by parties to the conflict since 7 October 2023, "there is already clear evidence that war crimes may have been committed in the latest explosion of violence in Israel and Gaza".²

The international community has a responsibility to protect children from the effects of armed conflict. Under international humanitarian law, the parties to the conflict are obliged to take all feasible steps to protect children and all civilians, and to allow and facilitate rapid and unfettered passage of humanitarian relief.³ Children also have the right to be protected in conflict and the right to survival under the UN Convention on the Rights of the Child (UNCRC). Children are more vulnerable in periods of armed conflict and their rights are routinely violated. Recognising this, the UN has determined six specific *grave violations* committed by parties to conflict as especially egregious and deserving of priority attention.⁴ These are: the killing and maiming of children; recruitment and use of children; sexual violence against children; abduction of children;

attacks on schools and hospitals; and denial of humanitarian access. Monitoring of the six grave violations against children in war is led by the United Nations Special Representative on Children and Armed Conflict.^{4,5} In this ongoing escalation of violence, four of the six grave violations have been observed and reported (although not yet independently verified by an appropriately mandated entity) against children in Gaza, the West Bank and Israel: the killing and maiming of children; the abduction of children; attacks against schools and health facilities; and the denial of humanitarian access. We condemn all violations committed against children in this conflict as the rights of all children are universal, unambiguous and indivisible. In this article we focus on the violations of rights that have been observed and we discuss the current and future impacts of these violations on the health of children. We also make recommendations to stop immediate harms to children, and suggest means for the child health community to advocate for children's rights.

The killing and maiming of children

As of the 10th November, at least 4,506 children in Gaza have been killed,¹ which is the equivalent of one child in Gaza being killed every 10 minutes.⁶⁻⁸ Additionally, 47 children have been killed by Israeli forces and settlers in the West Bank, and 33 children have been killed by Palestinian armed groups in Israel.¹ The UNCRC Article 6 elucidates a child's inherent right to life and binds all parties to ensure to the "maximum extent possible the survival and development of the child".⁹ Article 19 also requires that states ensure the protection of children from violence, injury and abuse. The alleged use of white phosphorus by Israeli forces in densely populated urban areas in Gaza has been reported by Human Rights Watch in the current offensive and also reported in previous attacks.^{10,11} White phosphorus exposure results in deep thermal and chemical burns, and can cause multiple organ system failure, with survivors facing extensive scarring, physical disabilities, painful treatment, psychological harm and social exclusion. Children are considered more susceptible to harm from chemical weapons due to their physiology and body mass.¹²

Abduction of children

Thirty children were taken as hostages by Palestinian armed groups during their attack on 7th October 2023¹ and Human Rights Watch have reported the use of children in 'hostage videos', which they highlight is an 'outrage on personal dignity'.¹³ We do not know the situation of these children, nor the nature of the psychological distress and trauma they are being subjected to. The abduction and detention of children is known to be harmful to children's physical and mental health, oftentimes with lifelong consequences for survivors.¹²

Attacks against schools and healthcare facilities

The UN Office for the Coordination of Humanitarian Affairs reported attacks on 279 educational facilities from 7th October to the 10th November.¹⁴ As of the 10th November, 101 UN Relief and Works Agency (UNRWA) workers have been killed.¹⁵ Mass displacement of the civilian population has necessitated the use of schools as emergency shelters and therefore resulted in an even greater number of deaths when they are attacked. One example was the attack on the

UNRWA Al Fakhoora School in the Jabalia refugee camp where approximately 20,000 individuals were sheltering.¹⁶ Healthcare facilities have similarly been attacked, with the World Health Organization documenting 135 attacks on healthcare facilities as of the 10th November and 20 out of 36 hospitals no longer functioning, including a paediatric hospital.^{14,15} The UNCRC highlights that all children have the right to the highest attainable standard of health and healthcare (Article 24) and the right to education (Article 28)⁹; the current attacks being inflicted on Gaza expose clear violations of these rights.

Denial of humanitarian access

The Gaza Strip has been under blockade for 16 years, during which time Israeli authorities have controlled the movement of individuals and imposed import restrictions on essential items such as food, construction materials, critical medical equipment and fuel.¹⁷ During the most recent offensive, Israel has cut fuel, electricity and aid supplies to Gaza under a “complete siege”, as described by Israeli defence minister, Yoav Gallant, and has also attacked telecommunications infrastructure, further exacerbating an already dire humanitarian crisis.^{15,18} The Government of Israel said on 19th October that it would no longer prevent all aid entering via the Rafah crossing with Egypt and on 21st October, the first 20 aid trucks since 7th October were allowed into Gaza carrying limited emergency supplies, which according to UN officials, was “a drop in the ocean of need”.¹⁹ Since then, a total of 1096 aid trucks have entered; however, fuel is still banned.¹ The restrictions on fuel and aid into Gaza have created a desperate situation for hospitals affecting children of all ages, including 130 newborn infants requiring incubators that rely on electricity from fuel-dependent generators,²⁰ two of whom died on 10th November as a result of failed incubators.²¹ It also means the limited aid arriving in Gaza cannot reach all those who need it across the Gaza Strip.²²

What do these violations mean for children?

