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The Treat of Chemical Weapons in 21st Century (Case Study: The Poisoning of Alexei Navalny with Novichok Nerve Agent)

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ABSTRACT

Chemical weapons have been outlawed as part of CBRNE (Chemical, Biological, Radioactive, Nuclear, and Explosive) weapons under the Chemical Weapons Convention since 1993. The convention's purpose is to eradicate all types of weapons of mass destruction by preventing participating states from developing, producing, acquiring, storing, retaining, transferring, or using chemical weapons, including those developed, produced, and used. The poisoning of Alexei Navalny in 2020 with the nerve toxin Novichok sparked widespread concern about the topic of chemical weapons in the twenty-first century. This study combined qualitative methodologies with descriptive analyses to better comprehend the incident. Strict enforcement, increased international collaboration, and improved detection technology are critical to preventing their spread. This episode worsened relations between Russia and the West, highlighting the breakdown of standards prohibiting the use of chemical weapons. The same nerve toxin was used to poison Sergei Skripa and his daughter in Salisbury. This chemical is difficult to detect and has a quick and fatal effect on the human body. Its usage in attacks on humans has raised serious concerns around the world. As a result, a coordinated and comprehensive global reaction is required to confront the threat of chemical weapons while upholding international rules barring their use

INTRODUCTION

Chemical weapons, often known as chemical warfare agents, are weapons specifically created and employed with the deliberate goal of inflicting harm, incapacitation, or fatality by exploiting the poisonous properties of the chemical agent. Due to their capacity to inflict significant destruction and casualties, weapons that possess biological, radiation, nuclear, and explosive capabilities (C.B.R.N.E) are categorized as Weapons of Mass Destruction (WMD). Chemical weapons can be categorized according to many factors, including their chemical composition, physical form, level of toxicity, harmful consequences, and the specific organs they target. Chemical weapons are typically categorized into various categories, including Nerve Agents, Vesicants or Blistering Agents, Chemical Asphyxiants, Pulmonary Irritants, Tearing Agents or Riot Control Agents, and Incapacitating Agents (Kumaran et al., 2010).

Nerve agents are a highly significant category of chemical weapons. These agents are classified as either organophosphates or organophosphorus compounds based on their chemical structure. These compounds are known to be highly potent and toxic chemical weapons because they may effectively block the activity of the enzyme acetylcholinesterase. Chemical weapons, including nerve agents like Tabun and Sarin, have been employed in warfare, such as during the Iran-Iraq War from 1980 to 1988. Additionally, additional nerve agents like Sarin and VX have been utilized in terrorist attacks across several nations. Subsequently, a novel and very poisonous category of nerve agents emerged, which was later identified as Novichok (Voiţă-Mekereş et al., 2023).

The word "Novichok" refers to a novel class of nerve agents developed in Russia and the Soviet Union between 1971 and 1993 (Jeong et al., 2019). Although these poisons have not been employed in terrorist attacks or military operations, there have been recent reports of their use in poisoning multiple individuals in the UK (Grandlun, 2023). Furthermore, Andrei Zheleznyakov, a scientist in the Novichok development project, experienced unintentional contact with the Novichok agent. This exposure led to severe neurological harm, including liver cirrhosis, depression, epilepsy, impaired reading and concentration abilities, and permanent loss of arm function (Tucker, 2008). Hence, the profound toxicity of Novichok has been observed and substantiated in at least one instance. The complete disclosure of the structure of the Novichok agent, suspected to have been created as part of the covert 'FOLIANT' program, has not yet occurred.

The detection of a Novichok poison in two British cities led to the restoration of the Chemical Weapons Convention (CWC). The treaty, comprising 193 member states, clearly prohibits the production, manufacture, stockpiling, and use of chemical weapons. In November 2019, the Chemical Weapons Convention (CWC) signatories established a consensus to add the Novichok agent to the roster of substances requiring disclosure and verification following the treaty. More precisely, they unanimously agreed to add Novichoks, along with other types of chemical warfare agents categorized as carbamates, to Schedule 1. This list consists of compounds that serve little to no utility other than being utilized as chemical warfare agents or their precursors. These chemicals are subjected to strict limits and duties for disclosure. Reaching this amendment, the first modification to the treaty, was complicated.

