

TERROR ATTACKS AGAINST AFRICAN HEALTH FACILITIES

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Abstract: *The article is about the attacks on health facilities including hospitals, medical staff and security inside the healthcare institutions. The author first goes on to present a short introduction about the general knowledge concerning the situation of the terrorist assaults on the hospitals and the medical staff. He divides the text into several chapters, which try to comprehend the most important sides of the attacks on the healthcare institutions. First, he starts with armed assaults on hospitals and health workers, where he describes the dangers the terrorists pose against the institutions and the personnel in them. Then he goes on to talk about the attacks by radicalized medical staff against their own personnel and patients, which presents a serious problem for the security officers. He continues with attacks by explosions, hostage taking and cyber attacks on medical facilities. At the end, the author concludes the article by giving some advises for the international community how to resolve these problems.*

Keywords: *healthcare facilities; terrorism; radicals; medical staff; explosions; hostage taking; cyber attacks.*

Altogether, there was 216 terrorist attacks against health facilities, health workers, in Africa 1974-2019.

Introduction

First and foremost, it is important to define the brief meaning of terrorism before one jump into the ocean of evaluating violent acts against healthcare facilities. There are some reliable sources which give a definition of the concept. According to Britannica, terrorism is “*the calculated use of violence to create a general climate of fear in a population and thereby bring about a particular political objective.*” (Jenkins, 2021). Other sources give different examples for the phenomenon; for example: “*A policy intended to strike with terror those against whom it is adopted; the employment of methods of intimidation...*” (Oxford English Dictionary, 1989). Finally, there is a short but useful definition of terrorism: “*(threats of) violent action for political purposes*” (Cambridge English Dictionary, 2021). It is also necessary to enlist the organizations which participate in such murderous acts of violence on the continent regionally. In North Africa there are several active terrorist cells. The most important ones operate in Algeria, Tunisia, Libya and Egypt. These are the Al Qaeda in the Islamic Maghreb (AQIM), Shabab al Tawhid (or Ansar al Sharia Tunisia (AST)), Okba ibn Nafaa Brigade (also Tunisia), Ansar al-Sharia Libya – Benghazi, Ansar al-Sharia Libya – Derna and Ansar Beit al Maqdis (ABM) in Egypt. In West Africa, in the Sahel region there are several other terrorist organizations in Mali, Burkina Faso, and Nigeria. The notable ones are Ansaroul Islam, Jama’at Nusrat al Islam wal Muslimin (JNIM), with its AQIM affiliates: The Sahara Emirate branch of AQIM, al-Mourabitoun, Ansar Dine, Macina Liberation Front (FLM) and another cell, the Movement for Unity and Jihad in West Africa (MUJAO) as well as the Islamic State in the Greater Sahara (ISGS). One of the most brutal organizations is the Nigerian Boko Haram and

along it there is another cell in the country called Islamic State West Africa. In East Africa there are also terrorist groups, including the infamous Al-Shabaab and the Islamic State in Somalia (ISS). In Kenya there are some organizations as well, for example the Al Hijra group, the Al Muhajiroun and the Jahba East Africa (Africa Center for Strategic Studies, 2017).

The terrorists of the ISIL (Islamic State of Iraq and the Levant-Libya) and Al-Qaeda cells carry out a lot of attacks on innocent health institutions and health workers in many countries in Africa (Warner and Hulme, *CTCSentinel*, 21–28). One of the most common targets are the hospitals which are the so-called “soft targets”. Between 1974¹ and 2019 there were several terrorist attacks, which were not committed mainly against health personnel, but rather against health facilities that are an easy target for the radicals. These comprehend 24 countries, where 520 people died. The first attack was carried out in Ethiopia in 27 May 1971. The perpetrator was the Eritrean Liberation Front, which is hostile to Ethiopia (Newton 2002, 90). There was another attack against the country in 1978, which was not followed by further incidents until 1989. These atrocities were only the beginning of the terrorist activity that has perplexed the continent. Their timing was not incidental since the cold war was at its height. The terrorist had many affiliations, they came from Ansar al-Sharia, AQIM, MUJAO and several other organizations that devastated the continent at the time. The hospitals weren't protected very well by security forces; they were targeted a lot of times by the Muslim radicals who used a wide range of methods against these buildings. The terrorists regrouped according to ethnic and national affiliations (Gofas 2012, 17-32). They were functioning by local customs (Neumann, 2009, 18-19). The terrorist groups often made pacts with their governments to make it easier to commit suicide bombings or other terrorist activities. One of the examples is the Eritrean Liberation Front (Iyob 1997, 47). The movement and its affiliates often committed terrorist attacks against hospitals and other health departments. The aforementioned attacks were usual mainly until the 2010s. There were lot of methods which the radicals applied against the government forces and the health personnel in the hospitals, and these were usually targeted against these health facilities.