Armed conflict is a major negative determinant of health that has short- and long-term effects on children. Exposure to conflict can cause harm prenatally and 50,000 pregnant women in Gaza are at risk of adverse birth outcomes from maternal stress, physical harm, malnutrition and damage to healthcare infrastructure.^{23,24} Direct child health effects include the experience of multiple forms of violence, injury, disability and death from bombing, shooting, explosions, and collapsing of buildings.²⁵ Substantial and pervasive indirect effects of exposure to armed conflict include communicable diseases, a range of non-communicable illnesses that are both the result of and exacerbated by inadequate living conditions and environmental exposures, displacement, family separation, being orphaned, and limited access to basic needs such as safety, shelter, food, clean water, sanitation, healthcare and education.²⁵ The impact of conflict affects children throughout their lives,¹² with decades of research establishing a connection between adverse childhood experiences such as violence and lifelong health outcomes, including chronic diseases and psychological disorders.²⁶

The effects of conflict on children are heavily influenced by the vulnerability of the population prior to the conflict.²⁷ For example, prior to the current offensive, there was a high prevalence of malnutrition in Gaza,²⁸ with approximately 90% of preschool children consuming less than 75%

of the recommended daily energy intake.²⁹ With the current food shortages and inadequate living conditions malnutrition rates can be expected to increase.²⁸ Acute and chronic malnutrition have adverse impacts on children’s future physical and psychological health, neurological development, and future opportunities.^{27,30} Studies have found high levels of psychological trauma and impaired health-related quality of life including emotional functioning and psychosocial health in Gaza’s children, which are compounded by intergenerational effects of the long-standing conflict.^{31–34} The current escalation in violence against civilians in Gaza will further exacerbate the mental health situation and there is likely to be psychological trauma in the surviving child hostages; thus, highlighting the critical importance of long-term interventions and support for all affected children.

Urgent recommendations to protect children and their health

Further harm to children is preventable if urgent steps are taken. Governments and non-governmental actors must demonstrate in action that the lives of children in Gaza are worth no less than any other life. We support the calls made by multiple organisations, such as the United Nations agencies, including the World Health Organization, the UN General Assembly Resolution ES-10/21, and fellow health workers for the following:

1. An immediate ceasefire
2. The release of all civilian hostages in Gaza
3. Urgent provision of water, food, fuel, medical supplies, non-food items and shelter to Gaza
4. An immediate reversal of the evacuation order applying to northern Gaza
5. Unrestricted, safe and sustained humanitarian access
6. Immediate and absolute protection from attack for civilians, health workers, hospitals and schools
7. Adherence and accountability to international law of all parties involved in the conflict
8. For allies to urge the conflict parties to respect humanitarian law without condition
9. Medical evacuation of severely injured, ill, and pregnant citizens of Gaza to a safe country
10. Resumption of the peace process and an end to the occupation in order to bring long-term safety to all children in the region

Actions for the child health community:

- Write to elected governmental representatives and call on paediatric medical colleges to lobby for the above immediate actions and also for the formal implementation of the United Nations Special Representative on Children and Armed Conflict Monitoring and Reporting Mechanism to hold parties accountable for committing grave violations against children
- Stand in solidarity with affected children and young people - join peace and humanitarian organisations working towards ending conflict

- Push to embed data on the adverse effects of conflict on child health into policy recommendations and for use in the international legal system to hold responsible parties to account

Competing interests

None declared.

Disclaimer

The views in this viewpoint represent individual authors' views and not the views of their organisations.

References:

- 1 United Nations Office for the Coordination of Humanitarian Affairs. Hostilities in the Gaza Strip and Israel - flash update #38. 2023; published online Nov 12. <https://reliefweb.int/report/occupied-palestinian-territory/hostilities-gaza-strip-and-israel-flash-update-38> (accessed Nov 14, 2023).
- 2 Office of the United Nations High Commissioner for Human Rights. Commission of Inquiry collecting evidence of war crimes committed by all sides in Israel and Occupied Palestinian Territories since 7 October 2023. <https://www.ohchr.org/en/press-releases/2023/10/commission-inquiry-collecting-evidence-war-crimes-committed-all-sides-israel> (accessed Nov 1, 2023).
- 3 European Civil Protection and Humanitarian Aid Operations. International Humanitarian Law. https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/international-humanitarian-law_en (accessed Nov 2, 2023).
- 4 Office of the Special Representative of the Secretary-General for Children and Armed Conflict. The six grave violations against children during armed conflict: The legal foundation. 2009. https://childrenandarmedconflict.un.org/publications/WorkingPaper-1_SixGraveViolationsLegalFoundation.pdf (accessed Oct 27, 2023).
- 5 Office of the Special Representative of the Secretary-General for Children and Armed Conflict (OSRSG-CAAC), United Nations Children's Fund (UNICEF), United Nations Department of Peacekeeping Operations (DPKO). Monitoring and Reporting Mechanism (MRM) on Grave Violations Against Children in situations of Armed Conflict. https://childrenandarmedconflict.un.org/wp-content/uploads/2016/04/MRM_Field_5_June_2014.pdf (accessed Nov 1, 2023).
- 6 Kostreci K. Save the Children Tells VOA: One Child Is Killed Every 10 Minutes in Gaza. 2023; published online Nov 8. <https://www.voanews.com/a/save-the-children-tells-voa-one-child-is-killed-every-10-minutes-in-gaza/7347135.html> (accessed Nov 9, 2023).
- 7 UN Security Council. World Health Organization Chief, Briefing Security Council on War in Gaza, Joins Calls for Immediate Ceasefire, Unfettered Humanitarian Access. <https://press.un.org/en/2023/sc15487.doc.htm> (accessed Nov 13, 2023).

8 Defense for Children Palestine. One Palestinian child in Gaza killed every 15 minutes by Israeli forces. https://www.dci-palestine.org/one_palestinian_child_in_gaza_killed_every_15_minutes_by_israeli_forces (accessed Nov 13, 2023).

9 United Nations Children’s Fund. The United Nations Convention on the Rights of the Child. 1989. <https://www.unicef.org.uk/wp-content/uploads/2016/08/unicef-convention-rights-child-uncrc.pdf> (accessed Oct 27, 2023).

10 Human Rights Watch. Israel: White Phosphorus Used in Gaza, Lebanon. 2023; published online Oct 12. <https://www.hrw.org/news/2023/10/12/israel-white-phosphorus-used-gaza-lebanon> (accessed Oct 27, 2023).

11 Amnesty International. Israel used white phosphorus in Gaza civilian areas. 2009; published online Jan 19. <https://www.amnesty.org/en/latest/news/2009/01/israel-used-white-phosphorus-gaza-civilian-areas-20090119/> (accessed Oct 29, 2023).