Alexei Navalny was a prominent Russian lawyer renowned for his activism against corruption and a notable politician who achieved global acclaim as one of the most essential individuals worldwide. Navalny, a prominent political adversary of Russian President Vladimir Putin, was subjected to poisoning by the lethal Novichok nerve agent in 2020 and later faced multiple incarcerations. In February 2024, Russian authorities announced his demise during his incarceration in an Arctic penitentiary.

This research aims to examine and evaluate the utilization of chemical weapons, namely nerve agents like Novichok, in incidents such as the poisoning of Alexei Navalny, Sergei Skripal, and Dawn Sturgess. Researchers are investigating the effects of the potential use of chemical weapons in the 21st century, as well as the consequences for global security and international conventions. Furthermore, this research seeks to emphasize the necessity of more stringent law enforcement, enhanced international collaboration, effective ways to address the issue, and the advancement of detecting technology in order to prevent the proliferation of chemical weapons and uphold global security.

METHODS

The research employed a qualitative methodology with descriptive analysis. As defined by Creswell (2014), qualitative research is a strategy utilized to comprehend and investigate the significance of an individual or multiple groups of individuals relevant to social or humanitarian issues. The data collection in this study employs a literature review, as defined by Sugiyono (in Yunanda et al. 2022), to explore the social values, norms, and culture reflected in the data gathered from various sources such as books, online newspapers, journals, military records, articles, and other relevant documents about the article's topic.

RESULTS AND DISCUSSION

Alexei Navalny Poisoning

Alexei Navalny, a prominent Russian opposition leader, was poisoned with the highly toxic nerve chemical Novichok on August 20, 2020, resulting in his hospitalization in a critical state. Following his illness on the trip, he was transported to a hospital in Omsk and subsequently airlifted to Berlin, Germany. Novichok nerve agent was detected in Navalny's blood, urine, and skin samples, as well as on a bottle and various other objects. There is a suspicion that Navalny was poisoned before he departed from the hotel. Navalny passed away on February 16, 2024, in a correctional facility located in the Russian Arctic hamlet of Kharp, where he was serving a 19-year prison term. Navalny, a prominent adversary of President Vladimir Putin, had already been targeted in an assault in 2017 (Etkind, 2020).

The poisoning of Navalny has been conclusively attributed to the nerve agent Novichok, according to the findings of two designated laboratories: the Bouchet laboratory, which is under the Direction générale de l'armement, and the Umeå laboratory. The OPCW declared on October 6, 2020, that the analysis of samples taken from Navalny confirmed the existence of Novichok nerve agent. They stated that the biomarker found in Navalny's blood and urine samples, which inhibits cholinesterase, shares structural similarities with the toxic substances listed in schedules 1.A.14 and 1.A.15 of the Chemicals Annex to the Convention. These schedules were added during the 24th Session of the Conference of the States Parties in November 2019. These cholinesterase inhibitors are not included in the Chemicals Annex of the Convention. The precise compositions of the agents in question have not been revealed to the general public. However, based on the above statement, it may be inferred that the compounds share some resemblances.

The Russian authorities refuted their involvement in the poisoning. However, compelling evidence contradicts their claim. Novichok was a component of the covert chemical weapons program of the Soviet Union and Russia, indicating that only a limited number of nations, including Russia, could manufacture it. Russia, being the successor state to the Soviet Union, has a lengthy history of both creating and employing chemical weapons. The utilization of Novichok in the 2018 poisoning incident involving Sergei Skripal and his daughter in Salisbury, as well as the case of Dawn Sturgess, a resident of Wiltshire who tragically lost her life after coming into contact with the contents of a perfume bottle containing the nerve agent Novichok, serve as unequivocal illustrations of this phenomenon. Novichok is a very advanced substance that can only be synthesized using sophisticated technology. It has been employed in previous instances of poisoning. Navalny has faced political persecution due to his role as an opposition politician and his criticism of Vladimir Putin. This further substantiates the incriminating evidence implicating the Russian government.

