<Index>

1. Why Does Australia Perceive China as a THREAT?: A Constructivist Point of View.  
   / Jungil Kang, Yooshin Im

2. Establishment of MILITARY Cooperative System for Disaster Relief in Northeast Asia.  
   / Hongje Cho, Sangjung Park

3. An Analysis of DRUG Manufacturing in North Korea and Smuggling in South Korea.  
   / Namseol Baek

4. A Study on the Influence Factors of Suicide TERRORISM.  
   / Seungpyo Hong

5. A Case Study on POLICE Activities for Effective Disaster Management.  
   / Seongcho Hong, Sanghun Lee

6. Evidence-Based Policing for Counter-TERRORISM in Korea.  
   / Eunkee Kim

J-INSTITUTE
Purpose: As the competition for supremacy between the United States and China intensifies, the strategic instability of neighboring countries is gradually increasing, and the Cold War era’s new competition structure, which requires the choice of one of two options: the United States and China, is being recreated. In this situation, Australia is the most active country in the US containment policy toward China, expressing concerns about the rise of China without filtering. This study attempts to examine the reasons ‘why Australia, which is located at a distance from China and has high economic interdependence, is recognizing China as a threat and actively participating in the US-led containment policy of China’.

Method: In this study, we will look at Australia’s policy toward China from the perspective of Constructivism in order to find out the factors that form Australia’s perception of threats to China. First of all, the framework of the analysis was formed through basic discussions on Constructivism, looking at the conflict between Australia and China, and focusing on the results of the survey that analyzed Australian people’s identity and historical perspective and perception of China by looking at the culture and perception formed in Australia, I want to achieve my research purpose.

Results: The United States and Australia are independent countries from the United Kingdom and share a racial, religious and cultural base. The United States and Australia, which have been working together to resolve important international conflicts and wars since World War I, maintain a solid alliance system based on ANSUS. Moreover, after the COVID-19 incident, the spread of hatred toward the Chinese in Australia, the expansion of China’s influence, and the issue of the South China Sea are rising, increasing awareness that the national interests of the United States and Australia are infringed. Australia, which shares its perception and identity of China from a constructivist point of view with the United States, will continue to actively cooperate with the United States’ containment policy toward China and strengthen cooperation with Western countries centered on the United States.

Conclusion: Although Australia is located in Asia, Australian identity, culture and historical values are closer to the Western world. As a member of the Commonwealth, Australia maintains partnerships in various fields, including politics, economic security and academia, along with the United States, the United Kingdom, Canada and New Zealand, which are expected to continue in the future. Australia, which has a Western identity, will strengthen cooperation with the Quad Council for stability and protection of national interests in the Indo-Pacific region and strengthen checks against China. Australia’s foreign policy can be assessed as being influenced by the national identity of the United States, which shares threats to China, and strengthens cooperation with security alliances such as the United States and the United Kingdom, which share traditional values and culture, to check China. I will do it.

Keywords: Australia, China, Constructivism, Quad, ANSUS
1. Introduction

With China’s recent expansion of national power and the U.S. policy of blocking China, the current global order is reproducing the Cold War-era competition structure, mainly in the U.S. and China. China is challenging the US, a dominant nation with the aim of 'cultivating a world-class strong force'. In addition, The U.S. has officially declared its rivalry with China under the slogan of "building peace through force," applying a policy similar to the Cold War-era containment policy applied to the Soviet Union with its allies [1].

Through the Indo-Pacific Strategy Report, the United States emphasized that it will further strengthen relations with existing allies and expand strategic partnerships with new countries to keep China in check [2]. In particular, while defining the strategic roles for Japan and Australia as major allies, Japan was expressed as a cornerstone of the alliance strategy, and Australia as a collaborating for security assurance [3]. In this situation, Australia is the most active country in the US containment policy toward China, expressing concerns about the rise of China. This study intends to examine why Australia, which is located far away from China and has high economic interdependence, recognizes China as a threat and is actively participating in the US-led containment policy of China.

This paper will analyze the current U.S.-China hegemony competition from a different perspective than the existing one, focusing on identity, ideology, and history, rather than on existing perspectives such as realism and liberalism.

2. Theoretical Consideration

2.1. The utility of constructivist theory

Focusing on the Cold War, the approach to national security has been centered on two axes: realism and liberalism. However, after the end of the Cold War, recognition of the parts that these existing approaches could not explain, and scholars raised fundamental questions and insisted that national security should be solved through a new approach. In this situation, the proposed approach is Constructivism. Research on the U.S.-China hegemony competition has been discussed by the theory of hegemony stability [4] and the theory of power war [5]. However, as an approach to national security, Constructivism provides an answer to how ethnic, racial, and religious issues that are not traditionally within the security realm affect international politics through the expansion of analytical units and levels of analysis.

Constructivism is an epistemological perspective that presents an ideological perspective on the properties of international politics, the principles that constitute and operate international politics, and the framework for analysis of the dynamics arising from those principles and properties [6]. Alexander Wendt, a representative constructivist scholar, said, “International order is not given, but is constructed and reconstructed through the interaction of subject and structure, and subject and object, individual and society, micro and macro levels do not exist dually [7]. It is constructed through interaction.” In other words, Constructivism assumes that international political phenomena are constructed and reconstructed through the interaction of the subject and the structure, rather than a given one, so that the concept variable and the role of the subject are important [8]. Constructivism would be useful as an analysis of the hegemonic competition between the U.S. and China outside the Cold War paradigm.

2.2. Features of constructivism

Constructivism argues that the international system has a structure that is not limited to physical things such as distribution of power, but is structured by the notions and norms of the cultural and institutional environment. In other words, the international order is constituted by
the distribution of idea, not the distribution of power[9]. It is argued that awareness and cultural environment determine the national identity, national identity affects national interests and security policies, and national policies recreate and reconstruct cultural and institutional structures again. Constructivism also emphasizes the importance of the actor's idea and discourse along with the structure. Factors such as ideas, norms, knowledge, culture, and discourse owned by the actor influence how the actor understands and regulates the material environment, and constitutes a worldview. Consequently, Constructivism argues that norms influence behavior because the actor's worldview, which is an ideological variable that determines human behavior, is more closely related to the group or relationship in which the actor belongs [10].

2.3. Constructivism and national interest

Morgenthau said, "Every state pursues the national interest, and to pursue this national interest, it seeks force or power," defining national interests as the power of the state, and argued that "power is both a national purpose and a means[11]." The concept of national interests may be relatively defined by the objective size of power rather than a fixed and unchanging absolute definition, and national interests may change depending on the current reality facing the state. This is because the specific content of national interests may change according to changes in domestic and foreign circumstances, and national goals may also change according to changes in national interests. Therefore, it is a saying that national interests cannot be consistent from time to time beyond time and space, and that they can be variable as much as possible. National interests are composed of values that form and maintain a national identity, and can be said to be a criterion for judging and directing the political actions of the state in order to protect and promote such a value system.

2.4. Framework of analysis

This study will look at Australia's foreign policy toward China from the perspective of Constructivism, which analyzes national policy based on national identity based on historical and cultural backgrounds in order to examine why Australia perceives China as a threat. First of all, the framework of the analysis was formed through basic discussions on Constructivism, looking at the conflict between Australia and China, and focusing on the results of the survey that analyzed Australian people's identity and historical perspective and perception of China by looking at the culture and perception formed in Australia, we want to achieve our research purpose.

3. Conflict Patterns Between Australia and China and National Interests

3.1. COVID-19 and trade friction

In the face of growing debate between the U.S. and China over the origin of Covid-19 in 2020[12], diplomatic conflicts, including trade sanctions, have been escalating since Australian Prime Minister Scott Morrison defended the United States in April and called for an international objective investigation into China over the COVID-19[13]. Since May 2020, China has imposed economic sanctions, halting some imports of Australian beef and imposing an 80.5% tariff on Australian barley[14]. Conflicts between the two countries are intensifying, with Australia filing a complaint with the World Trade Organization over China's economic sanctions as China expands its trade sanctions[15].

In addition, China's influence in Australia is expanding around the economic sector [16]. In 2019, Australia's total exports amounted to $390 billion, of which China's exports amounted to about $150 billion, accounting for 38.1 percent. As Australia made a move to contain China's influence, China's strong opposition to it, triggered a trade conflict between the two countries. Since 2015, China's economic share has continued to increase, and 8% of jobs in Australia are
created in China-related fields. As Australia moved to check China's influence, China strongly protested against it, sparking a trade conflict between the two countries.

3.2. Expansion into the field of security

The conflict between Australia and China extends beyond the economic field to diplomacy and security. In May 2020, China restricted travel and study abroad, recommending to refrain from visiting Australia from June due to increasing racism related to Covid-19 in Australia. In addition, from June to September 2020, the diplomatic conflict between the two countries gradually intensified, with the two countries implementing sanctions such as search and seizure of journalists and scholars and the ban on entry, respectively, for undermining national security. In November 2020, China unveiled Australia's 14 anti-China policies and strongly urged Australia to withdraw its policies[17]. In addition, on November 30, 2020, a Chinese Foreign Ministry spokesman posted a composite photo on Twitter of accusing Australian soldiers of the massacre of civilians in Afghanistan, and the Australian government revolted greatly.

3.3. South China Sea dispute

The Chinese government has sought to boost Southeast and Southwest Asian economies and establish the South China Sea as a direct link through the construction of 'One belt, One road initiatives'[18].

'One belt, One road' is a Chinese-led "New Silk Road Strategy Initiative," which refers to the Silk Road Economic Belt in inland and offshore areas. It is a large-scale project to rebuild the modern Silk Road, an ancient East-West transportation route, for 35 years(2014-2049) to open the way for China and neighboring countries to expand their economic and trade cooperation. It began with President Xi Jinping’s proposal in 2013, and as of 2021, more than 140 countries and international organizations participate. A total of five routes, including three inland and two offshore, are being promoted.

As a result, friction with Australia is also escalating as China’s threat in Southeast Asia, including the South China Sea dispute. The South China Sea is a major maritime transportation and strategic hub connecting Northeast Asia, the Indian Ocean and the Pacific Ocean, a trade route through which 50% of the world’s oil tankers pass, and a treasure trove of resources rich in underground and marine resources. For Australia, the South China Sea is a key region necessary for acquiring resources and maintaining its influence in Southeast Asia, and friction with China, which infringes on “freedom of navigation,” is inevitable.

3.4. Strengthening China’s influence in the Australian region

China's debt diplomacy has been criticized for promoting military bases in the form of leases in ports of South Pacific countries by imposing debts that China cannot afford to these countries in the name of joint development while pursuing 'One belt, One road'[19]. In this way, China established an overseas military base in Djibouti, a small African country, in 2017, and is also attempting to establish a military base and secure ports in Australia.

On April 9, 2018, the Australian daily newspaper Sydney Morning Herald and others reported that China is lending about half of the foreign debt of Vanuatu, which is close to Australia, of $440 million. It was reported that negotiations were held to establish a military base under the pretext of such economic assistance such as using ports of Batuatu and Naval Vessels, establishment of military bases, including supply of supplies. In addition, in November 2019, China proposed the construction of an artificial island in Tuvalu in the South Pacific Ocean and attempted to expand its influence in the South Pacific region, requesting a break with Taiwan. Chinese companies have proposed to Tuvalu to build an artificial island to help cope with the problem of sea level rise, but Tuvalu did not accept it. China is reinforcing its influence not only through artificial islands but also through economic aid, so the South Pacific Solomon Islands
and the Republic of Karibati broke up relations with Taiwan in September 2019 and established diplomatic relations with China.

4. Factors Shaping Threat Perception Toward China

4.1. Identity perspective: race, language, norms, religion

Australia became a British colony in August 1770 when British James Cook advanced to Australia. On January 1, 1901, Australia became independent from the British colony and started as an independent state, guaranteed freedom of speech and religion, but still remains a member of the Commonwealth, and from December 11, 1931, the Westminster Charter has been applied. Although independent from the UK, Australia still has a strong relationship with the UK.

Australia has a population of 2.99 million as of January 2020, of which 80% of Anglo-Saxons, 18% of other European and Asian descents, and 2% of Aboriginal and other indigenous peoples are white-centered society. In addition, 67% of Australia's citizens believe in Christianity and speak English as their official language. Australia is geographically located in Asia, but has a national identity close to the Western world, centered on the motherland of Britain. Like Australia, the British colony formed deep ties with the United States, which gained independence in 1776, in terms of political system, culture, and lifestyle.

Figure 1. Australian population composition.