12 Kadir A, Shenoda S, Goldhagen J, Pitterman S, SECTION ON INTERNATIONAL CHILD HEALTH. The Effects of Armed Conflict on Children. *Pediatrics* 2018; **142**. DOI:10.1542/peds.2018-2586.

13 Human Rights Watch. Gaza: Hostage Videos an ‘Outrage on Personal Dignity’. 2023; published online Nov 10. <https://www.hrw.org/news/2023/11/10/gaza-hostage-videos-outrage-personal-dignity> (accessed Nov 14, 2023).

14 UN Office for the Coordination of Humanitarian Affairs. Hostilities in the Gaza Strip and Israel - reported impact, Day 35. <https://www.ochaopt.org/content/hostilities-gaza-strip-and-israel-reported-impact-day-35> (accessed Nov 11, 2023).

15 UN Office for the Coordination of Humanitarian Affairs. Hostilities in the Gaza Strip and Israel - Flash update #35. 2023; published online Nov 10. <https://reliefweb.int/report/occupied-palestinian-territory/hostilities-gaza-strip-and-israel-flash-update-35-enarhe> (accessed Nov 11, 2023).

16 Education Above All: Schools are Off-Limits – Cease Attacks Now. ReliefWeb. <https://reliefweb.int/report/occupied-palestinian-territory/education-above-all-schools-are-limits-cease-attacks-now> (accessed Nov 9, 2023).

17 Save the Children International. ‘I can’t run, play, or get treatment’ - Two children a day in Gaza unable to access medical treatment due to 16 year blockade. Save the Children International. 2023; published online Sept 13. <https://www.savethechildren.net/news/i-can-t-run-play-or-get-treatment-two-children-day-gaza-unable-access-medical-treatment-due-16> (accessed Nov 1, 2023).

18 United Nations. Amid Increasingly Dire Humanitarian Situation in Gaza, Secretary-General Tells Security Council Hamas Attacks Cannot Justify Collective Punishment of Palestinian People. <https://press.un.org/en/2023/sc15462.doc.htm> (accessed Nov 1, 2023).

19 Borger J. Aid convoy set to enter Gaza a ‘drop in the ocean of need’ says WHO. The Guardian. 2023; published online Oct 19. <https://www.theguardian.com/world/2023/oct/19/gaza-aid-rafah-crossing-joe-biden-israel-egypt-agreement> (accessed Oct 27, 2023).

- 20 Reuters. Gaza neonatal unit warns babies at risk 'within minutes' if power fails. 2023; published online Oct 23. <https://www.reuters.com/world/middle-east/gaza-neonatal-unit-warns-babies-risk-within-minutes-if-power-fails-2023-10-23/> (accessed Oct 27, 2023).
- 21 Ullah A. Israel-Palestine war: Israeli troops besiege Gaza hospitals as Arab leaders denounce 'war crimes'. Middle East Eye. 2023; published online Nov 11. <https://www.middleeasteye.net/news/israel-palestine-war-troops-besiege-attack-gaza-hospitals--arab-leaders-denounce-israeli-war-crimes> (accessed Nov 13, 2023).
- 22 Save the Children International. How far can we travel with aid on our shoulders? A warning on Gaza from a humanitarian worker. 2023; published online Oct 30. <https://www.savethechildren.net/blog/how-far-can-we-travel-aid-our-shoulders-warning-gaza-humanitarian-worker> (accessed Nov 1, 2023).
- 23 Keasley J, Blickwedel J, Quenby S. Adverse effects of exposure to armed conflict on pregnancy: a systematic review. *BMJ Global Health* 2017; **2**: e000377.
- 24 United Nations Population Fund. Crisis in Gaza. <https://www.unfpa.org/crisis-gaza> (accessed Oct 30, 2023).
- 25 Kadir A, Shenoda S, Goldhagen J. Effects of armed conflict on child health and development: A systematic review. *PLoS One* 2019; **14**: e0210071.
- 26 Oral R, Ramirez M, Coohy C, *et al.* Adverse childhood experiences and trauma informed care: the future of health care. *Pediatr Res* 2016; **79**: 227–33.
- 27 Garry S, Checchi F. Armed conflict and public health: into the 21st century. *J Public Health* 2020; **42**: e287–98.
- 28 Najjar SA, Shaer TA. Risk factors for the double burden of malnutrition in children younger than 5 years in the Gaza Strip: a systematic review. *Lancet* 2022; **399**: S42.
- 29 Radi S. Nutrient intakes and adequacy among preschool children under blockade in Gaza City, Palestine. *East Mediterr Health J* 2021; **27**: 467–73.
- 30 Bendavid E, Boerma T, Akseer N, *et al.* The effects of armed conflict on the health of women and children. *Lancet* 2021; **397**: 522–32.
- 31 Massad SG, Nieto FJ, Palta M, Smith M, Clark R, Thabet A-A. Health-related quality of life of Palestinian preschoolers in the Gaza Strip: a cross-sectional study. *BMC Public Health* 2011; **11**: 253.
- 32 Altawil MAS, El-Asam A, Khadaroo A. Impact of chronic war trauma exposure on PTSD diagnosis from 2006 -2021: a longitudinal study in Palestine. *Middle East Current Psychiatry* 2023; **30**: 1–8.
- 33 Save the Children. Trapped: The impact of 15 years of blockade on the mental health of Gaza's children. 2022. https://resourcecentre.savethechildren.net/pdf/gaza_blockade_mental_health_palestinian_children_2022.pdf (accessed Oct 27, 2023).
- 34 Devakumar D, Birch M, Osrin D, Sondorp E, Wells JCK. The intergenerational effects of war on the health of children. *BMC Med* 2014; **12**: 57.