After 2010 the situation has changed: these organizations became international. There were numerous groups that committed terrorist acts on the continent. For example, it is possible to mention the Al-Gamaat Al-Islamiyya, which is an Egyptian terrorist group. It committed radical activities in Europe and in the Middle East as well. The other terrorist cell is the infamous Al-Qaeda, which has perpetrated several attacks on innocent civilians and government security personnel in Afghanistan, the Middle East and in our case in Africa as well (Hamzawy and Grebowski, *Carnegie Papers*, 2010, 1-19 and Neumann 2009, 18-19 and Rabasa, Chalk, Cragin, Daly and Gregg, *Rand Corporation*, 2002). The Al-Qaeda is very active in the region, it has a lot of affiliate groups and has interconnections with other terrorist organizations like ISIS and its relatives.

In recent times these islamist groups have changed as they have become much more fundamentalist and they started to be organized by radical thoughts. Their motivation was based on the destruction of the African and Western society (Field 2009, 198), and on the establishment of the Islamic Califate. They became active internationally, even in Europe and in the Middle East and they wanted to create a society that would be based on the sharia law and on islamist values, that disregard women and doesn't take into consideration the rights of the civilians and the population. These terrorist organizations were organized based on deeply fundamentalist views, they followed radical islam and they even resorted to violent activities against the health personnel and others. They wanted to destroy the international community, the nations and the global system in order to establish their Islamic state and they were willing to go far to achieve their goals.

¹ A.N.: Prior to 1974, I have found no terrorist attack on the African continent targeting a hospital or other health care facility.

Their system was comprised of a lot of groups, they could have been called an umbrella organization, which targeted the international Muslim community. They committed several terrorist acts, and their activity in Africa was emphasized and got more attention from the international community (e.g. suicide bombings). For example, Al-Qaeda perpetrated terrorist attacks against health personnel and hospitals (Roggio, Long War Journal, 2011), which received more concern from the European states and the global world. The attacks against health personnel was rare before 2011, but from then on it flourished and suicide bombings became widespread across the Muslim world, especially in the Middle East and in Africa. There were African radical organizations as well which committed terrorist acts against innocent people, such as Boko Haram, which is mostly active in Nigeria. For example, they perpetrated suicide bombings in Maiduguri, Nigeria. The group is responsible for kidnappings and hostage situations as well, and it is intertwined with the population of the country thus it isn't easy to be controlled. Their targets are not only hostile Muslim groups or civilians, but Western, Christian people and institutions. For example, the Coptic community in Egypt is under constant threat and danger from the radicals, and they have committed several terrorist attacks against the group which constitutes only a minority of the Egyptian population (Tony Blair Institute for Global Change 2018). In fact, the fundamentalists aim to destroy the Western society and its institutions as well, so they constitute a real problem for the European community (Finucane 2018, 8-12).

1. Armed assaults on hospitals, health workers

This type of attack is one of the most frequent terrorist attacks in the region. The radicals use heavy weapons, mortars, light arms, grenades. Besides other terrorist organizations it is possible to mention the Seleka movement in the Central African Republic which use such arms (Mickolus 2016, 196) They not only use heavy and light weapons, but they commit terrorist acts with stabbing weapons, baseball bats and stones. One such country in which these attacks take place in the Democratic Republic of the Congo (reliefweb.int 2019). These armed assaults took place not only against hospitals, but ambulances as well, which are one of the favourite targets of the radicals.