4.2. Historical perspective: the history of the alliance

To protect national interests, Australia is strengthening its national security, centering on cooperation with Western countries, including the United Kingdom and the United States, which are traditional security alliances. In particular, the United States and Australia have been together in important conflicts and dispute since World War I, and have since fought in all wars with the United States. The United States and Australia have formed an alliance based on the ANZUS(Australia New Zealand and United States Treaty) signed on April 29, 1952. ANZUS originated from the fact that Australia and New Zealand, which were invaded by Japan during World War II, were concerned about the threat from Japan and demanded an active form of security from the United States prior to signing the peace treaty with Japan. Conflicts with the United States escalated after New Zealand's declaration of anti-nuclear policy in July 1984, and the military alliance treaty was lost in 1986 when the United States announced a suspension of its duty to defend New Zealand. Currently, it has been converted into a bilateral military alliance between Australia-New Zealand and US-Australia. In February 2021, Australian Prime Minister
Morrison announced to the media that he would invite US President Biden to Australia in September to mark the 70th anniversary of the signing of the Pacific Security Council. This shows that the historical relationship between Australia and the United States is strong.

In addition to ANSUS, the United States and the United Kingdom have a special relationship called Five Eyes. Five Eyes refers to the five countries of the United States, United Kingdom, Canada, Australia and New Zealand that have joined the 'UK-USA Security Agreement(UKUSA)'. The etymology of Five Eyes comes from the U.S. class of classified documents, "AUS/CAN/NZ/UK/US Five Eyes ONLY". Since all five Five Eyes countries follow the Anglo-American law, which is a British and U.S. law, it is easy to cooperate in law and collect information that shares signal information systems. Five Eyes countries share a classified network of the Pentagon and the State Department and collect signal information from around the world.

4.3. Perception of China

Australia's independent constitution in 1901 stipulates that "white states, the exclusion of colored people, Anglo-Saxons, first of all, will remain loyal to the United Kingdom with a British monarch as its head of state". Australia's first policy as a new country was a white-Australian policy that only accepted white immigration and closed its doors to most peoples in the world. This policy was applied in Australia until it was abolished in 1973.

The background of white Australia was the biggest factor in the conflict with Chinese immigrants, which surged after the gold rush in the 1850s[20]. This perception of Chinese remains, and according to the 2020 Poll 2020(24 June 2020)[21] conducted by the Lowy Institute, only 23% of confidence in China, with most Australians trusting the United Kingdom(84%), Japan(82%), and the United States(51%). In a survey on the relationship between Australia, the United States and China, three-quarters(78%) of Australians said that the alliance with the United States is very or considerably important to Australia's security.

Figure 2. Country-specific preferences in Australia.

5. Conclusion

Based on the historical perception and culture of the people, it is formed in the identity of the country, and the identity of the country is reflected in the national policy, and the national policy forms the identity of the country. It was found in constructivism that the aforementioned research question, 'why Australia, which is located at a distance from China and has high economic interdependence, is recognizing China as a threat and actively participating in the US-led containment policy of China'.

In the conflict between Australia and China, the anti-Chinese sentiment of the Australian people is spreading due to trade issues after COVID-19, China's expanding influence in Australia,
and the South China Sea issue. In particular, while Australia’s dependence on the popular economy continues to increase, the conflict with China is highly likely to expand to all fields, including the press, academics, and diplomacy. Against this backdrop, Australia is striving for peace and security from North Asia, including the Indian and Pacific regions, to the East Asia-Pacific regions, fearing that strategic competition between the U.S. and China will expand beyond the Indo-Pacific to Australia’s regional stability.

Australia’s geographic location is in Asia, but Australia’s identity, culture and historical values are close to the Western world. Australia’s foreign policy can be assessed as being influenced by the US national identity, which shares the perception of threats to China. Australia will pursue national interests from China by actively participating in the Quad while strengthening cooperation with security alliances such as the United States and the United Kingdom, which have shared traditional values and culture to keep China in check[22]. We need to pay attention to the impact of Australia’s actions in response to the rise of China on the change in the security environment on the Korean Peninsula[23].

6. References

6.1. Journal articles


6.2. Books


6.3. Additional references


7. Appendix

7.1. Authors contribution

<table>
<thead>
<tr>
<th>Initial name</th>
<th>Contribution</th>
</tr>
</thead>
</table>
| JK Lead Author | -Set of concepts ☑
|               | -Design ☑
|               | -Getting results ☑
|               | -Analysis ☑
|               | -Make a significant contribution to collection ☑
|               | -Final approval of the paper ☑
|               | -Corresponding ☑
|               | -Play a decisive role in modification ☑
|               | -Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑
|               | -Participants in Drafting and Revising Papers ☑
|               | -Someone who can explain all aspects of the paper ☑
| VI Corresponding Author* |
Establishment of MILITARY Cooperative System for Disaster Relief in Northeast Asia

Hongje Cho¹
Korea National Defense University, Nonsan, Republic of Korea

Sangjung Park²
Korea National Defense University, Nonsan, Republic of Korea

Abstract

Purpose: This study aims to establish international systems and cooperative relations for disaster relief, one of the non-traditional security threats, to strengthen security cooperation in Northeast Asia, and to expand and strengthen them to traditional concepts of security threats, thereby contributing to the stability and prosperity of Northeast Asia.

Method: This study applies functional approach of regional security cooperation. It covers empirical case study to strengthen regional security cooperation and contribute to peace, stability and prosperity in the region through national and transnational cooperation such as state actors, non-state actors, NGOs(Non-government Organization), and so on.

Results: Humanitarian Assistance and Disaster Relief(HA/DR) issue, one of the non-traditional security threats, has been emerged as new security issues. Therefore, Republic of Korea(ROK) military needs to establish various measures and the role of disaster relief for international cooperation. Korea should also recognize the importance of these problems and study ways to mitigate them.

Conclusion: HA/DR is on the human security agenda as one of the non-traditional security threats and is a growing international security issue. Nowadays, HA/DR extends the traditional concept of security threats. In conclusion, the ROK military should play a key role in strengthening security cooperation in Northeast Asia. The active participation of the ROK military will contribute to the stability and prosperity of Northeast Asia.

[Keywords] Disaster Relief, Non-Traditional Security, Cooperative Security, Humanitarian Assistance, Operations Other Than War(OOTW)

1. Introduction

This study aims to establish an international cooperative system for disaster relief, to strengthen security cooperation in Northeast Asia, and to expand security threat areas from traditional factor to non-traditional factors, thereby contributing to the stability and prosperity of Northeast Asia.

Functionalist stands to be overlooked when discussing regional security cooperation in Northeast Asia. It is facing transnational(non-traditional and human security) security threats from Northeast Asian countries, each country is expanding its security agenda or redefining the concept of security in line with globalization, and security experts and policy makers are also increasing interested in non-traditional security threats.

There is a limit to dealing with such non-traditional security threats and challenges as a single country. Disaster preparedness cooperation issues are becoming an important issue in the Asian Regional Forum(ARF) and defense sectors. Major events of non-traditional security threats in the world were as follows:

- April 2009: International law discussion on disaster preparedness in Beijing, China
- May 2009: Joint training in Subic Bay, Philippines
April 2010: A disaster preparedness seminar in Honolulu

Local countries recognize the need for regional cooperation on such security challenges, but they still value the concept of national sovereignty and non-intervention, and regional cooperation is difficult due to the lack of ability of each country. Accordingly, we want to strengthen security cooperation through a functional approach. It aims to strengthen regional security cooperation and contribute to peace, stability and prosperity in the region through national cooperation, cooperation between state and non-state actors and cooperation by non-state actors. We also cover regional cooperation measures and roles between the state and NGOs.

**Figure 1.** Disaster occurrences and impacts, by region, 2005-2017.

The analysis of disaster occurrences and impacts by region from 2005 to 2017 is as shown in Figure 1. Asia had the second highest occurrence rate after Americas, but had the highest rate of casualties, damage, and total economic loss.

**Figure 2.** Number of disasters by continent and top 10 countries.

Number of disasters by continent and top 10 countries¹
<Figure 2> shows the number of disasters by continent and by top ten countries. The number of disasters was highest in Asia with 161 cases, with Indonesia, China and Vietnam particularly high.

2. Disaster Situation in Northeast Asia

2.1. Current status of disaster occurrence

There were earthquakes in Haiti and disasters in Chile around the world. The U.S., France, Russia, Canada, Australia and South Korea supported this. In particular, the U.S. dispatched 2,000 Marine Corps troops in addition to military transport planes, helicopters and naval warships to help save lives and excavate bodies. In addition, international organizations such as the World Food Program have taken measures to support emergency food supply.

Figure 3. Occurrence by disaster type: 2020 compared to 2000-2019 annual average.

According to statistics from the International Strategy for Disaster Reduction (ISDR), about 30% of the world's 5,000 disasters in 1991-2005, or 1,500 cases, occurred in Asia. Moreover, from 2000 to 2019, the average number of disasters was 368, but in 2020, due to increased floods, storms and earthquakes, that number rose to 389 in a year.

In comparison to the previous two decades (2000-2019), 2020 was higher than the annual average in terms of the number of recorded events and the annual average of economic losses, which is US$ 151.6 billion. There were considerably fewer deaths compared to the annual average of 61,709 and fewer people directly affected compared to the annual average of 201.3 million people. This decrease in impacts is due to the absence of mass casualty events, such as the 2004 Indian Ocean Tsunami (227,000 deaths) and the 2010 Haiti Earthquake (222,500 deaths) or high impact events, such as the 2015/2016 drought in India (330 million people affected). However, in 2020 there were 26% more storms than the annual average of 102 events, 23% more floods than the annual average of 163 events, and 18% more flood deaths than the annual average of 5,233 deaths [1].

An earthquake in China magnitude 8.0 killed about 70,000 people, injuring 400,000 or missing. Economic losses amounted to millions of dollars, and cyclones in Myanmar killed about 130,000 people and went missing.

2.2. Increasing domestic disaster cases

In Korea, similarly to other countries, the damage caused by disasters is increasing [2]. On January 26, 2018, a fire broke out at Sejong Hospital in Miryang, killing 50 people and injuring 142 others [3]. Most of the victims were elderly patients, but the evacuation plans for elderly patients who were unable to move were insufficient [4], and many mid-term disaster agency officials, including Cheong
WaDae, showed interest in the site to the on-site commander, which also affected the on-site command.

On April 29, 2020, a fire broke out at the construction site of the Icheon Logistics Center, killing 38 people and injuring 10 others. The scene in which the CEO of the construction company fainted while coming out of the press conference due to the accident clearly showed that the priority task should be to prepare for the crisis[5].

What the above-mentioned accidents have in common is the accident that has developed into a major disaster because it did not work properly at the disaster site, although it had a manual on the crisis situation.

3. Non-traditional Security Threats and the Role of the Military

3.1. Introduction

In Northeast Asia, regional cooperation and integration were prominent in the economic sector between the mid-1990s and the early 2000s. However, the institutionalization of this cooperation is still at a rudimentary stage[6].

This is because not only are historical and political issues between countries in the region an obstacle, but also there is an insufficient institutional mechanism for multilateral cooperation, and no country in the region is leading the cooperation process responsibly.

Of course, in recent years, broad security concepts and issues covering non-traditional security issues such as the economy, the environment and human rights, as well as military and political issues not only at the intergovernmental level but also at the professional level, have been discussed as various agenda items for regional cooperation.

However, given that all discussions and proposals to institutionalize regional multilateral cooperation require a specific review of the coordination of interests and position differences and policy directions, it is never an easy task to create a regional security community that will satisfy every country in the region. Moreover, comprehensive security paradigms need to be developed, including the co-existence of "19th-century security threats" such as fierce competition for regional leadership in Northeast Asia or potential hegemony competition between China and the United States, as well as "21st-century security threats" such as terrorism, famine, human rights abuses, environmental pollution, food shortages, energy problems, and infectious diseases.

Although the ASEAN Regional Forum(ARF) has made significant progress providing confidence-building mechanisms, it remains inconsistent in moving towards a shared goal of collective defense arrangements and this raises the issue of the ARF's overall efficacy in the region[7].

3.2. Multilateral security cooperation and the role of the Korean military

Under the disaster, the need to establish a new role for the South Korean military has been raised. The South Korean military should turn its attention to the importance of a new international security threat that has been developing since the Cold War, breaking away from its single defense goal of dealing with North Korea's military threats over the past 50 years. Today, the international situation has entered the post-Cold War era, and in particular, the core task of national defense since 9/11 is gradually shifting from war between countries to conflict between countries and non-state groups.

In accordance with Article 5(2) of the Constitution, the Korean military shall perform the sacred duties of national security and national defense[8]. Article 1 of the Military Service Act also stipulates the military service obligations of Korean citizens.

To this end, the Military Demarcation Line and other front and rear border missions are being carried out. A new mission will, however, have to be added under the new security climate.