BMJ Paediatrics Open

Gaza, armed conflict and child health

Journal:	<i>BMJ Paediatrics Open</i>
Manuscript ID	bmjpo-2023-002407.R1
Article Type:	Viewpoint
Date Submitted by the Author:	11-Dec-2023
Complete List of Authors:	<p>Boukari, Yamina; University College London, Institute of Health Informatics</p> <p>Kadir, Ayesha; No institutional affiliation</p> <p>Waterston, Tony; Newcastle University, Institute of Health and Society</p> <p>Jarrett, Prudence; Barts Health NHS Trust</p> <p>Harkensee, Christian; No institutional affiliation</p> <p>Dexter, Erin; Barts Health NHS Trust</p> <p>Cinar, Erva Nur; London School of Hygiene & Tropical Medicine</p> <p>Blackett, Kerry; No institutional affiliation</p> <p>Nacer, Hadjer; Royal Free Hospital</p> <p>Stevens, Amy; No institutional affiliation</p> <p>Devakumar, Delanjathan; University College London, Institute for Global Health</p>
Keywords:	Mortality, Ethics

SCHOLARONE™
Manuscripts



I, the Submitting Author has the right to grant and does grant on behalf of all authors of the Work (as defined in the below author licence), an exclusive licence and/or a non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where BMJ has agreed a CC-BY licence shall apply, and/or iii) in accordance with the terms applicable for US Federal Government officers or employees acting as part of their official duties; on a worldwide, perpetual, irrevocable, royalty-free basis to BMJ Publishing Group Ltd ("BMJ") its licensees and where the relevant Journal is co-owned by BMJ to the co-owners of the Journal, to publish the Work in this journal and any other BMJ products and to exploit all rights, as set out in our [licence](#).

The Submitting Author accepts and understands that any supply made under these terms is made by BMJ to the Submitting Author unless you are acting as an employee on behalf of your employer or a postgraduate student of an affiliated institution which is paying any applicable article publishing charge ("APC") for Open Access articles. Where the Submitting Author wishes to make the Work available on an Open Access basis (and intends to pay the relevant APC), the terms of reuse of such Open Access shall be governed by a Creative Commons licence – details of these licences and which [Creative Commons](#) licence will apply to this Work are set out in our licence referred to above.

Other than as permitted in any relevant BMJ Author's Self Archiving Policies, I confirm this Work has not been accepted for publication elsewhere, is not being considered for publication elsewhere and does not duplicate material already published. I confirm all authors consent to publication of this Work and authorise the granting of this licence.

Title: Gaza, armed conflict and child health**Corresponding Author:**

Dr Yamina Boukari, Institute of Health Informatics, University College London, UK,
yamina.boukari.19@ucl.ac.uk

Dr Ayesha Kadir, Paediatrician, UK

Dr Tony Waterston, Newcastle upon Tyne, tony.waterston@ncl.ac.uk

Dr Prudence Jarrett, Barts Health NHS Trust, London, UK, prudence.jarrett@nhs.net

Dr Christian Harkensee, Consultant Paediatrician, UK, harkensee@web.de

Dr Erin Dexter, Barts Health NHS Trust, London, UK. erin.dexter@nhs.net

Dr Erva Nur Cinar, Public Health MSc Student, London School of Hygiene and Tropical
Medicine, London, UK, cinarervanur@gmail.com

Dr Kerry Blackett, Paediatric Registrar, UK, kerry.blackett@doctors.org.uk

Dr Hadjer Nacer, Royal Free Hospital, London, UK, hadjer.nacer@nhs.net

Dr Amy J Stevens, Public Health Registrar, UK, amyjanestevens@doctors.org.uk

Professor Delanjathan Devakumar, Institute for Global Health, University College London,
London, UK, d.devakumar@ucl.ac.uk

Word count: 2368

Gaza, part of the occupied Palestinian territory and home to almost 2.3 million people, has been under Israeli blockade for the past 16 years and under occupation for decades. On 7th October 2023, Palestinian armed groups in Gaza launched an assault on Israel killing 1200 Israelis and foreign nationals, mostly civilians and including 36 children, and abducting hostages, at least 30 of whom are children.[1] Following this, Israeli forces launched aerial bombardments and ground operations in Gaza. A humanitarian pause to the hostilities came into force on the 24th November and ended on the 1st December 2023. As of the 8th December 2023, 17,487 people have been killed in Gaza, 70% of whom are children and women, and approximately 1750 children have been reported missing.[1,2] A further 68 children have been killed in the West Bank by Israeli forces or settlers.[1] During the humanitarian pause, 86 Israeli and 24 foreign national hostages were released, in exchange for the release of 240 Palestinians held in Israeli prisons, all of whom were children and women.[3]

The international community has a responsibility to protect children from the effects of armed conflict. Under international humanitarian law, the parties to the conflict are obliged to take all feasible steps to protect children and all civilians, and to allow and facilitate rapid and unfettered passage of humanitarian relief.[4] Children also have the right to be protected in conflict and the right to survival under the UN Convention on the Rights of the Child (UNCRC). Children are more vulnerable in periods of armed conflict and their rights are routinely violated, as has been seen in conflicts in Ukraine, Yemen and Syria.[5–7] However, the rate of child deaths in this recent escalation of the conflict in Gaza when compared with other conflicts has been disproportionately high.[8] The collective punishment of Gaza's extremely young population amounts to a child health catastrophe, with lifelong and intergenerational consequences.

Furthermore, according to the UN Commission of Inquiry, which has been collecting and preserving evidence of war crimes committed by parties to the conflict since 7 October 2023, “there is already clear evidence that war crimes may have been committed in the latest explosion of violence in Israel and Gaza”.^[9]

Recognising the vulnerability of children in conflict, the UN has determined six specific *grave violations* committed by parties to conflict as especially egregious and deserving of priority attention, which are listed in Table 1.^[10] Monitoring of the six grave violations against children in war is led by the United Nations Special Representative on Children and Armed Conflict.^[10,11] In this ongoing escalation of violence, four of the six grave violations have been observed and reported (although not yet independently verified by an appropriately mandated entity) against children in Gaza, the West Bank and Israel: the killing and maiming of children; the abduction of children; attacks against schools and health facilities; and the denial of humanitarian access. We condemn all violations committed against children in this conflict as the rights of all children are universal, unambiguous and indivisible. In this article we focus on the violations of rights that have been observed and we discuss the current and future impacts of these violations on the health of children. We also make recommendations to stop immediate harms to children, and suggest means for the child health community to advocate for children’s rights in this conflict and beyond.