1.1. Attacks with the target to kill specific groups

These types of attacks were committed against health personnel and patients of the hospitals, and they are mostly fatal. There are some examples which are worth mentioning, for example there was an assault on Fawzi Miknail (Mizell and Smith 2015, 189), an Egyptian healthcare official in Assiut in 22 July 1993, or another attack could be mentioned which was committed against an Italian sister in 4 September 2006 in Mogadishu, Somalia, in the S.O.S. Hospital (Shay 2010, 101). As it has been mentioned before the Islamic State targets the Coptic community (Mickolus 2016, 163), which is a Christian minority in Egypt. Along the personnel and the patients, the security guards, military officers and police officers were also attacked, one example was in Algeria, in Sidi Bel Abbes – on 3 August 1992 a police officer was killed (Terrorism Database). The terrorists use other methods, they disguise themselves as patient (S., J. and L. 2008, 224) this way they can easily enter the health facilities, which are therefore in greater danger from the radicals.

1.2. Attacks by explosions

This is the second most popular method of the terrorists to attack health institutions and personnel. They commit these assaults at parking lots, main entrances, at the ambulance entrances, or even inside the facility as well. They generally place the bombs in cars or trash cans, but they can also carry the explosives with them on suicide vests or in their luggage. It is

also a preferred method to throw grenades on buildings, or on the rooms of the health institutions. Several times they carry hidden explosives inside the building. Usually, they carry their bags inside the building, which is a dangerous method, because the security personnel rarely checks the bags of the people entering the building. Sometimes the radicals park cars loaded with bombs outside the hospitals, or they even use ambulances to hide their intentions. There are a lot of instances when this type of attacks happened, Egypt is one of the known places for such bombings (Global Terrorism Database 2013). In 24 October 2013, Boko Haram stole two ambulances from the General Sani Abacha Hospital in Damatura, Nigeria (Global Terrorism Database 2013). It happened also in Burkina Faso (Lyammouri, Sahel Memo 2019) and Niger (caert.org.dz 2019), as well as in Libya, on 12 June 2016: this recent attack was perpetrated by the Islamic State's militia, which stole an ambulance car. They went to the hospital of the Libyan Army on 12 June 2016 in the town of Sirte, which resulted in one fatality (Mickolus 2016, 176).

There were also suicide bombings which were common from the 2010s. They are perpetrated usually by cars. Sometimes the terrorists even dressed as women (Maruf and Joseph 2018, 140-141). The assaults are widespread among the terrorist cells: first, they commit suicide or other bombings against civilians or government officials, then when the health personnel and the ambulances arrive, they carry out a second attack, in which the doctors and the patients are killed. There are several examples in which these attacks happened: one of them was in Jos, Nigeria, where the Boko Haram bombed the Terminus Market. When the ambulances arrived, there was another explosion. 59 people have died (Global Terrorism Database). In 5 August 2019, in Egypt the Hasm organization (which is an affiliate of the Muslim Brotherhood) bombed the Cairo University Teaching Hospital, where 20 people died and 47 suffered injuries (Michaelson, The Guardian, 2019).

2. Involvement of medical staff in terrorist groups

There are instances when health personnel become radicalized, and they even enter terrorist groups (Aboul-Enein 2004, 18) which generally take advantage of the opportunity to train them. Several times they terrorist activities or suicide bombings against their own patients, which present a serious problem for the security of the hospitals (Mizell 2015, 234-235). They are perpetrated usually by the Islamic State, but ISIL does it usually as well (caert.org.dz 2019 and Amiga and Schuster Haaretz 2015). There are other organizations which are responsible for the training of the medical staff, for example GSPC (Botha 2008, 120), Al-Qaeda (Bloom 2017, 603-623 and Perper and Cina 2010, 145-147), Ansar al-Sharia (Turak Tunisia Live, 2014), Al-Shabab (Maruf and Joseph 2018, 70-71) and Boko Haram (Ewi, Salifu, ISS Policy Briefs, 2017). This is why the medical personnel must be frequently checked and the hospitals must be thoroughly searched to avoid such incidents (Fischbacher-Smith and Fischbaher-Smith 2013, 337-338).