In 2004, the Ministry of National Defense decided to make the military "basic mission" in terms of "operations other than war(OOTW)" for national disaster support. As a result, the ROK Armed Forces added disaster management and public support to the military's original mission and established a
comprehensive training system. The Ministry of National Defense institutionalized the government-military cooperation system by signing a disaster cooperation agreement with the Central Disaster and Safety Countermeasures Headquarters and designating units that can be supported by local governments in advance.

3.3. Military experience in humanitarian assistance and disaster relief (HA/DR)

The Asia-Pacific region has frequent natural disasters and disasters that cost countless lives, property and infrastructure. Military operations are appearing somewhat differently depending on the situation in each country. In some countries, military operations have been the main focus, while in others, they have the support or complementary role of civilian organizations. Military power plays a very important role in disaster relief in terms of capacity and assets. ARF Member States have domestic laws or regulations on disaster relief by military force. Military operations also provide methods of deploying personnel on the ground, equipment, technicians, and medical facilities. When huge infrastructure is destroyed, the military could help rebuild it. It is clear that military power can play a very important role in dealing with the consequences of disasters in minimizing the loss of life and damage, swiftly reconstruction, recovery, and returning to a permanent state. However, military power should be used as a final means and should not play a long-term and continuous role in humanitarian aid and disaster relief operations.

Legal issues arise over the use of military force in carrying out disaster relief operations. There are many norms for the use of military and private assets in disaster relief. At the national level, some countries have enacted domestic laws or regulations that guide the use or operation of military force in disaster situations. Other countries have also adopted internal operational procedures to enable the use of military force. At the international level, the United Nations provides comprehensive guidelines for cooperation under the Oslo Guidelines on the Use of Military and Private Assets in Disaster Relief[9].

At the same time, there is a framework for regional cooperation, such as humanitarian assistance and disaster relief (HA/DR) within ASEAN or ARF. It is important to respect international codes of conduct or principles for cooperation in disaster relief operations. The main responsibility for responding quickly and efficiently within the territory of the country where the disaster occurred lies with the affected countries.

If necessary, the affected countries must take steps to enable external assistance from other countries or international organizations to respond quickly and effectively to disasters. External support shall be provided with the consent of the affected country (receiving country) and shall be provided under the control or supervision of the receiving country. It is also necessary to abide by the humanitarian principles of human rights, neutrality and inconvenient injustice. The military faces a series of legal problems in humanitarian disaster relief.

These issues include safety issues under the receiver’s responsibility, proper lines of intervention, the wearing of uniform, and the possession of appropriate weapons. Other issues include exemption from privileges, guaranteeing diplomatic privileges, the authority to fly over the air, customs issues, obligations and dispute resolution. There is no single model or solution that is collectively unified due to different disaster relief policies, cultures and political systems. Nevertheless, we need to create harmonization between different legal issues and measures.

4. Lessons about Civilian-Military Relations in Disaster Relief

4.1. Quick response

Disasters such as earthquakes and tsunamis that are beyond the capabilities of prediction or general rescue teams are unprepared as they require large-scale missions. In order to cope with these problems, it is necessary to establish a disaster preparedness between civilian and military agencies. Rapid response is the most important factor in the early stages of disaster relief to minimize casualties.
- Facilitate effective and coherent sharing of information.
- Contribute to achieving common situational awareness.
- Facilitate development of realistic indicators and benchmarks
- Assist with transition planning.
- Advise on the appropriate foreign military assets (FMA) to be deployed/employed.
- Request for assistance for use of FMA.
- Contribute to establishing a needs-based and demand-driven system.
- Provide a predictable and effective coordination mechanism.
- Provide a structure for host nation/humanitarian actors to define priorities and needs, and military actors to plan and execute.

4.2. Providing proper information

The environment in which disaster situations occur is generally very chaotic. And it is very difficult to assess the exact situation decisive to disaster relief. This information enables the allocation of manpower and resources. Communications must be set up directly in disaster areas, and accurate information must be provided to the applicant countries[10].

4.3. Meet the needs

Natural disasters not only cause enormous human and property losses but also destroy human life itself. Disaster relief must therefore meet the needs of victims over time and be carefully planned. In summary, the purpose of HA/DR is to respond effectively to disaster situations to bring humanitarian assistance to populations[11].

4.4. Disaster relief should be carried out step by step

Rescue activities, medical support, food and accommodation in the search and rescue stages, stabilization stages, reconstruction and rehabilitation stages are the main contents required in the early stages. Following the stabilization phase, in the reconstruction and rehabilitation phase, medical aid will continue to be needed, and the main focus will be to relocate victims, clean up destroyed things and provide other related items. Proper support and assistance will only be obtained if the demand is accurately identified at various levels.

4.5. Cooperation and adjustment

Cooperation is another important factor in ensuring the success of disaster relief operations. Unilateral support will result in duplication, waste or responsibility. Cooperation in disaster relief is needed to maximize profits.

4.6. Professional ability

Disaster relief operations shall form a multi-functional expert team for planning, organizing, directing, and controlling disaster reconstruction gln. Early search and rescue teams require participants to be well trained in the field of disaster relief operations, including rescue experts, medical doctors and assistants, chefs and drivers.

4.7. Finance

The financial problem is an important factor in any rescue operation. It can be an important limiting factor. The budget to support relief operations must be organized in advance in most countries The reason why they can’t carry out their own relief operations is because they use the budget to do so. This is because there is no basis for applying.

4.8. Strengthen international disaster relief cooperation
Disaster relief became an important issue after the 2004 Asian tsunami. There have been many regional and international forums on how to strengthen humanitarian aid and disaster relief operations.

4.9. The concept of military intervention

Many disaster-hit countries are skeptical of military intervention in humanitarian disaster relief, especially the involvement of armed forces as a violation of sovereignty. In fact, the weapons that soldiers carry in relief operations are intended to defend themselves when the recipient country is unable to provide adequate defense to the applicant countries. Nevertheless, in order to gain their trust and commitment, humanitarian disaster relief. Hosi's military intervention focuses on crisis response, and can be implemented in a short period of time. It has to be done with the enemy.

4.10. Need a legal basis

Not every country can prepare itself for every crisis. As seen in the tsunami in Aceh, Nazar in Myanmar and Sincheon in China, any country on the planet is potentially in need of international support. When a disaster goes beyond a country’s capacity, international relief agencies or NGOs try to provide support to the government. These organizations provide a great deal of supplies, equipment and manpower that run counter to domestic laws and regulations.

4.11. The civilian-military cooperation system

Civil-military cooperation shall be strengthened to maximize the effectiveness of cooperation in disaster treatment. Strengthening international civilian-military cooperation increases synergy, shares information, and guarantees the economic feasibility of efforts, prevention of duplication, etc. However, it must be acknowledged that there will be many difficulties due to different cultures and approaches to achieving common goals. Efforts to emphasize a sense of Community and minimize differences are very important[12][13].

4.12. Build your skills

International efforts to strengthen humanitarian disaster relief cooperation could be further strengthened by building capabilities between countries.

4.13. Cooperation

Cooperation is another important factor in ensuring the success of disaster relief operations. Unilateral support will result in duplication, waste or responsibility. Cooperation in the event of disaster relief shall be necessary to maximize profits, and cooperation shall be jointly responsible for the operation of liaison officers or joint training.

5. Limit and Prospect of Institutionalization of Security Cooperation

As a catalyst, non-military security threats are also increasing in Northeast Asia (terrorism, environment, and disaster disasters in the region). International disaster-response cooperation in Northeast Asia has lagged behind that taking place in Southeast Asia, where relevant initiatives have been led by ASEAN. In this context, establishing a hub for civil-military disaster-relief activities in Northeast Asia would provide a noteworthy opportunity to strengthen regional capacity[14].

As a result, joint maritime training agreements between China and Japan, defense ministers' talks between South Korea, China and Japan, maritime rescue drills and disaster drills were held. China is stepping up its military diplomacy against non-military threats. In other words, it is aimed at enhancing transparency, selling high-tech weapons in the country, and securing leadership in the military security sector in the region. The main contents are strengthening military diplomacy, agreeing on joint military training between Japan and China, and visiting high-level military personnel.
In order to strengthen military cooperation between Korea and Japan, the Korea-Japan Defense Ministers’ Meeting, PKO Cooperation, and Korea-Japan Joint Maritime Training were agreed. It also made joint efforts to prevent accidental aircraft crashes between South Korea and Japan. Among the constraints on the institutionalization of security cooperation are traditional military confrontation zones, historical and emotional issues, and hardware problems such as border and maritime disputes (such as Dokdo between Korea and Japan and Jeodo Island between China and Japan). There is also a security dilemma (the issue of China and the United States).

From a comprehensive perspective, we recognize the need for international cooperation due to major disasters such as China's Tsu Shenzheng Earthquake and the tsunami in Southeast Asia, and we also share the perception that there is a limit to one country's response to menstrual and non-traditional security threats such as terrorism, drugs, environmental destruction and the spread of disease, and that an international cooperative response system is essential. In particular, China’s contribution diplomacy, the common nationalization of the Japanese government, Korea's global diplomacy, and the limitations of the unilateral diplomatic attitude of the U.S. are further increasing the possibility of security threats or military cooperation against non-traditional security threats and disasters. Therefore, there is a growing perception that it is time to establish an emergency military cooperation organization for disasters, network information sharing, and establish a crisis management system, and the cooperative atmosphere on non-traditional security threats is being further strengthened.

6. Strengthening Cooperative Relations

6.1 Basic direction

It will have to contribute to ARF in regional and international cooperation in responding to or mitigating natural disasters locally. The current ARF framework or initiative is very useful to build a framework for capacity building or cooperation. In addition to normative preparation, they agreed on the need to enhance their ability to deal with disasters and further establish a permanent organization for disasters [15]. In particular, it is necessary to establish concrete partnerships beyond the level of dialogue within ARF.

High-level talks on security, regularization of cooperation dialogue, and utilization of existing cooperation are needed. "It is necessary to strengthen and expand the Asian cooperation network by actively participating in various multilateral consultative bodies such as the ASEAN Regional Forum (ARF), the East Asian Summit (EAS), and the Asia Cooperation Dialogue (ACD).

6.2. Establishment of international cooperative relations

It is necessary to establish a military disaster cooperation organization, secure a disaster management cooperation channel that shares information with related countries and shares human and material resources. In other words, it is necessary to regularly promote security cooperation dialogue in Northeast Asia and establish an international register against disasters in Northeast Asia.

In addition, domestic and international institutional legal arrangements are needed. Specifically, it is necessary to establish an Asian Transport Coordination Center in reference to European Cases (MCCE) (some EU and NATO member countries have established a transport coordination center for strategic aviation and maritime transport cooperation. July 1, 2007, Eitenhoven, the Netherlands).

In addition, we need to share information on humanitarian disaster relief (open portal sites, establish an early warning system through satellite information), develop and operate education and training programs [16][17]. We also need to establish multilateral security cooperation relations and conduct joint drills regularly. We need to raise funds for disaster relief and improve equipment and comprehensive training systems. For humanitarian disaster relief, our military should also establish a multinational cooperation system along with establishing all-round security and military preparedness. Non-military threats are global, but they cannot be dealt with by the power of one country alone and...
need to be dealt with internationally. To that end, it is necessary to provide a legal basis for military support.

7. Conclusion

Humanitarian Aid and Disaster Relief (HA/DR) issue, one of the non-traditional security threats, have emerged as new security issues. Therefore, ROK military also needs to establish various measures for disaster relief, and the role of the military in disaster relief and international cooperation play a very important role. Furthermore, Korea should recognize the importance of these problems and study ways to develop them.

8. References

8.1. Journal articles


8.2. Books


8.3. Additional references


[4] Park JH. Why the Death Toll at Sejong Hospital was High, the Elderly and the Mobility Impaired. Yonhap News (2018).


9. Appendix

9.1. Authors contribution

<table>
<thead>
<tr>
<th>Initial name</th>
<th>Contribution</th>
</tr>
</thead>
</table>
| Lead Author  | - Set of concepts ✔  
|              | - Design ✔  
|              | - Getting results ✔  
|              | - Analysis ✔  
|              | - Make a significant contribution to collection ✔  
|              | - Final approval of the paper ✔  
|              | - Corresponding ✔  
|              | - Play a decisive role in modification ✔  
|              | - Significant contributions to concepts, designs, practices, analysis and interpretation of data ✔  
|              | - Participants in Drafting and Revising Papers ✔  
|              | - Someone who can explain all aspects of the paper ✔  
| Corresponding Author* | SP  
|              | - Set of concepts ✔  
|              | - Design ✔  
|              | - Getting results ✔  
|              | - Analysis ✔  
|              | - Make a significant contribution to collection ✔  
|              | - Final approval of the paper ✔  
|              | - Corresponding ✔  
|              | - Play a decisive role in modification ✔  
|              | - Significant contributions to concepts, designs, practices, analysis and interpretation of data ✔  
|              | - Participants in Drafting and Revising Papers ✔  
|              | - Someone who can explain all aspects of the paper ✔  

Abstract

**Purpose:** North Korea's drug production and trafficking have the longest history of illegal activities by the North Korean authorities as a means of earning foreign currency. In the 1990s, scientists smuggled large quantities of drugs from North Korea's Suncheon and Pyeongseong pharmaceutical plants to China. Drug manufacturing and trafficking in North Korea is a well-known public fact. Drugs from North Korea are being smuggled into South Korea through China through various methods. The purpose of the study is to block the entry of North Korean drugs into South Korea.