Table 1: The Six Grave Violations Against Children During Armed Conflict

The Six Grave Violations Against Children During Armed Conflict
The killing and maiming of children
The recruitment and use of children
Sexual violence against children
The abduction of children
Attacks on schools and hospitals
Denial of humanitarian access

The killing and maiming of children

As of the 7th December, at least 7,112 children in Gaza had been killed.^[12] Additionally, 68 children were killed by Israeli forces and settlers in the West Bank as of the 8th December, and 36 children were killed by Palestinian armed groups in Israel.^[1] Nearly 85% of the population are internally displaced due to the conflict.^[1] On 3 December, the Israel military issued immediate evacuation orders for 20 percent of Khan Younis city; the area was home to nearly 117,000 people before hostilities, and is currently hosting at least 50,000 persons displaced from the north in 21 shelters.^[3] The entire population of children in Gaza have nowhere safe to go, nor adequate provision of food, water, toilets and shelter.^[13,14]

The Israeli Defense Force reportedly targeted over 15,000 locations in Gaza during the first 35 days of the onslaught, often using large bombs weighing up to 2000 lbs.[15] This method of combat in a densely populated area inevitably results in staggeringly high civilian casualties.[15] Additionally, the alleged use of white phosphorus by Israeli forces in densely populated urban areas in Gaza has been reported by Human Rights Watch in the current offensive and also reported in previous attacks.[16,17] White phosphorus exposure results in deep thermal and chemical burns, and can cause multiple organ system failure, with survivors facing extensive scarring, physical disabilities, painful treatment, psychological harm and social exclusion. Children are considered more susceptible to harm from chemical weapons due to their physiology and body mass.[18] These assaults on the lives, health and wellbeing of children and young people who have no place in the origins of the conflict is a moral outrage.

The UNCRC Article 6 elucidates a child's inherent right to life and binds all parties to ensure to the "maximum extent possible the survival and development of the child".[19] UNCRC Article 19 also requires that states ensure the protection of children from violence, injury and abuse. International humanitarian law stipulates that "parties to a conflict must take all feasible precautions to avoid, and in any event to minimise, civilian harm. This can entail evacuating civilians or giving effective advance warning of attacks, which provides civilians enough time to leave, as well as a safe route and place to go." [14]

Abduction of children

During the humanitarian pause, more than 30 children who were taken as hostages by Palestinian armed groups during their attack on 7th October 2023 were released.[20] Human Rights Watch have reported the use of children in 'hostage videos', which they highlight is an 'outrage on personal dignity'.[21] News reports on the child hostages indicate the children were subjected to inadequate food, sanitation and hygiene conditions, and to psychological trauma.[22]

Since the 7th October, the UN Human Rights Office has reported a dramatic increase in the arrest and detention of Palestinians, with no evidence of committing an offence in the majority of cases.[23] Children are not immune to this; it is estimated that the Israeli military arrests and detains 500–700 Palestinian children yearly through military courts without basic safeguards for a fair trial and often via a process of administrative detention in which no charge is ever presented.[24,25] Additionally, on the 7th December, dozens to hundreds of Palestinians sheltering in a school, including boys aged as young as 15 years were detained, stripped, tied up and transferred to an unknown location.[14] The abduction and detention of children is known to be harmful to children's physical and mental health, oftentimes with lifelong consequences for survivors.[18]

Attacks against schools and healthcare facilities

UNICEF reported attacks on 352 educational facilities between 7th October and 8th December.[26] As of the 6th December, 133 UN Relief and Works Agency (UNRWA) workers had been killed.[27] Mass displacement of the civilian population has necessitated the use of

schools as emergency shelters and therefore resulted in an even greater number of deaths when they are attacked. One example was the attack on the UNRWA Al Fakhoora School in the Jabalia refugee camp where approximately 20,000 individuals were sheltering.[28] Healthcare facilities have similarly been attacked, with the World Health Organization (WHO) documenting 212 attacks on healthcare facilities as of the 8th December, affecting 56 facilities and 59 ambulances.[29] Medecins Sans Frontieres has also reported the targeting of their vehicles by Israeli forces.[30] The UNCRC highlights that all children have the right to the highest attainable standard of health and healthcare (Article 24) and the right to education (Article 28)[19]; the current attacks being inflicted on Gaza expose clear violations of these rights.

Denial of humanitarian access

The Gaza Strip has been under blockade for 16 years, during which time Israeli authorities have controlled the movement of individuals and imposed import restrictions on essential items such as food, construction materials, critical medical equipment and fuel.[31] During the most recent offensive, Israel has cut fuel, electricity and aid supplies to Gaza under a “complete siege”, as described by Israeli defence minister, Yoav Gallant, and has also attacked telecommunications infrastructure, further exacerbating an already dire humanitarian crisis.[32] The Government of Israel said on 19th October that it would no longer prevent all aid entering via the Rafah crossing with Egypt and on 21st October, the first 20 aid trucks since 7th October were allowed into Gaza carrying limited emergency supplies, which according to UN officials, was “a drop in the ocean of need”. [33] Before the start of the humanitarian pause on 24th November, a total of 1723 aid trucks had entered, with Israel allowing small amounts of fuel from 18th November for essential humanitarian operations.[34] The restrictions on fuel and aid into Gaza has created a desperate situation for hospitals affecting children of all ages, including 130 newborn infants requiring incubators that rely on electricity from fuel-dependent generators,[35] two of whom died on 10th November as a result of failed incubators.[36] It also means the limited aid arriving in Gaza cannot reach all those who need it across the Gaza Strip.[37]

What do these violations mean for children?