3. Taking hostages, kidnapping hospital employees

Altogether there was 44 cases of kidnappings in Africa until 2019. Generally, the terrorists use firearms, and ask for ransom to return the hostages. However, there are a lot of instances when they are not given back, instead the radicals kill them without asking for any ransom. For example, in 1 March 2018, at the Rann refugee camp, Nigeria the Boko Haram killed 3 people and abducted 3 sisters. From the kidnapped persons 2 were publicly executed on September 2018. Several times they are released by ransom or in some instances the secret services free them. Another example is the ISIL organization, which also perpetrated an attack

against the Sirte army hospital in Libya. 22 doctors were taken hostage on March 2016 (refworld 2018).

4. Cyber attacks

The internet system of the hospitals is prone to cyber-attacks and they are very vulnerable, for this, hackers target these institutions (Berman, nationalinterest.org, 2019), who belong to radical groups.

The cyber-attack can have two goals:

1. To prevent the proper functioning of the internet system of the patients' care, which puts the civilians and the hospital staff at a risk (phe.gov 2017 and Shapira, Hammond and Cole 2008, 261-262).

2. The terrorists gather data about the patients, and with that they can blackmail the healthcare staff and the civilians who are vulnerable (Rosenberg, Jerusalem Post, 2019).

Virus attacks and code-stealings can be dangerous as well, as they can affect or disfunction the healthcare machinery in the hospitals or other medical facilities (H. and F. and M and L J 2017, 94-100). Recently the cyber-attacks became frequent (Landi, Healthcare Innovation, 2018). This is why the defence against viruses is so important in the healthcare facilities.

5. Effect of the Covid-19 and other diseases in Africa on terrorism

To understand better the security situation concerning the attacks on health facilities, it is important to take notice of the recent events concerning the Covid-19 situation that has increased global insecurity in the world.

In overall, the cases of Coronavirus on the continent have been decreasing in the week between 4-10 October 2021 examined by the World Health Organization (WHO). The countries show a decisive reduction of Covid-19 cases concerning Africa. In general, in the abovementioned week there were 25,044 Coronavirus-infections in the region, while a week before the number was 44,212. This means a 43,4% diminution in the diseases in relation with the virus. The most infected countries of the region in this week were Ethiopia (5,807 persons), South Africa (5,723 persons), Angola (2,435 persons) and Nigeria (1,558 persons). These states account for the most infected areas of the continent in which the disease left a mark. However, the rate of illness in Africa is considered by WHO the smallest one among the other continents (3,6% of the worldwide epidemics). The numbers speak for themselves: in Africa there were 8.4 million illnesses caused by Covid-19 with 214,480 fatalities. This is negligible compared to other regions and continents of the world (World Health Organization, 2021).

Not only was Coronavirus the main problem for the African community, as other diseases have spread that affected the security of the countries. Notably the Ebola Virus, which caused several outbreaks in West Africa (Guinea, Liberia, Sierra Leone, Mali, Nigeria, Senegal) between 2014-16 (CDC, 2019) and in August 2021 (Cote d'Ivoire, Guinea) there was another case of a detected infection (WHO, 2021). West Nile Virus is also a terrible source of insecurity, as in the 2000s there were several cases reported of WNV outbreaks in North Africa (Morocco, Tunisia, Algeria, Egypt) and in Guinea, Ghana, Gabon and South Africa (Sayed-Ahmed, 2016, 102).

However, the biggest problem concerning health facilities is that these outbreaks will give the opportunity for the abovementioned terrorist organizations like AQIM and ISIS to exploit the ongoing health and food crisis and the inability of governments to act against the weakness of their domestic defence capabilities. Hospitals and health facilities that are not well-equipped are struggling to get a grip on the handling of the Coronavirus outbreak and other kind

of diseases, thus it is easy to see the inherent dangers that these infections pose to the spread of terrorism on the continent (Coleman, J.D., 2020).