The Treat of Chemical Weapons in the 21st Century

The poisoning of Alexei Navalny with the deadly agent Novichok has generated worldwide apprehension and acted as a stark reminder of the enduring danger posed by chemical weapons in the modern era. Although the 1993 Chemical Weapons Convention prohibited the manufacturing, stockpiling, and deployment of chemical weapons, this incident demonstrates that the ban has not been entirely successful. The utilization of chemical weapons by non-state entities or governments that fail to adhere to international legal standards poses a substantial obstacle in endeavors to hinder the spread of chemical weapons. These actors possess the means and materials required to produce chemical weapons, and they may not be dissuaded by international law or ethical standards that prohibit the deployment of such weapons.

The occurrence of chemical weapons usage in recent years has brought attention to the ongoing

danger posed by chemical weapons in the 21st century. The sarin gas attack in Ghouta, Syria, in 2013 and the Novichok incident in Salisbury, UK, in 2018 exemplify the utilization of chemical weapons for political and military objectives. The sarin gas assault in Ghouta was a highly lethal chemical weapons attack that ranks among the most deadly in modern history. Over one thousand individuals lost their lives, and thousands sustained injuries. This incident demonstrates that non-state actors and rogue regimes continue to possess chemical weapons and are prepared to employ them in order to accomplish their objectives. Moreover, the Salisbury incident involving the use of Novichok demonstrates that chemical weapons can be employed on a more limited scope yet nonetheless yield equally destructive consequences. Chemical weapons were employed in an attempt to assassinate a former Russian agent and his daughter within the territory of the United Kingdom. The assault sparked diplomatic turmoil between Russia and the Western nations, highlighting the potential utilization of chemical weapons as instruments in global power dynamics.

Effectively implementing the prohibition of chemical weapons is undeniably a formidable undertaking. While the Chemical Weapons Convention prohibits the manufacturing, stockpiling, and deployment of chemical weapons, it has several shortcomings when it comes to verification procedures. In the absence of an intense verification process, effectively monitoring and tracing the spread of chemical weapons becomes challenging, particularly in nations or areas that lack transparency or cooperation. Another obstacle is the existence of non-state entities and rogue governments that may disregard international rules. These groups potentially possess the resources and expertise required to manufacture chemical weapons. They might be inclined to employ such weapons regardless of the potential legal or political ramifications. This presents a significant peril to worldwide security and the region's stability. This challenge is enabled by the progress in technology and science, which can simplify the creation of chemical weapons. Research in nanotechnology and biotechnology can be utilized to create novel chemical weapons with enhanced efficacy, heightened concealment, and increased complexity in handling.

Implications for Global Security and International Norm

The poisoning of Navalny carries substantial ramifications for global security and international norms. The situation has deteriorated the relations between Russia and Western countries and has intensified fears regarding the spread and utilization of chemical weapons. In March 2021, US Secretary of State Antony Blinken concluded that the Russian government had employed chemical weapons in an assault on Alexei Navalny in August 2020, so it breached international legal norms. As a result of this discovery, the President was obligated to enforce economic and diplomatic actions according to the Chemical and Biological Weapons Control and Elimination Act of 1991 (CBW Act), requiring the President to impose economic and diplomatic measures (the Congressional Research Service (CRS), 2021).

The mounting evidence implicating Russia in the poisoning of Navalny has heightened relations between Russia and Western nations. Western nations have insisted on a transparent and comprehensive inquiry into the poisoning of Navalny and his subsequent release. The poisoning of Navalny has generated a politically uncomfortable predicament for Western politicians. In order to engage with senior Russian officials, it is imperative to simultaneously insist on the liberation of the Russian opposition leader (Wintour, 2020).