**Method:** Define the concept of drugs and methamphetamine, look at the background of North Korea's trafficking, the status of smuggling to the world, the production and distribution of drugs in North Korea are handled at the national level, and analyze how they are smuggled into South Korea.

**Results:** Drugs have been manufactured in the mountains of North Korea, which are hard to find outside, and are flowing into South Korea through China. Smuggling methods are highly intelligent, mainly using diplomatic bags, hidden in other goods of merchants, etc. Drugs in circulation are in large quantities and are understood to be in circulation at various stages.

**Conclusion:** The reason why North Korea produces, manufactures and trafficks drugs is to cover insufficient foreign currency and use it as a cost of maintaining the regime. It is necessary to strengthen cooperation between South Korea and neighboring countries to prevent smuggling of North Korean drugs into South Korea, expand the international drug crime investigation organization, and strengthen investigation capabilities.

**Keywords** North Korea, Drugs, Methamphetamine, Drug Manufacturing, Drug Trafficking

1. Introduction

This The legal definition of narcotics defines narcotics as drugs, psychotropic drugs and hemp. According to the World Health Organization, the desire for drug use is compulsory, the amount of drugs tends to increase, withdrawal occurs, and this phenomenon is defined as a drug that harms society, not just individuals.

Therefore, in summing up these contents, narcotics can be defined as substances that are human-dependent and abused and that are responsible for drugs, marijuana, and psychotropic drugs. It also identified the concept of methamphetamine and the characteristics of methamphetamine addicts. North Korea produces and manufactures drugs at pharmaceutical plants and smokes them to China through diplomats, security guards, and traders.

National Guard personnel dispatched to China are making foreign currency by trafficking methamphetamine in Jangbaek, Yeongil, and Shenyang. North Korean drugs are flowing through China to neighboring countries. The method of smuggling into Korea is highly advanced and intelligent, and North Korean drugs are imported into South Korea using international students,
housewives, and peddlers. Drugs brought into Korea will be spread throughout the country through sales measures in Korea[1][2].

However, whenever illegal activities such as drug manufacturing and drug trafficking are detected, the North Korean authorities deny the crime itself or insist that it is an individual’s deviation. Therefore, this study analyzed the case of North Korean authorities directly intervening to manufacture methamphetamine and the smuggling of drugs from North Korea into South Korea[3]. Through this, we would like to present basic data for countermeasures against smuggling of North Korean drugs into South Korea.

2. Theoretical Background

2.1. Definition of narcotics

Narcotics are drugs, psychotropic drugs and hemp. Drugs are largely classified as natural drugs, oriental drugs, synthetic drugs, semi-synthetic drugs, and drugs are all alkaloids extracted from poppies, opium or coca leaves, or chemical compounds that are equally likely to be abused or detoxified.

Psychotropic drugs are those that act on the human central nervous system and are recognized as significant harm to the human body if abused or abused. Hemp refers to cannabis and its resin or any product manufactured from it, except for its seeds, roots and stems from mature cannabis and its products. In terms of pharmacology, Narcotics are treated as drugs, and drugs refer to any drug or psychotropic drug that changes behavior or mental state[4].

According to the World Health Organization, drugs have a strong desire for drug use, tend to increase in the amount of drugs, withdrawal, and this phenomenon is defined as a drug that harms society, not just individuals. Taken together, drugs can be defined as substances that are dependent and abused on humans and that are responsible for drugs, marijuana, and psychotropic drugs[5].

2.2. Post-dose symptoms and addiction of methamphetamine

Narcotics Methamphetamine is an amphetamine psychotropic drug synthesized from ephedrine hydrochloride, which is called ‘pilopon’ and ‘Hiropon’ in Korea.

As of 2013, 80.9% of all drug offenders were found to be methamphetamine offenders. It is said that methamphetamine was produced in Japan during World War II to keep workers of munitions factory and soldiers from feeling tired.

The methamphetamine is white and light gray in the form of powder, has a weak sour taste, and usually smells of weak ammonia or fishy in odorless or high purity. It is soluble in water and is smuggled into crystalline powders, tablets, and capsules. People who take methamphetamine cause excitement and insomnia, so they can’t sleep for days, continue to work, and rarely eat. As a result, it shows symptoms such as increased blood pressure, increased pulse rate, and shaking hands. Sensitivity and anxiety increase, leading to paranoid delusions that you are always being watched by someone or being involved in a conspiracy[6].

Methamphetamine poisoning refers to a condition in which methamphetamine is used to the body and mind, making it difficult to live without methamphetamine. A methamphetamine addict is aggressive, impulsive, impatient, lacks patience for frustration of needs, is not afraid of any harm, and has severe sexual conflicts. Also, methamphetamine addicts are generally depressed and have low self-esteem, so they try to have self-esteem in physical changes through drugs[7].

According to the process of methamphetamine addiction, drug abuse gradually develops from weak strength to strong strength. At first, it can be seen that the process gradually evolved from smoking to bond, butane gas, and methamphetamine[8]. It has been shown that methamphetamine addicts are not alert to psychotropic drugs such as methamphetamine because they
have used different types of drugs before methamphetamine[9]. In general, methamphetamine users tend to concentrate on more than one behavior after taking the medication, with sexual activity being the most prevalent[10].

3. Background and Organizations of North Korea’s Drug Trafficking

3.1. North Korea’s drug trafficking background

Narcotics North Korea's drug trafficking is recorded as having the longest history of illegal activities linked to North Korea as a means of earning foreign currency. Shortly after North Korea defaulted on international debt in 1976, the North Korean embassy was ordered to "autonomous financing" and a series of drug incidents linked to the North Korean embassy occurred around the world where North Korea had diplomatic and trade relations[11][12].

They relied on diplomatic immunity to avoid seizure and arrest. When a drug trafficking crime was committed by a North Korean diplomat, the North Korean government claimed that it punished drug offenders for personal deviation[13]. However, the North Korean diplomat has not been punished since he was summoned to his home country for drug smuggling charges. Drug trafficking in North Korea began to diversify in the late 1980s. The fact that diplomats are repeatedly arrested for drug smuggling has become embarrassing, which has caused difficulties in North Korea's diplomatic activities abroad[14].

The drug trade by North Korean diplomats continued into the mid-1990s. In 1994, a black market called the ‘Jangmadang’ emerged due to economic difficulties such as the death of Kim Il-sung and natural disasters. The North Korean authorities have lost control of its people. North Korea’s drug trafficking expanded as individuals participated in illegal businesses such as drug trafficking[15].

3.2. North Korea's drug trafficking organization, the ministry of national security

The ministry of national security is the nation’s top secret police and intelligence agency with about 90,000 secret police officers and intelligence agencies. It is a department dedicated to counter-revolutionaries, espionage, immigration control, security support, and intelligence gathering against South Korea, and has the power to arrest and put them into political prison camps or execute them without any procedures.

Currently, the Ministry of National Security is a key drug trafficking organization in North Korea. North Korea trafficked drugs overseas using various methods, mostly through diplomatic bags in the early 1970s and mid-1980s, and smuggled them through black markets in Southeast Asia, including Thailand and Hong Kong, and under the Central Party ‘Room 39’ in the late 1980s[11].

However, since 2010, the Ministry of National Security seems to be leading North Korea’s drug trafficking. In April 2013, the Ministry of National Security gave drugs to Chinese drug dealers and received chemical fertilizers instead. According to sources in Yanggang Province at the time, "Why would fertilizer come out through Samjiyon County over so many customs?" "If it is an open trade, the Ministry of Security does not have to do it, and the Ministry of Security does not have to bring in fertilizer in bulk."

As the international community continues to impose high-intensity sanctions on North Korea, smuggling of drugs at the North Korea-China border is rampant. Major contraband products can be cited as drugs, and opium smuggling is traded at 5 to 10 kilograms at a time, which is too much for an individual to do and is a large amount of money. It can be seen that drug trafficking is taking place systematically. Smuggling is rampant on the border, which cannot be called smuggling except for the drug trade. Recently, drug smuggling has been on the rise as the smuggling process is simple and can make a lot of money on the North Korea-China border[15].
In early May 2019, the Chinese police arrested a North Korean smuggling organization that smuggled North Korean stimulant methamphetamine in Chang Bai, the border between North Korea and China, and confirmed that they were linked to the National Security Agency during the investigation. According to local sources, drug trafficking by security guards belonging to North Korea's National Security Agency has been rampant recently. It is understood that nearly a thousand security guards have been dispatched to China since last year. They are secretly engaged in activities in Jangbaek, Yeongil, and Shenyang, tracking high-level North Korean defectors, collecting information on North Korea, and even making foreign currency by trafficking methamphetamine.

Drugs from North Korea have been sold on the Chinese black market for a long time. Recently, North Korean drugs have been introduced to the United States, Japan, and South Korea through China. In this regard, the Chinese government has sternly dealt with the drug smuggling case in Changbaek, punishing officials of the National Security Agency related to the incident, while showing its willingness to punish North Korea severely without tolerance. So far, Chinese authorities have turned a blind eye to corruption involving North Korean law enforcement agencies such as public security and defense guards[12].

4. The Status of North Korean Drug Smuggling into South Korea

4.1. Drug manufacturing in North Korea

North Korea secretly began producing drugs in the mountainous areas of Hamgyong-do and Yanggang-do in the late 1970s. Since then, drug production and sales have begun in earnest since the late 1980s, when North Korea's Kim Il-sung inspected Hamgyong-do and designated the area around Yeonsa-eup to develop it as an opium farm[16].

The farm was guarded by security officers. They began producing opium at collective farms located in villages such as Speaker, Hwaryeong, Musan, and Onseong in Hamgyong-do and all opium produced in this way was made of heroin. In late 1995, the central government ordered about 25 acres of poppy farms to be cultivated[17].

All opium produced is sent to a pharmaceutical factory in Ranam, Cheongjin, Hamgyong-do, where it is processed into heroin, all of which are under central government control and strict supervision. Around 1995, scientists manufactured drugs at North Korea's Suncheon pharmaceutical plant and Pyeongseon pharmaceutical plant. Pharmaceutical factories are pharmaceutical factories that make medical drugs. Because drug making itself is made of chemicals, pharmaceutical factories are equipped with all the facilities, so they started producing drugs there.

There are a total of five large pharmaceutical plants in North Korea, three of which produce drugs, Pyongyang, Heungnam and Ranam. The center of North Korea's methamphetamine production, known to produce up to 15 tons a year, is the Heungnam Pharmaceutical Plant. Drugs in North Korea can be manufactured in large quantities because they-a graduate of a pharmacy school of Pharmacy- are manufactured with state support using the best facilities of pharmaceutical companies[18].

4.2. Drug proliferation in North Korea

In North Korea, methamphetamine is called ice, Bingdu, and Hiroppong, and has been used as a substitute for medicine since the mid-1990s[19].

Drugs are being mass-produced in North Korea for the purpose of earning foreign currency, but they began to be converted to domestic use as smuggling was blocked overseas due to sanctions against the North Korea. In North Korea, drugs began to be taken like regular drugs, but are now used as a catalyst for pleasure.

According to a North Korean defector, "Since ice contains stimulants, it is used as a stimulant and a fatigue recovery agent." "Children also consider it a panacea, and if they wash a little ice,
the pain will be gone and refreshed quickly."[20] What's more problematic is that students are abusing drugs. High school students are using tobacco and drugs as their preference. North Korea is a country of drugs. In North Korea, drugs are being abused for family medicine, beauty treatments, gifts and bribes. In North Korea, drugs are widely used by all walks of life, and manufacturing and consumption are spreading, especially in the border area between North Korea and China[21].

4.3. Drug smuggling into South Korea

North Korea denies drug manufacturing and trafficking altogether. Some claim that if caught, it is a personal deviation unrelated to the authorities. However, the case was confirmed through a drug-making case involving North Korean authorities[22].

In 1997, four South Koreans contacted two North Korean agents from the Ministry of Social and Cultural Affairs and agreed to provide facilities, materials and technology for methamphetamine production, and two North Korean agents provided a location to North Korea. Since then, agents have prepared various goods and chemicals needed to manufacture methamphetamine around the end of 1997 and sent them from Busan to Najin Port, North Korea. Since then, the agents have entered North Korea, installed methamphetamine manufacturing facilities with materials such as reaction furnaces sent in advance from the Sariwon liaison station managed by the Ministry of Operations and came out to China. After obtaining 100 kg of ephedrine hydrochloride from China, the agents arrived at the Sariwon liaison station under the guidance of other agents, installed outdoor reactors, and commissioned reactors and coolers, before manufacturing 60 kg of methamphetamine around mid-June 2000.