Conclusion

In recent years the attacks against hospitals and healthcare facilities, as well as against medical facilities have multiplied. African militants, radicals who arrive from the Middle East and other foreign countries to the continent want to establish the Islamic state. They want to convert the Christians and subjugate the hostile Muslim groups or the civilians in order to create a fundamental Islamic world on the continent and install the Islamic law (the sharia). The terror attacks against the hospitals constitute a clear problem for the governments and the security forces notwithstanding the security guards of the healthcare facilities. The main problem is that these institutions have a very weak defence system and the security guards are not prepared to prevent these kind of attacks on the medical facilities of the African countries. Therefore, these buildings and their personnel are very vulnerable and they are a favourite target of the terrorist cells and organizations.

According to these facts, it is possible that there will be more similar attacks on such institutions – suicide bombings, murders during hostage takings and cyber-attacks. To make the healthcare facilities more secure, there has to be some measurements taken which are the following:

1. to analyse the terrorist attacks committed until 2019 in Africa and to integrate the results into the security systems of the hospitals;
2. to check the security situation of the healthcare facilities;
3. to prepare emergency plans and protocols, which should be controlled generally by the state organizations and the security forces;
4. the examination and correction of the security systems;
5. establishment of an inner security system, which should check the personnel working in these institutions;
6. to prepare against cyber-attacks.

These steps would eradicate or lessen the possibility of further attacks, although the danger of the situation probably would remain.

BIBLIOGRAPHY:

- ABOUL-Enein, YOUSSEF H.. 2004. Ayman Al-Zawahiri: The Ideologue of Modern Islamic Militancy. Alabama: USAF Counterproliferation Center, 18.
- Africa Center for Strategic Studies. 2017. "Map of Africa's Militant Islamist Groups." URL: <https://africacenter.org/spotlight/map-africa-militant-islamic-groups-april-2017/>
- AMIGA, Aimee and SCHUSTER, Ruth. 2015. Haaretz. "EU Report: ISIS Could Commit Chemical or Biological Terror Attack in West." URL: <https://www.haaretz.com/middle-east-news/isis/eu-isis-could-commit-chemical-biological-attack-in-west-1.5436111>
- BERMAN, Ilan. 2019. "Technology is Making Terrorists More Effective – And Harder to Thwart." The National Interest. URL: <https://nationalinterest.org/feature/technology-making-terrorists-more-effective%E2%80%94and-harder-thwart-45452>
- BLOOM, Mia. 2017. "Constructing Expertise: Terrorist Recruitment and "Talent Spotting" in the PIRA, Al Qaeda, and ISIS." Studies in Conflict & Terrorism 40 (7), 603-623, DOI: 10.1080/1057610X.2016.1237219.