International laws forbidding the use of chemical weapons have weakened in recent years. Notable occurrences, such as the utilization of Novichok in the poisoning of Alexei Navalny and the sarin gas assault in Ghouta, Syria, have demonstrated that the global prohibition on the utilization of chemical weapons has been breached. The utilization of Novichok, a chemical armament devised by the Soviet Union during the era of geopolitical tension known as the Cold War, in the act of poisoning Alexei Navalny, an individual who openly criticizes the Russian government, has elicited global apprehension. Despite Russia's denial, it is widely believed that only governments possessing substantial resources can develop and employ chemical weapons such as Novichok.

An additional instance of a transgression of international rules is the sarin gas assault in Ghouta, Syria. Thousands were injured, and hundreds of people died in the attack. The incident was generally

attributed to Bashar al-Assad's administration by the international community despite the Syrian government's denial of involvement. These occurrences demonstrate that state actors and non-state actors are capable and willing to employ chemical weapons despite international restrictions prohibiting their use. This calls into doubt the efficacy of current international accords and conventions and emphasizes the necessity for more robust measures to stop the use of chemical weapons in the future. More international collaboration, stricter law enforcement, and the creation of new technologies for the detection and mitigation of chemical weapons are a few examples.

International collaboration is crucial to thwart the proliferation of chemical weapons. States should collaborate to exchange information and allocate resources in order to uphold international agreements that forbid the utilization of chemical weapons. The Chemical Weapons Convention (CWC) should be enhanced with more rigorous verification methods to guarantee adherence to the treaty. This could involve conducting more frequent and comprehensive inspections of establishments that are suspected of harboring chemical weapons. Research and development in chemical weapons detection and mitigation technologies is crucial. These technologies can enhance the ability to promptly and efficiently detect and respond to the utilization of chemical weapons. It is crucial to promote public consciousness regarding the hazards posed by chemical weapons and the need to prevent their spread. This may encompass educational efforts and training programs for experts in pertinent domains. States must pledge to enforce legislation that prohibits the utilization of chemical weapons. This may entail implementing more stringent penalties for infractions and enhancing collaboration in global law enforcement.

CONCLUSION

The 21st Century Chemical Weapons Threat has generated worldwide apprehension and acted as a sobering reminder of the enduring danger posed by chemical weapons. Although the 1993 Chemical Weapons Convention has banned the manufacturing, storage, and use of chemical weapons, the significant difficulty lies in the fact that non-state actors or regimes that do not adhere to international law continue to employ these weapons. The occurrence of chemical weapons utilization in recent times, exemplified by the sarin gas assault in Ghouta, Syria, in 2013 and the Novichok attack in Salisbury, UK, in 2018, demonstrates the potential for political and military exploitation of chemical weapons.

Implementing the prohibition of chemical weapons poses a substantial difficulty. Constraints hinder the Chemical Weapons Convention in its verification systems, which pose challenges in effectively monitoring and tracing the spread of chemical weapons, particularly in nations with limited transparency. The presence of non-state actors and regimes that defy international conventions is a difficulty due to their possession of the necessary chemicals and technology for manufacturing chemical weapons. The utilization of chemical weapons in certain instances, exemplified by the poisoning of Alexei Navalny through the deployment of the deadly agent Novichok, has escalated the tensions between Russia and Western nations. This indicates a decline in international standards that forbid the utilization of chemical weapons. The sarin gas attack in Ghouta, Syria, is a precise instance of breaching international conventions. The utilization of chemical weapons by actors, regardless of whether they are part of a government or not, raises significant concerns regarding the efficacy of current international standards and agreements.

Interstate collaboration is crucial in halting the proliferation of chemical weapons. States are required to collaborate in the exchange of information and allocation of resources, as well as in the enforcement of international regulations that ban the utilization of chemical weapons. Enhancing the Chemical Weapons Convention with more rigorous verification systems is also essential. Research and development in chemical weapons detection and mitigation technologies is crucial. It is crucial to raise public knowledge of the hazards associated with chemical weapons and the significance of non-proliferation. States should demonstrate a firm dedication to upholding laws that forbid the utilization of chemical weapons by implementing stricter sanctions and enhancing collaboration in international law enforcement.

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