Armed conflict is a major negative determinant of health that has short- and long-term effects on children. Exposure to conflict can cause harm prenatally and 50,000 pregnant women in Gaza are at risk of adverse birth outcomes from maternal stress, physical harm, malnutrition and damage to healthcare infrastructure.[38,39] Direct child health effects include the experience of multiple forms of violence, injury, disability and death from bombing, shooting, explosions, and collapsing of buildings.[40]

Substantial and pervasive indirect effects of exposure to armed conflict include communicable diseases, a range of non-communicable illnesses that are both the result of and exacerbated by inadequate living conditions and environmental exposures, displacement, family separation, being orphaned, and limited access to basic needs such as safety, shelter, food, clean water, sanitation, healthcare and education.[40] During the short-lived ceasefire, the WHO stated that disease could kill more people than the war itself and since the resumption of hostilities there have been further increases in infectious diseases.[41,42] The current hostilities have caused

disruption to childhood vaccination programmes, hampered the functioning of disease surveillance systems, damaged water and sanitation systems, and reduced access to treatment, which together exacerbate the child population's vulnerability to communicable diseases.[43] The significant damage to Gaza's health infrastructure will contribute to increased child morbidity and mortality beyond this period of active hostilities. The impact of conflict affects children throughout their lives,[18] with decades of research establishing a connection between adverse childhood experiences such as violence and lifelong health outcomes, including chronic diseases and psychological disorders.[44]

The effects of conflict on children are heavily influenced by the vulnerability of the population prior to the conflict.[45] For example, prior to the current offensive, there was a high prevalence of malnutrition in Gaza,[46] with approximately 90% of preschool children consuming less than 75% of the recommended daily energy intake.[47] With the current food shortages and inadequate living conditions malnutrition rates can be expected to increase.[46] Acute and chronic malnutrition have adverse impacts on children's future physical and psychological health, neurological development, and future opportunities.[45,48] Studies have found high levels of psychological trauma and impaired health-related quality of life including emotional functioning and psychosocial health in Gaza's children, which are compounded by intergenerational effects of the long-standing conflict.[49–52] The current escalation in violence against civilians in Gaza will further exacerbate the mental health situation and there is likely to be psychological trauma in the surviving child hostages; thus, highlighting the critical importance of long-term interventions and support for all affected children.

Urgent recommendations to protect children and their health

Further harm to children is preventable if urgent steps are taken. Governments and non-governmental actors must demonstrate in action that the lives of children in Gaza are worth no less than any other life. We support the calls made by multiple organisations, such as the United Nations agencies, including the World Health Organization, non-governmental organisations, and fellow health workers for the following:

1. An immediate and permanent ceasefire
2. The release of all civilian hostages in Gaza
3. Urgent provision of water, food, fuel, medical supplies, non-food items and shelter to Gaza
4. An immediate reversal of the evacuation orders for all affected areas of Gaza
5. Unrestricted, safe, and sustained humanitarian access
6. Immediate and absolute protection from attack for civilians, health workers, hospitals and schools
7. Adherence and accountability to international law of all parties involved in the conflict
8. Medical evacuation of severely injured, ill, and pregnant citizens of Gaza to a safe country
9. Resumption of the peace process and an end to the occupation in order to bring long-term safety to all children in the region

Actions for the child health community:

- Appeal to elected governmental representatives to advocate for the above immediate actions
- Call for the formal implementation of the United Nations Special Representative on Children and Armed Conflict Monitoring and Reporting Mechanism to hold parties accountable for committing grave violations against children
- Demand equal application of international law to any party suspected of committing abuses of children’s rights in conflict
- Demand objective, needs-based humanitarian aid for children in all conflicts, regardless of scale, political or strategic importance
- Continue to highlight evidence of the egregious impact of war on children through formal (e.g. publication, news media) and informal channels (eg. social-media), especially where co-ordinated, collective actions are possible or where the voices of advocacy, human rights and humanitarian organisations can be amplified
- Join or develop a coalition of child health advocates in your country or region to work specifically on protecting child health in conflict
- Stand in solidarity with affected children and young people by joining peace and humanitarian organisations working towards preventing and ending conflict
- Push to embed data on the adverse effects of conflict on child health into policy recommendations and for use in the international legal system to hold responsible parties to account

Competing interests

None declared.

Disclaimer

The views in this viewpoint represent individual authors’ views and not the views of their organisations.

Contributorship Statement

YB, AK and TW came up with the original concept and YB wrote the first draft. All authors provided substantial edits to the draft and read the final version prior to submission. YB is responsible for the overall content of the article.

References:

1 United Nations Office for the Coordination of Humanitarian Affairs. Hostilities in the Gaza Strip and Israel - Flash Update #63. <https://reliefweb.int/report/occupied-palestinian-territory/hostilities-gaza-strip-and-israel-flash-update-63> (accessed 9 Dec 2023).