Drugs produced by North Korean pharmaceutical companies are smuggled to China and other countries, and there are various ways to get drugs out of the border in North Korea. North Korean diplomats are also caught carrying drugs overseas[23][24]. North Korean drugs from North Korea to China are smuggled back into South Korea in various ways.

The method is highly advanced and intelligent, and it is imported into international waters as well as cultural assets and agricultural and fishery products, or even concealed by wrapping silver foil in batteries behind the eye drops and notebooks, or by ship-using bundles. In some cases, international students or housewives receive about 1 million won per time as part-time jobs and bring in North Korean drugs hidden in their bodies.

According to the Seoul Metropolitan Police Agency’s drug investigation, 112 kilograms of North Korean methamphetamine(KRW 370 billion) were hidden in a machine that passed customs around July 2018. Police confiscated 90 kilograms of methamphetamine, but said 22 kilograms were already on the market. At this time, it was confirmed that 3 million people could be injected with the seized quantity alone. Through this process, North Korean drugs brought into South Korea will be spread throughout the country through various stages through the South Korean financial manager and sales manager. The technique used at this time is called "throwing".

According to a drug broker who escaped from North Korea, North Korean drugs are sold at more than 10 times the price of other drugs in Gangnam entertainment district, and they are so popular that there is no need to bargain. According to a broker who trafficked drugs at a Seoul club, the number of drugs from North Korea continues to increase and estimates that about 40 percent of the drugs trafficked in South Korea are from North Korea.

5. Conclusion

In the 1970s, North Korea began producing drugs in the mountainous areas of Hamgyong-do and Yanggang-do as a means of earning foreign currency. The opium produced was sent to a pharmaceutical factory in Ranam, Cheongjin-si, Hamgyong-do and processed into heroin.

---

23

J-INSTITUTE.com
Around 1995, scientists manufactured drugs at Suncheon Pharmaceutical Plant and Pyeongs-eong Pharmaceutical Plant in North Korea. These drugs were smuggled into China and other countries through diplomats, security guards, and traders. The North Korean authorities are completely denying drug manufacturing and trafficking. If some of the findings are confirmed to be true, it is a personal deviation unrelated to the authorities\textsuperscript{25}.

However, the case confirmed in 1997 that 60kg of methamphetamine was manufactured by agents from the Ministry of Social Culture and Operations at the Sariwon liaison station managed by the North Korean Operations, and smuggled it into China to sell it to the Japanese gang Yakuza. Drug trafficked from North Korea to China is smuggled back into South Korea through various methods. The method is highly advanced and intelligent, and it is also introduced into cultural assets and agricultural and fishery products as well as international waters. In July 2018, 112 kilograms of North Korean methamphetamine were hidden in a machine and passed customs.

Drugs from North Korea brought into South Korea will spread throughout the country through South Korea’s sales measures. Drugs from North Korea are reportedly being trafficked at prices 10 times higher than other drugs in the Gangnam entertainment district. Some argue that about 40% of the methamphetamine circulating in South Korea is from North Korea.

Therefore, it is time to strengthen investigation capabilities, such as strengthening international cooperation to prevent smuggling of North Korean drugs into South Korea and expanding the investigation organization for drug crimes.

6. References

6.1. Journal articles


7. Appendix

7.1. Authors contribution

<table>
<thead>
<tr>
<th>Author</th>
<th>Initial name</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB</td>
<td></td>
<td>-Set of concepts ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Design ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Getting results ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Analysis ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Make a significant contribution to collection ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Final approval of the paper ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Corresponding ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Play a decisive role in modification ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Participants in Drafting and Revising Papers ☑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Someone who can explain all aspects of the paper ☑</td>
</tr>
</tbody>
</table>
Abstract

Purpose: The purpose of this study is to identify the factors influencing the occurrence of suicide terrorism. Specifically, the nationality of the suicide terrorist and the country belonging to the group that committed suicide terrorism were checked, and the factors that influence the occurrence of suicide terrorism were identified after comparing the social indicators of the outbreak country and the non-occurrence country. In addition, the purpose of this study is to prepare measures to prevent the occurrence of suicide terrorism based on this.

Method: After confirming the suicide terrorism incident that occurred in 2014, the factors influencing the occurrence of suicide terrorism were identified from a macroscopic point of view, and the world peace index was used for this. A Poisson regression analysis was performed to confirm the influence on the occurrence of suicide terrorism by setting the variables corresponding to the general strain factor and the relative deprivation factor of the Global Peace Index(GPI) as independent variables.

Results: As a result of the analysis, macroscopic factors influencing the occurrence of suicide terrorism could be identified. Factors influencing the occurrence of suicide terrorism include the country's crime perception level, murder rate, possibility of violent demonstrations, violent crime level, fatality index from domestic and foreign disputes, military expenditure, ratio of migrants to population, domestic and foreign. It was confirmed that the factors of conflict affect the occurrence of suicide terrorism.

Conclusion: Based on such research results, policy suggestions to prevent the occurrence of suicide terrorism were suggested. First of all, in relation to political terrorism, it can be said that there is a need for an institutional plan to prohibit political terrorism such as torture for reasons of ideology, religion, race, and ethnicity. In addition, it can be said that there is a need for an institutional plan that can resolve domestic disputes in a peaceful way rather than in a violent way, and efforts to create a safe environment by trying to reduce military expenditures are needed.

[Keywords] Suicide Terrorism, General Strain Theory, Relative Deprivation Theory, Global Peace Index, Poisson Regression
necessary to study causes and countermeasures. Thus, studies have been conducted to determine and contain the causes of suicide attacks, but many have been conducted from a microscopic perspective that considers suicide to be caused by personal abnormal psychological conditions, past personal experiences, family history, or trauma experienced by individuals [2][3].

Korea is also working on suicide terrorism, but most of the research has been conducted from a microscopic perspective, focusing on the psychology of suicide terrorists. However, suicide attacks are not carried out impulsively, but rather through a deliberate preparation process, such as targeting targets and seeking various means and tools for use in suicide attacks. In addition, actions such as committing suicide terrorism in consideration of economic feasibility and effectiveness and promoting it through the media as an opportunity for political propaganda can be explained better from a macro perspective than a micro perspective [4].

Furthermore, considering that many suicide terrorists do not show symptoms of mental illness such as schizophrenia or depression, and that they have a healthy mind that does not differ from the mental state of the general public, future research requires a comprehensive attitude toward suicide terrorism. Therefore, macroscopic research needs to be carried out to consider factors such as politics, society, culture, religion, etc. rather than to determine the cause only from a microscopic point of view [5].

Therefore, the purpose of this study is to identify the factors affecting the occurrence of suicide terrorism from a macro perspective such as society and the environment to determine the cause of suicide terrorism and to suggest countermeasures against it. Specifically, macro factors such as political, economic, and social indicators of the countries in which suicide terrorists and groups belong are compared to those of countries where suicide terrorists do not occur.

2. Concepts of Terrorism & Suicide Terrorism

2.1. Terrorism

In order to identify the factors affecting the occurrence of suicide terrorism, it is first necessary to identify the concept and definition of terrorism. However, the reality is that it is difficult to define terrorism precisely because it depends on the motives, targets, subjects, etc. of terrorism, and also depends on the perspective of researchers and terrorist agencies, and there is much controversy among scholars [6][7]. Therefore, this study seeks to define terrorism by identifying the definitions of various countries, institutions and scholars of terrorism.

The U.S. Department of State defines terrorism as politically motivated and premeditated use of violence against unarmed civilians or the general public. In addition, there is no agreed definition of terrorism, but the definition has been made for statistical analysis and policy-making of terrorism [8]. According to Atran (2003), terrorism, as defined by the Patriot Act (U.S. Congress), is an act of violence that could result in life-threatening and coercion against ordinary citizens, as well as federal or state criminal acts to influence government policies.

Next, Gibs (1989) explains that terrorism is an act of violence aimed at influencing not only terror victims but also the general public in order to achieve political, social and religious purposes, which is commonly acknowledged by scholars studying terrorism [9]. Hoffman (1998) defined terrorism as an intentional act of causing political change and fear through violent acts, means and threats based on violence. It is also argued that terrorism causes greater psychological damage in addition to direct damage from acts of terrorism, thereby inducing political change. Saul (2006), who described terrorism separately, argues that terrorism is "an act that allows others to feel fear through specific threats and violence" and that terrorism is "achieving the goals planned through various forms of direct attack and violence, such as assassination, assault and purge," and defines terrorism as "underdeclared war."

Meanwhile, Mohaddam (2006) defines terrorism as politically motivated violence committed by individuals, organizations, or states to cause psychological harm, affecting the policy-making
process and thereby leading to political change. In addition, Agnew(2010) described terrorism as "a violent criminal act against citizens, and it must be done for political, social and religious purposes, and in organizations or organizations below the national level".

In Korea, the Anti-Terrorism Act for the Protection of People and Public Safety defines terrorism. Terrorism defined by this Act is intended to disrupt or intimidate the exercise of authority by national, local or foreign governments(including treaties or other international organizations established under international agreements), including the killing and threatening of human lives, aircraft and ships.

Therefore, terrorism, conceptualized through the review of such a prior study, is illegal violence used by individuals or specific groups to achieve political, social and religious purposes, forming fear and fear for terrorists and the general public, and inducing political and social change based on it.

2.2. Suicide terrorism

Efforts continue to come up with a fully agreed concept of the definition of terrorism, but the reality is that it is not easy to give an accurate definition of terrorism to this day. However, in the case of suicide terrorism, it is relatively easy to draw a consensus definition compared to terrorism by limiting its scope and adding special means of suicide.

Araj(2012) studied suicide bombings in Palestine and defined them as suicide bombings, which he described as "an attack aimed at the death of others, including the terrorist himself, or many other unspecified people," through more than one attack using the bomb”. According to Brym and Araj(2006), suicide bombings are not necessarily aimed at killing multiple lives, and suicide attacks should include the initiation of more specific criminal actions beyond the planned stage. In other words, simply planning and imagining terrorism does not mean that terrorism has occurred, and in fact, it can be seen as a suicide bombing when a terrorist has direct contact with a terrorist target, including his own death as part of a terrorist act.

Pape(2003), who described suicide terrorism as one of the most aggressive forms of terrorism, argued that it sought coercion by force and intimidation, despite losing support from other terrorist groups. He also explained that suicide terrorists committed terrorism without considering survival during terrorist activities. Weinberg et al.,(2003) explain that suicide bombings exemplify terrorism, unlike other acts of terrorism, are more active and require the death of terrorists. The expression “active” here explained that most suicide bombings refer to the terrorist because they hide bombs in the terrorist's body or become a means of direct terrorism by means of transportation, such as vehicles. Merari(1990) argued that suicide is the intention of terrorists to kill their lives in order to achieve political or ideological goals, and that if a terrorist does not anticipate his death, such as when a terrorist-carrying bomb explodes due to remote control of others.

Scholars in Korea also defined the concept of suicide terrorism, which Yoon & Kim(2012) explained that the definition of suicide terrorism is an extreme form of terrorism in which terrorists sacrifice their lives as collateral, attacking terrorist targets to achieve political, religious, and ideological purposes. Heo(2012) also described suicide terrorism as part of homegrown terrorism, which is associated with Islamic or radical thinking, and defined it as an act of attacking citizens of Western countries such as the United States or Europe with their religious beliefs.

Thus, suicide terrorism, which has been conceptualized through such a prior study review, is a violent act in which terrorists use their lives as weapons for personal or unspecified deaths and physical damage.

3. Factors influencing Terrorism & Suicide Terrorism

3.1. Perspective of general strain theory
General Strain Theory (GST) was developed by improving the problem of Strain Theory, which Merton (1938). Agnew argued that Merton's interpretation of the desire for social or material achievement and the absence of the means necessary to achieve it is very limited in reality, and therefore a broader concept of strain is needed [10]. Agnew (1992) defined strain as 'what happens when others are treated in a way they don't want', providing a general explanation that everyone can be a criminal agent to solve the problem of Strain Theory that not only people in the lower class but also those in the middle and upper classes commit crimes [11].

Agnew (2010) argues that experiencing collective strain increases the likelihood of terrorism occurring. Here, he explained that the more intense, unjust, and influenced by more power others, the more collective strain that leads to terrorism, but not all collective strain leads to terrorism. Specifically, it is argued that collective strains arise when high levels of damage are suffered, such as death, serious physical or sexual abuse, extortion, loss of livelihood, identity and value, and great threats to goals. Collective strains also arise in unfair cases, such as undesirable or rationally unconvincing behaviors, unfair treatment in the decision-making process, and violations of socially agreed values. Finally, it explains that collective strains can arise when powerful groups in important areas such as religion, race, ethnicity, class, region, state, and political ideology exert influence on weak groups with weak ties and inflict pain.