- BOB, Yonah Jeremy. 2018. "Exclusive: Islamic cyber terrorists trying to target infrastructure." The Jerusalem Post. URL: <https://www.jpost.com/Arab-Israeli-Conflict/Exclusive-Islamic-cyber-terrorists-trying-to-target-infrastructure-562052>
- BOTHA, Anneli. June 2008. Terrorism in the Maghreb, The Transnationalisation of Domestic Terrorism. Johannesburg: Institute of Security Studies, 120.
- Cambridge English Dictionary. 2021. "Terrorism." URL: <https://dictionary.cambridge.org/dictionary/english/terrorism>
- Centers for Disease Control and Prevention. 2019. "2014-2016 Ebola Outbreak in West Africa." URL: <https://www.cdc.gov/vhf/ebola/history/2014-2016-outbreak/index.html>
- COLEMAN J.D., Julie. 2020. "The Impact of Coronavirus on Terrorism in the Sahel." International Centre for Counter-Terrorism – The Hague. URL: <https://icct.nl/publication/the-impact-of-coronavirus-on-terrorism-in-the-sahel/>
- De CAUWER H., SOMVILLE F., SABBE M., MORTELMANS LJ. 2017. "Hospitals: soft target for terrorism?". Prehospital and Disaster Medicine. 32 (1): 94-100.
- EVAN, T., LEVERETT, E., RUFFLE, S. J., COBURN A. W., BOURDEAU J., GUNARATNA R. and RALPH, D.. 2017. Cyber Terrorism: Assessment of the Threat to Insurance, University of Cambridge. URL: https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/risk/downloads/pool-re-cyber-terrorism.pdf
- EWI, Martin and SALIFU, Uyo. February 2017. "Money Talks: A Key Reason Youths Join Boko Haram." ISS Policy Briefs 98. URL: https://css.ethz.ch/content/dam/ethz/special-interest/gess/cis/center-for-securities-studies/resources/docs/ISS_Africa-policybrief98.pdf
- FIELD, Antony. 2009. "The 'New Terrorism': Revolution or Evolution?". Political Studies Review, 7 (2): 198.
- FINUCANE, David J. 2018. "Unhealthy complacency: The vulnerability of US hospitals to direct terrorist attacks." Journal of Healthcare Risk Management 37 (3): 8-12.
- FISCHBACHER-SMITH D. and M. 2013. "The vulnerability of public spaces: challenges for UK hospitals under the 'new' terrorist threat." Public Management Review 15.
- Global Terrorism Database. "Boko Haram suicide attack at Terminus Market in Jos, Nigeria." URL: <https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=201405200067>
- Global Terrorism Database. "Terror attack on police guard before Sidi Bel Abbes Hospital." URL: <https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=199208080001>
- Global Terrorism Database. 2013. "An explosive in an ambulance detonated near Egyptian soldiers in Rafah, Egypt." URL: <https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=201310240011>
- Global Terrorism Database. 2013. "Boko Haram attack against General Sani Abacha Specialist Hospital, Damaturu." URL: <https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtid=201310240037>
- GOFAS, Andreas. 2012. "Old' vs. 'New' Terrorism: What's in a Name?". Uluslararası İlişkiler 8 (32) (Winter): 17-32. URL: <https://dergipark.org.tr/tr/download/article-file/540175>

- HAMZAWY, Amr; GREBOWSKI, Sarah. 2010. „From Violence to Moderation Al-Jama‘a al-Islamiya and al-Jihad.”. Carnegie Papers, No. 20 (April): 1-19. URL: <https://carnegieendowment.org/files/Hamzawy-Grebowski-EN.pdf>
- Health Care Industry Cybersecurity Task Force. 2017. „Report on Improving Health Care Industry Cybersecurity.” URL: <https://www.phe.gov/preparedness/planning/cybertf/documents/report2017.pdf>
- <https://www.oed.com/oed2/00249602;jsessionid=A14CBC89A41317E966650528756F5841>
- IYOB, Ruth. 1997. The Eritrean Struggle for Independence: Domination, Resistance, Nationalism, 1941-1993. St. Louis: Cambridge University Press. 47.
- JENKINS, John Philip. 2021. „Terrorism.” Britannica. URL: <https://www.britannica.com/topic/terrorism>
- LANDI, Heather. 2018. „Report: Ransomware Attacks Against Healthcare Orgs Increased 89 Percent in 2017.” Healthcare Innovation. URL: <https://www.hcinnovationgroup.com/cybersecurity/news/13029655/report-ransomware-attacks-against-healthcare-orgs-increased-89-percent-in-2017>
- LYAMMOURI, Rida. 2019. „Burkina Faso: February 2019 SITREP and Chronology of Violent Incidents Related to AlQaeda affiliates Jama‘at Nusrat al-Islam wal Muslimeen (JNIM) and Ansaroul Islam, and Islamic State in the Greater Sahara (ISGS).” 2016-2019 Sahel MeMo LLC. URL: https://www.sahelmemo.com/wp-content/uploads/2019/03/Burkina-Faso-SITREP_February2019.pdf
- MARUF, Harun, JOSEPH, Dan. 2018. Inside Al-Shabaab: The Secret History of Al-Qaeda’s Most Powerful Ally. Bloomington: Indiana University Press.
- MICHAELSON, Ruth. 2019. „Cairo car bomb kills at least 20 outside hospital.” The Guardian. URL: <https://www.theguardian.com/world/2019/aug/05/at-least-20-dead-and-47-injured-in-explosion-outside-cairo-hospital>
- MICKOLUS, Edward. 2016. Terrorism, 2013-2015: A Worldwide Chronology. Jefferson: McFarland.
- MIZELL, Louis R. and Smith. 2015. E. Reed; Terrorism & The Medical Environment. Tactics, Targets& Trends.
- NEUMANN, Peter R. 2009. Old and New Terrorism. Cambridge: Polity Press.
- NEWTON, Michael. 2002. The Encyclopedia of Kidnappings. New York: Infobase Publishing, Infobase Publishing.
- Oxford English Dictionary. 1989. „Terrorism.”
- PERPER, Joshua A. and CINA, Stephen J.. 2010. When Doctors Kill: Who, Why, and How. New York: Copernicus Books.
- RABASA, Angel; CHALK, Peter; CRAGIN, Kim; DALY, Sara A.; GREGG, Heather S.. 2002. „Beyond al-Qaeda: The Outer Rings of the Terrorist Universe.”. Part 2 Rand Corporation,. URL: https://www.rand.org/content/dam/rand/pubs/monographs/2006/RAND_MG430.pdf
- ROGGIO, Bill. 2011. „AQIM suicide bombers kill 4 in Algeria.”. Long War Journal. URL: https://www.longwarjournal.org/archives/2011/07/aqim_suicide_bombers.php