2 UNICEF State of Palestine Humanitarian Situation Report No. 8 (Escalation), 24 - 29

- November 2023. ReliefWeb. <https://reliefweb.int/report/occupied-palestinian-territory/unicef-state-palestine-humanitarian-situation-report-no-8-escalation-24-29-november-2023> (accessed 2 Dec 2023).
- 3 United Nations Office for the Coordination of Humanitarian Affairs. Hostilities in the Gaza Strip and Israel - Flash Update #58. <https://www.unocha.org/publications/report/occupied-palestinian-territory/hostilities-gaza-strip-and-israel-flash-update-58> (accessed 8 Dec 2023).
- 4 European Commission. International Humanitarian Law. https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/international-humanitarian-law_en (accessed 2 Nov 2023).
- 5 UNICEF. Twelve years on, Syrian children endure one brutal crisis after another. <https://www.unicef.org/syria/stories/twelve-years-syrian-children-endure-one-brutal-crisis-after-another> (accessed 5 Dec 2023).
- 6 UNICEF. War in Ukraine pushes generation of children to the brink, warns UNICEF. <https://www.unicef.org/press-releases/war-ukraine-pushes-generation-children-brink-warns-unicef> (accessed 5 Dec 2023).
- 7 Save the Children. 'Will I See my Children Again?': A brief on attacks on education in Yemen. <https://resourcecentre.savethechildren.net/document/will-i-see-my-children-again-a-brief-on-attacks-on-education-in-yemen/> (accessed 5 Dec 2023).
- 8 Shamim S. Is Israel's Gaza war the deadliest conflict for children in modern times? Al Jazeera. 2023. <https://www.aljazeera.com/news/2023/11/7/is-israels-gaza-war-the-deadliest-conflict-for-children-in-modern-times> (accessed 5 Dec 2023).
- 9 Office of the United Nations High Commissioner for Human Rights. Commission of Inquiry collecting evidence of war crimes committed by all sides in Israel and Occupied Palestinian Territories since 7 October 2023. <https://www.ohchr.org/en/press-releases/2023/10/commission-inquiry-collecting-evidence-war-crimes-committed-all-sides-israel> (accessed 1 Nov 2023).
- 10 Office of the Special Representative of the Secretary-General for Children and Armed Conflict. The six grave violations against children during armed conflict: The legal foundation. 2009. https://childrenandarmedconflict.un.org/publications/WorkingPaper-1_SixGraveViolationsLegalFoundation.pdf (accessed 27 Oct 2023).
- 11 Office of the Special Representative of the Secretary-General for Children and Armed Conflict (OSRSG-CAAC), United Nations Children's Fund (UNICEF), United Nations Department of Peacekeeping Operations (DPKO). Monitoring and Reporting Mechanism (MRM) on Grave Violations Against Children in situations of Armed Conflict. https://childrenandarmedconflict.un.org/wp-content/uploads/2016/04/MRM_Field_5_June_2014.pdf (accessed 1 Nov 2023).
- 12 Reuters. Israeli forces storm Khan Younis in south Gaza, killing scores of Palestinians. 2023. <https://www.reuters.com/world/middle-east/israel-intensifies-southern-gaza-offensive-us-un-urge-civilian-protections-2023-12-05/> (accessed 8 Dec 2023).
- 13 Save the Children International. 'Nowhere to go' - Over one million children in Gaza at risk of being killed. Save the Children International.

2023.<https://www.savethechildren.net/news/nowhere-go-over-one-million-children-gaza-risk-being-killed> (accessed 8 Dec 2023).

14 United Nations Office for the Coordination of Humanitarian Affairs. Hostilities in the Gaza Strip and Israel - Flash Update #62. <https://www.ochaopt.org/content/hostilities-gaza-strip-and-israel-flash-update-62> (accessed 8 Dec 2023).

15 Leatherby L. Gaza Civilians, Under Israeli Barrage, Are Being Killed at Historic Pace. 2023.<https://www.nytimes.com/2023/11/25/world/middleeast/israel-gaza-death-toll.html> (accessed 5 Dec 2023).

16 Human Rights Watch. Israel: White Phosphorus Used in Gaza, Lebanon. 2023.<https://www.hrw.org/news/2023/10/12/israel-white-phosphorus-used-gaza-lebanon> (accessed 27 Oct 2023).

17 Amnesty International. Israel used white phosphorus in Gaza civilian areas. 2009.<https://www.amnesty.org/en/latest/news/2009/01/israel-used-white-phosphorus-gaza-civilian-areas-20090119/> (accessed 29 Oct 2023).

18 Kadir A, Shenoda S, Goldhagen J, *et al*. The Effects of Armed Conflict on Children. *Pediatrics* 2018;**142**. doi:10.1542/peds.2018-2586

19 United Nations Children’s Fund. The United Nations Convention on the Rights of the Child. 1989.<https://www.unicef.org.uk/wp-content/uploads/2016/08/unicef-convention-rights-child-uncrc.pdf> (accessed 27 Oct 2023).

20 UNICEF. Statement by UNICEF Executive Director Catherine Russell on the resumption of fighting in Gaza. <https://reliefweb.int/report/occupied-palestinian-territory/statement-unicef-executive-director-catherine-russell-resumption-fighting-gaza> (accessed 2 Dec 2023).

21 Human Rights Watch. Gaza: Hostage Videos an ‘Outrage on Personal Dignity’. 2023.<https://www.hrw.org/news/2023/11/10/gaza-hostage-videos-outrage-personal-dignity> (accessed 14 Nov 2023).

22 Minsberg T. Relatives describe the trauma of child hostages freed by Hamas. The New York Times. 2023.<https://www.nytimes.com/2023/11/29/world/middleeast/relatives-describe-the-trauma-of-child-hostages-freed-by-hamas.html> (accessed 8 Dec 2023).

23 UN Office of the High Commissioner for Human Rights. Dramatic rise in detention of Palestinians across occupied West Bank. <https://reliefweb.int/report/occupied-palestinian-territory/un-human-rights-office-opt-dramatic-rise-detention-palestinians-across-occupied-west-bank> (accessed 5 Dec 2023).

24 Defence for Children. Childhood in captivity: Palestinian children arbitrarily detained in Israeli prisons. <https://defenceforchildren.org/hrc53-side-event-childhood-in-captivity-palestinian-children-arbitrarily-detained-in-israeli-prisons/> (accessed 5 Dec 2023).

25 Defense for Children International-Palestine. Number of Palestinian Children (12-17) in Israeli Military Detention. https://www.dci-palestine.org/children_in_israeli_detention (accessed 5 Dec 2023).