This collective strain increases the likelihood of terrorism because it causes negative emotions, impairs social control, and makes it difficult to respond through legitimate channels. In addition, collective strains create a social atmosphere of learning about terrorism, induce collective orientation and collective response, thereby influencing the occurrence of terrorism.

### 3.2. Perspective of relative deprivation theory

The Relative Deprivation Theory, organized by Ted Robert Gurr, explains the cause of terrorism most convincingly from a social and psychological perspective and is sometimes referred to as the "Frustration-Aggression Theory" [12][13]. The relative deprivation here is due to the separation between the expected value and the actually attainable value, which can be both individual and collective. In other words, relative deprivation is a social and psychological tension arising from the gap between the ideal life that an individual or group thinks and the reality they or the group face [14].

Relative Deprivation Theory is based on the assumption that individuals who feel relative deprivation are more likely to commit crimes. Specifically, if the level of social need formation is greater than that of social need satisfaction, social or psychological frustration is formed, which is likely to lead to violent behavior. This assumption applies to real life and can be explained by the fact that the people of third world countries, regarded as the periphery of the world, act violently to relieve political independence and modernization in the course of world history [15]. Gurr (1970) explained the causes of terrorism and explained that after World War II, independent new countries experienced relative deprivation due to rapid political and social changes, and that social deprivation was a major cause of terrorism. Violence such as terrorism occurs when there is a gap between the value expected by a particular individual or group and the ability to realize that value.

In addition, according to Piazza (2006), many scholars who studied terrorism considered material poverty important as the cause of terrorism, but as a result, absolute and relative poverty did not have a significant impact on the occurrence of terrorism. Piazza studied the causes of terrorism from 1986 to 2002 based on poverty-related variables in 96 countries (such as poverty, inequality, inflation, unemployment, etc.) and explained that social divisions related to relative deprivation had a greater impact on terrorism than poverty-related variables.

Also, there are studies that explain the causes of terrorism from a social and psychological perspective. According to Martin (2008), the psychological causes of terrorism can be explained at the individual level and at the collective level, first looking at the causes of terrorism at the individual level, that terrorism occurs under the influence of significant events experienced by an individual in life. In other words, individuals who have experienced a particular event have...
antisocial feelings and act to resolve them, and it is terrorism that has occurred with the will to identify the causes of the unfortunate situation that individuals face and correct them or retaliate against them.

3.3. Factors influencing suicide terrorism

Much of the research into the causes of suicide terrorism has to do with religious altruism. In this regard, suicide attacks can be described as extreme religious activities in which suicide terrorists take extreme forms of sacrifice for members and terrorists themselves and attack religions and groups other than their own[16].

Suicide attacks are also used as a means of strengthening the sense of belonging and unity of the state and organization. By conducting suicide attacks, suicide attacks are carried out because groups of suicide terrorists can establish their support base and draw support from members[17][18][19][20]. It is also used as a means of strengthening religious beliefs and beliefs through the treatment of suicide terrorists as martyrs, and the slogan that suicide terrorists will receive religious rewards and benefits in the afterlife[21][22][23].

The cause of suicide attacks can also be explained on a personal level. A suicide terrorist who experiences trauma due to the loss of a loved family or lover experiences a loss of will and meaning to his or her life, and commits suicide attacks with only revenge against the other person or group that killed his or her lover[24][25][26][27].

It can explain the causes of suicide attacks on an organizational or social level. The persuasion and persuasion of the organization's leader or organization-wide suicide terrorism to its members has a significant impact on the decision to commit suicide. The organization's leaders continue to educate their members that suicide terrorism is a noble mission, that sacrifices such as suicide terrorism will return to glory and reward after death, and brainwashed members of the organization will carry out suicide attacks[28][29]. The environment that considers suicide attacks as part of martyrdom also contributes to suicide attacks. Suicide terrorists who grew up in this environment often accept and implement suicide attacks more easily because they perceive them as an honorable mission. In addition, if they refuse suicide terrorism, they are likely to be stigmatized and branded as cowardly by people and society, which makes them more likely to be despised and criticized. Thus, it can be explained that this is the case of forcing suicide attacks in the country, society, and organization, and that terrorists who commit suicide are forced to commit suicide attacks for the honor of themselves and their families[25].

There is also a study that the experience of relative deprivation causes suicide terrorism. Walker & Smith(2001) explained in a study of terrorists of September 11 and 2005 in London that these terrorists were not poor and educated. However, they thought they were relatively discriminated against other individuals and organizations, and they were determined to change this irrational and discriminatory society, thus committing suicide attacks.

4. Research Methods

The purpose of this study is to identify the causes of suicide terrorism by focusing on general strain and relative deprivation factors that affect the occurrence of suicide terrorism and to provide countermeasures. Specifically, we want to analyze the factors that affect suicide terrorism behavior by comparing macro factors such as political, economic, and social indicators of countries where suicide terrorists and groups belong to.

To this end, I used data from the Global Terrorism Database(GTD) of the National Consortium for the Study of Terrorism and Response to Terrorism(START), which is located at the University of Maryland and is supported by the federal government. In addition, 2014 data from The Chicago Project on Security and Terrorism(CPOST) at the University of Chicago, which specializes in collecting and analyzing suicide terrorist data only, were obtained and used for research. In addition, to identify macro indicators such as social and environmental factors, the 2014 data,
which is available for research among the Global Peace Index (GPI), published by the Institute for Economics and Peace (IEP), were utilized.

4.1. Dependent variable

The existence of suicide terrorists in each country corresponding to the dependent variable was established by reference to suicide terror data provided by CPOST, focusing on suicide terror data provided by GTD. Suicide attacks around the world in 2014 were classified by countries of origin of suicide terrorists, coded as the number of suicide attacks by country and used as subordinate variables.

4.2. Independent variable

Based on the macro variables used in existing terrorism studies, this study selected general strain and relative deprivation factors that are thought to affect suicide terrorism. First of all, Hoffman (2006)'s study confirmed that organizational clashes, the possibility of violent protests, and clashes at country and abroad affect suicide terrorism. Hoffman (2006) argued in his work that democracy influenced suicide terrorism, suggesting efforts such as arms acquisition, struggle through it, and demonstration to find democratic rights as variables that influence democracy.

The relationship between military spending as a percentage of GDP, the relationship between neighboring countries and suicide attacks was confirmed by Santifort-Jordan and Sandler’s (2014) study. They conducted empirical studies on the occurrence of suicide attacks, using variables such as military spending as a percentage of GDP and occupation from neighboring countries. In addition, Barkun (1997), Blazak (2001), Freilichetal (2014), Gibson (1994), Greenetal (1999), Hamm (1993) and Simi & Futrell (2010) selected the increase in immigrants based on the results of far-right terrorism. The occurrence of political terrorism and political instability were selected based on Tilly’s (1978) study that these factors influence the occurrence of terrorism. He explained in his research that political instability, strikes and massive political terrorism were the harbingers of future terrorism. Next, crime awareness levels were identified in a study by Chermak & Gruenewald (2015) based on claims that such variables influence the occurrence of terrorism. A study by Freilich and his colleagues (2014) found that murder and violent crime affected the occurrence of terrorism, which selected murder, security personnel, prisoners, and violent crime levels per 100,000 people. Piazza (2006) also confirmed that conflicts between countries, organizations and classes contributed to terrorism, setting the number of deaths from domestic and international conflicts as variables.

4.3. Analysis method

This study utilizes STATA 13.0 to perform technical statistics, correlation analysis, and mean difference verification. Furthermore, based on this, Poisson regression analysis confirms the influence of independent variables on dependent variables. The data analysis method used in this study was carried out in the following procedures:

First, the mean, standard deviation, skewness, and kurtosis were calculated to analyze the tendency of the collected data. In particular, skewness and kurtosis are procedures to verify whether they satisfy the normality of the data, so that skewness does not exceed 2.0 and kurtosis does not exceed 7.0. Second, a correlation analysis was conducted to analyze the relevance between each indicator of the world peace index utilized in this study. Third, the average difference test (t-test) was conducted for each of the countries where suicide attacks occurred and for each of the countries that did not occur. Fourth, the Poisson regression analysis was conducted based on the identification of the general strain factors and relative deprivation factors affecting suicide terrorism. To this end, suicide terror data identified by GTD and CPOST were converted to the number of suicide terrorists in each country to analyze what general tension factors and relative deprivation factors affect suicide terrorism and their impact.
5. Result

5.1. Descriptive statistics

Based on 2014 suicide data provided by the GTD, it identified the countries of origin and other countries where suicide terrorists came from. First of all, 162 countries were targeted, and 17 were from suicide terrorists. As a result of checking the number of suicide attacks around the world in 2014, a total of 738 suicide attacks occurred, and 46 suicide attacks were confirmed based on the country of origin of suicide terrorists.

Next, the frequency of suicide attacks in each country was confirmed. If you look at the number of suicide attacks in 2014 presented in Table 1, you can see that there were more suicide attacks in the Middle East or Africa than in other regions and countries. It was confirmed that there were 305 suicide attacks in Iraq, nearly half of them in Afghanistan, and that there were many suicide attacks in particular countries and regions, including 187 in Afghanistan.

Table 1. Frequency of suicide terrorisms by country.

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iraq</td>
<td>305</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>187</td>
</tr>
<tr>
<td>Syria</td>
<td>53</td>
</tr>
<tr>
<td>Pakistan</td>
<td>43</td>
</tr>
<tr>
<td>Nigeria</td>
<td>30</td>
</tr>
<tr>
<td>Yemen</td>
<td>37</td>
</tr>
<tr>
<td>Somalia</td>
<td>24</td>
</tr>
<tr>
<td>Libya</td>
<td>14</td>
</tr>
<tr>
<td>Lebanon</td>
<td>13</td>
</tr>
<tr>
<td>Israel</td>
<td>5</td>
</tr>
<tr>
<td>Egypt</td>
<td>5</td>
</tr>
<tr>
<td>Marley</td>
<td>4</td>
</tr>
<tr>
<td>China</td>
<td>3</td>
</tr>
<tr>
<td>Ukraine, Saudi Arabia, Russia, Djibuti, Algeria</td>
<td>1</td>
</tr>
</tbody>
</table>

The World Peace Index consists of a total of 22 categories, but this study selected and utilized for the purpose of the study. Each independent variable consists of a five-point scale (1-5 points), meaning that the higher each score, the lower the country’s peace level. The characteristics of the items used as independent variables in the measurement of these world peace indexes were identified, and the average and combined scores of each variable were identified to compare the average of suicide terrorists and other countries.

Table 2. Top 10 countries in the world peace index.

<table>
<thead>
<tr>
<th>Top Country(rank)</th>
<th>Total</th>
<th>Mean</th>
<th>Bottom Country(rank)</th>
<th>Total</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland(1)</td>
<td>25.69</td>
<td>1.19</td>
<td>Syria(162)</td>
<td>77.17</td>
<td>3.65</td>
</tr>
<tr>
<td>Denmark(2)</td>
<td>25.84</td>
<td>1.19</td>
<td>Afganistan(161)</td>
<td>73.72</td>
<td>3.42</td>
</tr>
<tr>
<td>Austria(3)</td>
<td>26.56</td>
<td>1.2</td>
<td>South Sudan(160)</td>
<td>68.63</td>
<td>3.4</td>
</tr>
</tbody>
</table>
If you look at Table 2, which presented the top 10 and bottom 10 countries of the world peace index in 2014, you can see that most of the bottom 10 countries are located in the Middle East or Africa except North Korea. In addition, the average score of the top 10 countries in the World Peace Index is 28.48 points, and the average score of the bottom 10 countries is 70.2 points, indicating that there is a big difference between the top 10 countries and the bottom 10 countries.

5.2. Comparison between countries with and without suicide terrorisms

Table 3 shows the itemized average of the two groups’ World Peace Index based on the separation of suicide terrorist-turned-country and not. As a result of t-test analysis, the possibility of violent demonstrations, political instability, political terrorism level, fatality index due to domestic conflict, organized conflict, crime perception level, policing manpower rate, violent crime level, migrant rate, relations with neighboring countries, military expenditure In factors, there was a significant difference between the country of origin of the suicide terrorist and the country not.