- ROSENBERG, Oz. 2019. "Health technology: Are medical devices protected?". Jerusalem Post. URL: <https://www.jpost.com/Israel-News/Israel-health-technology-Are-medical-devices-protected-588405>
- S., SHAPIRA., J . HAMMOND and L. COLE. 2008. Essentials of Terror Medicine. Springer Science & Business Media, 224.
- SAYED-AHMED, Mohamed. 2016. "Incidence history of west Nile virus in Africa and middle east, with emphasis on Egypt: a review." Journal of Dairy, Veterinary & Animal Research, no. 3: 101-104. URL: <https://medcraveonline.com/JDVAR/JDVAR-03-00080.pdf>
- SHAY, Shaul. 2010. Somalia Between Jihad and Restoration. New Brunswick: Transaction Publishers, 101.
- Terrorism-bulletin. 2019. "Africa Terrorism Bulletin, African Centre for the Study and Research on Terrorism.". URL: <http://caert.org.dz/Medi-review/Terrorism-bulletin/Bulletin-6.pdf>
- The Safeguarding Health Conflict Coalition. 2019. "Impunity remains: Attacks on Health Care in 23 Countries in Conflict 2018." URL: <https://reliefweb.int/sites/reliefweb.int/files/resources/SHCC2019final.pdf>
- The Tony Blair Institute for Global Change. 2018. "How Islamist Extremists Target Civilians", URL: <https://institute.global/sites/default/files/articles/How-Islamist-Extremists-Target-Civilians.pdf>
- TURAK, Natasha. 2014. "Medical Student Fatma Zouaghi, Alleged Ansar Al Sharia Member, Arrested." Tunisia Live. URL: <https://web.archive.org/web/20170623133134/http://www.tunisia-live.net/2014/10/15/medical-student-fatma-zouaghi-allegedansar-al-sharia-member-arrested>
- United States Department of State. 2018. "Country Reports on Terrorism 2017 - Foreign Terrorist Organizations: Islamic State of Iraq and the Levant-Libya (ISIL-LIBYA)." URL: <https://www.refworld.org/docid/5bcf1f40a.html>
- WARNER, Jason and HULME, Charlotte. 2018. "The Islamic State in Africa: Estimating Fighter Numbers in Cells Across the Continent." CTC Sentinel 11 (7). URL: <https://ctc.usma.edu/islamic-state-africa-estimating-fighter-numbers-cells-across-continent/>
- World Health Organization, Africa. 2021. "West Africa COVID-19 deaths surge amid Ebola and other outbreaks.". 19 August. URL: <https://www.afro.who.int/news/west-africa-covid-19-deaths-surge-amid-ebola-and-other-outbreaks>
- World Health Organization. 2021. "Weekly Bulletin on Outbreaks and other Emergencies." 4-10 October. URL: <https://apps.who.int/iris/bitstream/handle/10665/346225/OEW41-0410102021.pdf>