26 UNICEF. Damaged Schools Dashboard - Gaza 2023 (Updated on 8 December).

- <https://gis.unicef.org/portal/apps/dashboards/c6e0bfd744164b2f84276071b1a83e78> (accessed 8 Dec 2023).
- 27 UNRWA. UNRWA Situation Report #47 on the situation in the Gaza Strip and the West Bank, including East Jerusalem. <https://www.unrwa.org/resources/reports/unrwa-situation-report-47-situation-gaza-strip-and-west-bank-including-east-jerusalem> (accessed 8 Dec 2023).
- 28 Education Above All Foundation. Education Above All: Schools are Off-Limits – Cease Attacks Now. <https://reliefweb.int/report/occupied-palestinian-territory/education-above-all-schools-are-limits-cease-attacks-now> (accessed 9 Nov 2023).
- 29 United Nations. Gaza humanitarian disaster heralds ‘breakdown’ of society. 2023. <https://news.un.org/en/story/2023/12/1144547> (accessed 9 Dec 2023).
- 30 Médecins Sans Frontières (MSF) International. MSF convoy attacked in Gaza: all elements point to Israeli army responsibility. <https://www.msf.org/msf-convoy-attacked-gaza-all-elements-point-israeli-army-responsibility> (accessed 5 Dec 2023).
- 31 Save the Children International. ‘I can’t run, play, or get treatment’ - Two children a day in Gaza unable to access medical treatment due to 16 year blockade. Save the Children International. 2023. <https://www.savethechildren.net/news/i-can-t-run-play-or-get-treatment-two-children-day-gaza-unable-access-medical-treatment-due-16> (accessed 1 Nov 2023).
- 32 United Nations. Amid Increasingly Dire Humanitarian Situation in Gaza, Secretary-General Tells Security Council Hamas Attacks Cannot Justify Collective Punishment of Palestinian People. <https://press.un.org/en/2023/sc15462.doc.htm> (accessed 1 Nov 2023).
- 33 Borger J. Aid convoy set to enter Gaza a ‘drop in the ocean of need’ says WHO. The Guardian. 2023. <https://www.theguardian.com/world/2023/oct/19/gaza-aid-rafah-crossing-joe-biden-israel-egypt-agreement> (accessed 27 Oct 2023).
- 34 United Nations Office for the Coordination of Humanitarian Affairs. Hostilities in the Gaza Strip and Israel - Flash Update #48. <https://reliefweb.int/report/occupied-palestinian-territory/hostilities-gaza-strip-and-israel-flash-update-48-enarhe> (accessed 2 Dec 2023).
- 35 Reuters. Gaza neonatal unit warns babies at risk ‘within minutes’ if power fails. 2023. <https://www.reuters.com/world/middle-east/gaza-neonatal-unit-warns-babies-risk-within-minutes-if-power-fails-2023-10-23/> (accessed 27 Oct 2023).
- 36 Ullah A. Israel-Palestine war: Israeli troops besiege Gaza hospitals as Arab leaders denounce ‘war crimes’. Middle East Eye. 2023. <https://www.middleeasteye.net/news/israel-palestine-war-troops-besiege-attack-gaza-hospitals-arab-leaders-denounce-israeli-war-crimes> (accessed 13 Nov 2023).
- 37 Save the Children International. How far can we travel with aid on our shoulders? A warning on Gaza from a humanitarian worker. 2023. <https://www.savethechildren.net/blog/how-far-can-we-travel-aid-our-shoulders-warning-gaza-humanitarian-worker> (accessed 1 Nov 2023).
- 38 Keasley J, Blickwedel J, Quenby S. Adverse effects of exposure to armed conflict on pregnancy: a systematic review. *BMJ Global Health* 2017;**2**:e000377.

39 United Nations Population Fund. Crisis in Gaza. <https://www.unfpa.org/crisis-gaza> (accessed 30 Oct 2023).

40 Kadir A, Shenoda S, Goldhagen J. Effects of armed conflict on child health and development: A systematic review. *PLoS One* 2019;**14**:e0210071.

41 Gritten D. Untreated diseases could kill more than bombings in Gaza, WHO warns. BBC. 2023.<https://www.bbc.co.uk/news/world-middle-east-67554394> (accessed 8 Dec 2023).

42 World Health Organization. WHO appeals for protection of the health system from further attacks and degradation of its capacity. <https://www.who.int/news/item/04-12-2023-who-appeals-for-protection-of-the-health-system-from-further-attacks-and-degradation-of-its-capacity> (accessed 8 Dec 2023).

43 World Health Organization-Regional Office for the Eastern Mediterranean. Risk of disease spread soars in Gaza as health facilities, water and sanitation systems disrupted. <https://www.emro.who.int/media/news/risk-of-disease-spread-soars-in-gaza-as-health-facilities-water-and-sanitation-systems-disrupted.html> (accessed 8 Dec 2023).

44 Oral R, Ramirez M, Coohy C, *et al*. Adverse childhood experiences and trauma informed care: the future of health care. *Pediatr Res* 2016;**79**:227–33.

45 Garry S, Checchi F. Armed conflict and public health: into the 21st century. *J Public Health* 2020;**42**:e287–98.

46 Najjar SA, Shaer TA. Risk factors for the double burden of malnutrition in children younger than 5 years in the Gaza Strip: a systematic review. *Lancet* 2022;**399**:S42.

47 Radi S. Nutrient intakes and adequacy among preschool children under blockade in Gaza City, Palestine. *East Mediterr Health J* 2021;**27**:467–73.

48 Bendavid E, Boerma T, Akseer N, *et al*. The effects of armed conflict on the health of women and children. *Lancet* 2021;**397**:522–32.

49 Massad SG, Nieto FJ, Palta M, *et al*. Health-related quality of life of Palestinian preschoolers in the Gaza Strip: a cross-sectional study. *BMC Public Health* 2011;**11**:253.

50 Altawil MAS, El-Asam A, Khadaroo A. Impact of chronic war trauma exposure on PTSD diagnosis from 2006 -2021: a longitudinal study in Palestine. *Middle East Current Psychiatry* 2023;**30**:1–8.

51 Save the Children. Trapped: The impact of 15 years of blockade on the mental health of Gaza’s children. 2022.https://resourcecentre.savethechildren.net/pdf/gaza_blockade_mental_health_palestinian_children_2022.pdf (accessed 27 Oct 2023).

52 Devakumar D, Birch M, Osrin D, *et al*. The intergenerational effects of war on the health of children. *BMC Med* 2014;**12**:57.