Specifically, the number of possibility of violent demonstrations was 3.765 in countries where suicide terrorists were born and 2.831 in countries where they were not born, which was 0.934 points higher in countries where suicide terrorists were born(t=-3.985, p<.001). In the category of political instability, suicide terrorist born countries scored 3.566 points and not born countries 2.413 points, with the countries which suicide terrorist born are 1.153 points higher(t=-4.581, p<.001). The level of political terrorism was 3.647 points for the countries where suicide terrorists born and 2.386 points for the countries where suicide terrorists not born, so the countries where suicide terrorists born are 1.261 points higher(t=-5.001, p<.001). The death index due to domestic disputes was 2.647 points in countries where suicide terrorists were born and 1.186 points in countries where suicide terrorists are not born, so the score of countries where suicide terrorists born is 1.461 higher(t=-8.276, p<.001). In the case of organizational conflict factors, suicide terrorist countries scored 3.706 points and not born countries 2.283 points, which was 1.423 points higher(t=-5.220, p<.001). The level of criminal awareness was found to be 4.059 points for suicide terrorists born countries and 3.110 points for those from the not born countries and 0.978 points for those from suicide terrorists born countries(t=-4.217, p<.001). The average score for the proportion of security personnel was 2.706 in countries where suicide terrorists were born and 2.207 in countries where suicide terrorists were not born was found to be 0.499 points higher(t=-2.015, p<.05). In the category of violent crimes was 3.412 in countries where suicide terrorists were born and 2.738 in countries where the suicide terrorists were born was found to be 0.691 points higher(t=-3.296, p<.001). The scores for the factors related to neighboring countries were
3.353 points for countries of suicide terrorists were born and 2.179 points for countries not born, and 1.174 points higher for countries of origin\((t=4.741, p<.001)\).

Finally, the military expenditure factor showed that suicide terrorist-based countries scored 2.376 points and the countries which not based scored 1.552 points, which was 0.824 points higher\((t=5.031, p<.001)\). On the other hand, the difference in average scores between the two groups was found to be insignificant in the cases of domestic and foreign disputes, murder rates, inmates rates, and death index factors.

**Table 3.** Compare means by independent variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Countries where suicide terrorists were born</th>
<th>Countries where suicide terrorists were not born</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>S.E.</td>
<td>M</td>
</tr>
<tr>
<td>Domestic and foreign disputes</td>
<td>1.941</td>
<td>.747</td>
<td>1.938</td>
</tr>
<tr>
<td>Possibility of violent demonstrations</td>
<td>3.765</td>
<td>.886</td>
<td>2.831</td>
</tr>
<tr>
<td>Political instability</td>
<td>3.565</td>
<td>.768</td>
<td>2.413</td>
</tr>
<tr>
<td>Political terrorism level</td>
<td>3.647</td>
<td>.806</td>
<td>2.386</td>
</tr>
<tr>
<td>Death index (domestic dispute)</td>
<td>2.647</td>
<td>1.320</td>
<td>1.186</td>
</tr>
<tr>
<td>Organized dispute</td>
<td>3.706</td>
<td>.985</td>
<td>2.283</td>
</tr>
<tr>
<td>Criminal awareness level</td>
<td>4.059</td>
<td>.827</td>
<td>3.110</td>
</tr>
<tr>
<td>Percentage of security personnel</td>
<td>2.706</td>
<td>1.105</td>
<td>2.207</td>
</tr>
<tr>
<td>Percentage of murder</td>
<td>2.470</td>
<td>1.419</td>
<td>2.752</td>
</tr>
<tr>
<td>Inmate rate</td>
<td>1.294</td>
<td>.398</td>
<td>1.552</td>
</tr>
<tr>
<td>Violent crime level</td>
<td>3.412</td>
<td>1.290</td>
<td>2.738</td>
</tr>
<tr>
<td>Percentage of migrants</td>
<td>1.912</td>
<td>1.492</td>
<td>1.221</td>
</tr>
<tr>
<td>Relationship with neighboring countries</td>
<td>3.353</td>
<td>.996</td>
<td>2.179</td>
</tr>
<tr>
<td>Military expenditure</td>
<td>2.376</td>
<td>1.013</td>
<td>1.552</td>
</tr>
</tbody>
</table>
The correlation between factors used as independent variables and the occurrence of suicide terrorism was identified among the components of the World Peace Index. Correlation analysis is intended to determine the linear relationship between variables and their strength and orientation, and a representative method for correlation analysis, correlation coefficient verification, is performed. As a result of checking the correlation coefficient, the level of crime perception and the ratio of security personnel, the level of organized conflict, the possibility of violent demonstrations, the level of violent crime, political instability, the level of political terrorism, the index of deaths from domestic disputes, the amount of military expenditure, the ratio of migrants, the relationship about neighboring countries variable showed a significant positive correlation with the occurrence of suicide terrorism. Specifically, the level of crime perception ($r=.316$, $p<.001$), the ratio of security personnel ($r=.157$, $p<.05$), the level of organizational disputes ($r=.382$, $p<.001$), and Possibility of violent demonstration ($r=.301$, $p<.001$), level of violent crime ($r=.176$, $p<.05$), political instability ($r=.341$, $p<.001$), level of political terrorism ($r=.368$, $p<.001$), index of deaths due to domestic disputes ($r=.548$, $p<.001$), scale of military expenditure ($r=.370$, $p<.001$), ratio of migrants ($r=.252$, $p<.01$), and relations with neighboring countries ($r=.351$, $p<.001$) were statistically significant and showed a positive correlation.
Table 4. Correlation analysis result.  

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.316**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>.157*</td>
<td>.070</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-.058</td>
<td>.582***</td>
<td>-.138</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-.114</td>
<td>.006</td>
<td>.270***</td>
<td>.079</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.382***</td>
<td>.601***</td>
<td>.071</td>
<td>.391***</td>
<td>-.060</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>.301***</td>
<td>.542***</td>
<td>-.080</td>
<td>.384***</td>
<td>-.184*</td>
<td>.564***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>.176*</td>
<td>.704***</td>
<td>-.138</td>
<td>.680***</td>
<td>-.106</td>
<td>.556***</td>
<td>.642***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.341***</td>
<td>.556***</td>
<td>.093</td>
<td>.393***</td>
<td>-.101</td>
<td>.695***</td>
<td>.626***</td>
<td>.522***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>.368***</td>
<td>.581***</td>
<td>.044</td>
<td>.480***</td>
<td>.131</td>
<td>.731***</td>
<td>.519***</td>
<td>.524***</td>
<td>.640***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>.548***</td>
<td>.440***</td>
<td>.161*</td>
<td>.230**</td>
<td>-.075</td>
<td>.523***</td>
<td>.388***</td>
<td>.450***</td>
<td>.366***</td>
<td>.578***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>.370***</td>
<td>.254**</td>
<td>.324***</td>
<td>.034</td>
<td>.101</td>
<td>.366***</td>
<td>.109</td>
<td>.098</td>
<td>.360***</td>
<td>.370**</td>
<td>.327***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>.252**</td>
<td>.320***</td>
<td>.088</td>
<td>.179*</td>
<td>-.092</td>
<td>.418***</td>
<td>.275***</td>
<td>.290***</td>
<td>.348***</td>
<td>.384***</td>
<td>.502***</td>
<td>.314***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>.351***</td>
<td>.398***</td>
<td>.120</td>
<td>.137*</td>
<td>.172</td>
<td>.605***</td>
<td>.294***</td>
<td>.215**</td>
<td>.617***</td>
<td>.576***</td>
<td>.349***</td>
<td>.334***</td>
<td>.402***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>.001</td>
<td>-.025</td>
<td>-.140</td>
<td>-.105</td>
<td>.019</td>
<td>.164*</td>
<td>.044</td>
<td>-.029</td>
<td>.054</td>
<td>.178*</td>
<td>.285***</td>
<td>.070</td>
<td>.200*</td>
<td>.221**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>.075</td>
<td>-.036</td>
<td>-.083</td>
<td>-.078</td>
<td>.109</td>
<td>-.025</td>
<td>.012</td>
<td>-.042</td>
<td>-.130</td>
<td>.111</td>
<td>.129</td>
<td>.038</td>
<td>-.056</td>
<td>.031</td>
<td>.308***</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: *p<.05, **p<.01, ***p<.001.

1 = suicide terrorism, 2 = crime perception level, 3 = security personnel ratio, 4 = percentage of murder, 5 = Inmate Rate, 6 = organized conflict level, 7 = possibility of violent demonstration, 8 = violent crime level, 9 = political instability, 10 = level of political terrorism, 11 = deaths index (domestic disputes), 12 = military expenditures, 13 = migrants to population, 14 = relations with neighboring countries, 15 = domestic and foreign disputes, 16 = deaths index (foreign disputes).
Next, it was confirmed whether multicollinearity occurred through tolerance or Variance Inflation Factor (VIF). The tolerance limit is calculated by subtracting the median polycorrelation square (R), which means the degree of correlation between variables from 1.0, and it is usually judged that the closer the tolerance limit is to 1, the more the multicollinearity problem does not occur. The variance expansion coefficient is the reciprocal of the tolerance and means the degree to which the standard error of the regression coefficient increases due to the correlation between the independent variables. If this value is more than 10, it is generally considered that a multicollinearity problem occurs. Table 5 shows the variance expansion coefficient of each variable, and since the variance expansion coefficient of all variables did not exceed 10, it was found that the problem of multicollinearity did not occur.

Table 5. VIF.

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime perception level</td>
<td>2.63</td>
</tr>
<tr>
<td>Security personnel ratio</td>
<td>1.49</td>
</tr>
<tr>
<td>Percentage of murder</td>
<td>2.41</td>
</tr>
<tr>
<td>Inmate rate</td>
<td>1.49</td>
</tr>
<tr>
<td>Organized conflict level</td>
<td>3.25</td>
</tr>
<tr>
<td>Possibility of violent demonstration</td>
<td>2.40</td>
</tr>
<tr>
<td>Violent crime level</td>
<td>3.63</td>
</tr>
<tr>
<td>Political instability</td>
<td>3.45</td>
</tr>
<tr>
<td>Level of political terrorism</td>
<td>3.47</td>
</tr>
<tr>
<td>Deaths index (domestic disputes)</td>
<td>2.21</td>
</tr>
<tr>
<td>Military expenditures</td>
<td>1.48</td>
</tr>
<tr>
<td>Migrants to population</td>
<td>1.57</td>
</tr>
<tr>
<td>Relations with neighboring countries</td>
<td>2.55</td>
</tr>
<tr>
<td>Domestic and foreign disputes</td>
<td>1.35</td>
</tr>
<tr>
<td>Deaths index (foreign disputes)</td>
<td>1.25</td>
</tr>
</tbody>
</table>

5.4. Poisson regression analysis

First, whether the data show the form of Poisson distribution, we checked the mean, variance, and Pearson dispersion statistics. First of all, because the mean and variance are different from each other, it can be seen that it deviates from the Poisson regression model, which assumes that the mean and variance are the same. In addition, as the Pearson dispersion statistic is closer to 1, the Poisson distribution can be seen. The statistical value of the data used in the study was 619.1314, confirming that the problem of overdispersion occurred. Therefore, after solving the overdispersion problem by adjusting the standard error, a Poisson regression analysis was performed.

As shown in Table 6, the model analyzed for additive data has a limitation in that it is difficult to directly compare and explain the magnitude indicated by the estimated coefficient of the variable. This is because it cannot be interpreted because the estimated coefficient of the variable does not mean the marginal effect of the independent variable (explanatory variable). Therefore, in order to analyze the influence of the independent variable, it is necessary to estimate the marginal effect of the independent variable, and for this purpose, the marginal effect is presented in Table 6. In this paper, the marginal effect was set as the Incidence Rate Ratio (IRR). IRR is a value obtained by converting the regression coefficient to exp and represents the relative ratio of the change in the event rate as the independent variable changes. When
the value of IRR is greater than 1, the incidence rate of the dependent variable increases, and when it is less than 1, the incidence rate decreases.

Table 6. Poisson regression analysis result.

<table>
<thead>
<tr>
<th></th>
<th>Estimation coefficient</th>
<th>IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime perception level</td>
<td>1.544**(.596)</td>
<td>4.685</td>
</tr>
<tr>
<td>Security personnel ratio</td>
<td>-.554(.582)</td>
<td>.574</td>
</tr>
<tr>
<td>Percentage of murder</td>
<td>.944**(.289)</td>
<td>2.571</td>
</tr>
<tr>
<td>Inmate</td>
<td>-.243(.459)</td>
<td>.784</td>
</tr>
<tr>
<td>Organized conflict level</td>
<td>.452(.857)</td>
<td>1.571</td>
</tr>
<tr>
<td>Possibility of violent demonstration</td>
<td>2.430*(1.088)</td>
<td>11.336</td>
</tr>
<tr>
<td>Violent crime level</td>
<td>-2.503**(.795)</td>
<td>.082</td>
</tr>
<tr>
<td>Political instability</td>
<td>-.649(929)</td>
<td>.523</td>
</tr>
<tr>
<td>Level of political terrorism</td>
<td>-.560(657)</td>
<td>.571</td>
</tr>
<tr>
<td>Deaths index(domestic disputes)</td>
<td>2.519**(.862)</td>
<td>12.413</td>
</tr>
<tr>
<td>Military expenditures</td>
<td>.805*(.410)</td>
<td>2.237</td>
</tr>
<tr>
<td>Migrants to population</td>
<td>-.355**(.112)</td>
<td>.701</td>
</tr>
<tr>
<td>Relations with neighboring countries</td>
<td>.124(.489)</td>
<td>1.132</td>
</tr>
<tr>
<td>Domestic and foreign disputes</td>
<td>-.676*(.296)</td>
<td>.509</td>
</tr>
<tr>
<td>Deaths index(foreign disputes)</td>
<td>3.001*(4.364)</td>
<td>20.201</td>
</tr>
<tr>
<td>Pseudo R2</td>
<td></td>
<td>0.919</td>
</tr>
<tr>
<td>Log likelihood</td>
<td></td>
<td>-198.735</td>
</tr>
<tr>
<td>Chi-square</td>
<td></td>
<td>1078.06(p&lt;.001)</td>
</tr>
</tbody>
</table>

Note: *p<.05, **p<.01, ***p<.001.

According to the analysis results in <Table 6>, the significant factors that induce suicide terrorism are the level of crime perception, the rate of murder cases, the possibility of violent demonstrations, the level of violent crime, the index of deaths from domestic and foreign disputes, the amount of military expenditure, the ratio of migrants to the population and domestic and foreign dispute. Looking at this in detail, it can be seen that if the crime perception level score increases by 1 point, suicide terrorism increases by 4.685 times. Next, if the number of murder rate scores increases by 1 point, suicide terrorism increases by 2.571 times. In addition, if the score of the violent protest item increases by 1 point, suicide terrorism increases by 11.336 times, and if the score of the death-related items from domestic conflict increases by 1 point, suicide terrorism increases 12.413 times. In addition, if the score in the military expenditure category increases by 1 point, suicide terrorism increases by 2.237 times, and when the score in the item related to the dead due to foreign dispute increases by 1 point, suicide terrorism increases by 20.201 times.

On the other hand, when the score of the violent crime level increases by 1 point, suicide terrorism decreases by 0.82 times, and when the score for the ratio of migrants to the population increases by 1 point, suicide terrorism decreases by 0.701 times. It was found that suicide terrorism was reduced by 0.509 times.

6. Conclusion

So far, we have looked into what factors affect suicide terrorism, focusing on general strain factors and relative deprivation factors. Specifically, by analyzing and verifying the relationship
between the number of suicide terrorism occurrences around the world and the world peace index in 2014 through Poisson regression analysis, we tried to find social and environmental factors that influence suicide terrorism. As a result of Poisson's regression analysis, the factors that have a significant influence on the occurrence of suicide terrorism are the level of crime perception, the rate of murder cases, the possibility of violent demonstrations, the level of violent crime, the index of deaths from domestic and foreign disputes, the amount of military expenditure, and the ratio of migrants to the population. Domestic and foreign dispute factors have been identified.

Based on these findings, it is necessary to consider measures to prevent suicide terrorism. First of all, in relation to political terrorism, it is necessary to prevent this from happening by prohibiting political terrorism such as torture, repression and repression for reasons of ideology, religion, race and ethnicity, etc. There is a need for international coercion to more faithfully implement the treaty against torture and various treaties of the International Human Rights Commission, which are used internationally. In addition, it is necessary to prevent the occurrence of political terrorism by providing systematic education for countries or groups with weak human rights consciousness, and based on this, the occurrence of suicide terrorism should be prevented in advance.

Second, it is imperative to avoid the violent method of resolving domestic disputes and suggest a more peaceful method. By creating a culture that maintains an inclusive attitude toward different races or ethnicities existing in a country or society, efforts should be made to end the blind oppression or conflict against heterogeneous groups in a multicultural society.

Lastly, from the military perspective, the intensification of global conflict and the resulting increase in competitive military expenditure increases the likelihood that aggressive and violent forms of means will be used in resolving issues between countries and groups. This can affect the possibility of suicide terrorism, which is the most aggressive and violent type of terrorism. Therefore, it is necessary to create a global atmosphere of peace by reducing military expenditures so that violent means such as suicide terrorism are not tolerated. In addition, efforts to create a global environment and culture capable of resolving conflicts between groups and countries through rational and peaceful methods instead of violent means and methods such as the use of military power will be needed.

This study is meaningful as a new study on the social and environmental factors that induce suicide terrorism, but the following limitations exist. Independent variables were selected based on general strain factors and relative deprivation factors, but the exact definition explained by the theory was not implemented. This is because the World Peace Index is data that has not been investigated based on the theory of general strain and the theory of relative deprivation, and it has not been investigated to verify these theories.

As a result of this study, it can be said that the way to prevent suicide terrorism is ultimately based on understanding between groups of different ideologies, religions, races, and ethnicities, and an attitude of embracing different cultures and customs. In addition, it is necessary to develop countermeasures against terrorism that can prevent and prevent various types of terrorism including suicide terrorism from a realistic perspective. Therefore, for this, it can be said that the attitude of trying to eliminate the factors influencing suicide terrorism in the long-term rather than the short-term approach is required. In other words, by cultivating an attitude of respect and consideration for others, other countries, and other cultures, it is necessary to reduce conflicts and antagonisms between groups, while removing social and environmental factors that influence the occurrence of suicide terrorism based on cooperation and cooperation between countries.

7. References

7.1. Journal articles

7.3. Books

8. Appendix

8.1. Authors contribution

<table>
<thead>
<tr>
<th>Initial name</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH</td>
<td>-Set of concepts ☑&lt;br&gt;-Design ☑&lt;br&gt;-Getting results ☑&lt;br&gt;-Analysis ☑&lt;br&gt;-Make a significant contribution to collection ☑&lt;br&gt;-Final approval of the paper ☑&lt;br&gt;-Corresponding ☑&lt;br&gt;-Play a decisive role in modification ☑&lt;br&gt;-Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑&lt;br&gt;-Participants in Drafting and Revising Papers ☑&lt;br&gt;-Someone who can explain all aspects of the paper ☑</td>
</tr>
</tbody>
</table>
Abstract

**Purpose:** As modern society becomes dense, complex, and wide-ranging, even small accidents often cause a series of infrastructure collapse or human casualty which leading to a national crisis. The government always promises to be thoroughly prepared to prevent the same accident in the future, but despite many proposals and measures, similar types of accidents occur repeatedly after a certain period of time. Now, distrust is building up in the government which has failed to manage the disaster. In this paper, considering this reality, we believe that national capabilities should first be invested intensively in initial measures for appropriate actions at Golden Time, and we would like to present a plan to secure capabilities by dividing them into software and hardware parts for appropriate initial action.

**Method:** Inappropriate initial measures in post-evaluations are pointed out as problems every time a disaster occurs. Research would like to check what problems are there through recent cases in Korea and draw implications for effective initial measures in the future. Based on previous national crisis and disaster, case study method is conducted to analyze military, state, local government, police and coast guard’s initial measures and action. Research focused on 2010 ROKS Cheonan sinking, 2014 Sinking of MV Sewol and 2019 defecting of North Korean wooden boat cases. Overviews of each cases will be introduced and case analysis of each cases’ initial measure will be discussed.

**Results:** Case analysis of previous disaster’s initial measures show importance of initial measure. Researchers suggest that improvement measures must be prepared to utilize the police’s 112 system in times of crisis such as disasters. In this paper, researchers suggest two different way (legal and physical) to improve initial measure of the police and coast guards’ in the event of a disaster. In legal way, research focuses on law and regulation of authorities, police, coast guards and the Disaster Safety Act. Physical way discuss about equipment, expert training, and overall system of comprehensive disaster management. More detail will be discussed later.

**Conclusion:** Problems commonly pointed out in the BAI reports, media, civic groups, and investigative agencies that have analyzed accidents in the past are inexperienced initial measures within Golden Time. There is a golden time in every crisis, so appropriate measures can save people, minimize property damage, or end the case early by putting only a small national capability in dealing with it afterward. Researchers believe that limited national resources can be efficiently responded in the event of a disaster by first strengthening the field of initial measures. In the future, when the autonomous police system is implemented, the national autonomous police officers will be separated and the 112 system will be separated too. In that situation, Central Disaster and Safety Countermeasures Headquarters, local government, National Coast Guards, and National Fire Agency will have hard time in communication and chain of command. In the event of a crisis while receiving a crisis-related report or on-site patrol, it should be clearly stipulated that all reports should be dispatched first regardless of authorities.

**[Keywords]** National Crisis, Disaster, Initial Measures, Disaster Safety Act, Golden Time
1. Introduction

As modern society becomes dense, complex, and wide-ranging, even small accidents often cause a series of infrastructure collapse or human casualty which leading to a national crisis. The government always promises to be thoroughly prepared to prevent the same accident in the future, but despite many proposals and measures, similar types of accidents occur repeatedly after a certain period of time. Now, distrust is building up in the government which has failed to manage the disaster.

Field and academic experts suggest comprehensive measures for disaster management (prevention, preparedness, response and recovery) by suggesting various reasons such as lack of professional capacity, un-unifying law and system, manual syndrome, complacent safety awareness, and lack of training. However, the actual usable, comprehensive measure needs a lot of time and money. If disaster occurs at this point, there is a high possibility of another mass human casualty and property damage. Considering that disaster could occur at any time today, researchers believe that limited national resources should be invested first in the most important areas to prevent disaster or minimize damage. Every national disaster has a golden time, so appropriate measures can save people, minimize property damage, or end the case early by investing only a small national capacity in subsequent measures.

According to the FRAMEWORK ACT ON THE MANAGEMENT OF DISASTERS AND SAFETY (hereinafter referred to as ‘the Disaster Safety Act’), “disaster” is managed in four stages: prevention, preparedness, response, and recovery. “Initial measures” is part of the response phase. However, compared to the importance of golden time, the Disaster Safety Act does not stipulate initial measures. The National Fire Agency stipulates that an on-site control team should be operated by the National Fire Agency, but the most likely national resource to arrive at the field on land is the police, and sea is the Coast Guard.

In order to take appropriate action at Golden Time, it is necessary to have initial action capabilities in the organization that organizes each type of disaster. However, it is impossible for all 30 organizations to have such capabilities, and it is a waste of national resource utilization due to overlapping investments.

In this paper, considering this reality, we believe that national capabilities should first be invested intensively in initial measures for appropriate actions at Golden Time, and we would like to present a plan to secure capabilities by dividing them into software and hardware parts for appropriate initial actions.

2. Review of Literature

2.1. The concept of initial measures

In practice, 'Initial measures' is used mixed with 'initial response' and 'emergency action'. Initial measure is a measure at the early stage of the event, and it is more important to see to what extent as initial action rather than conceptual definition. This study refers to measures that are implemented from the time the first person arrives at the site until the relevant experts for each type of disaster arrive and take professional action.

In statutes, the "Initial Measures" are referred to in the “INFECTIOUS DISEASE CONTROL AND PREVENTION ACT”, “ACT ON COUNTER- TERRORISM FOR THE PROTECTION OF CITIZENS AND PUBLIC SECURITY (hereinafter referred to as ‘the Anti-Terrorism Act’), “The Disaster Safety Act”, “The Enforcement Rules of the National Police Agency and its affiliated agencies”, “The Enforcement Rules of the National Coast guard and its affiliated agencies”, “The Enforcement Rules of the National Fire Agency and its affiliated agencies”. However, the laws defining the concept of initial measures are “the Anti-Terrorism Act” and National Police Agency’s “Situation Control Center Operating Rules”.

43
Article 23 of the Anti-Terrorism Act stipulates that in order to prevent the spread of terrorist incidents, the head of a related agency shall, i) strengthening control and preservation of incident sites and security, ii) emergency evacuation and rescue, iii) requests for assistance to authorities, and iv) other matters necessary to prevent the spread of the incident.

In Article 3 (Definition of Terms) of “Situation Control Center Operating Rules”, “Initial measures shall be reported to the relevant supervisor or the relevant function due to an urgent situation, when there is no time to receive instructions or cooperation by notifying, the situation manager (in charge) or the head of the Situation Control Center (Head of the 112 comprehensive situation room) shall take precedence i) situation reporting, notification and order, ii) restricted police force dispatch orders, iii) wanted and blocked orders, iv) requests for aircraft, ships and other equipment support, v) cooperation with related agencies, vi) follow-up measures according to the progress of the situation, vii) other rational measures when there is no time to report and notify the relevant functions of the situation.

Unfortunately, Article 15-2 (Central and Regional Accident Management Headquarters) of the Disaster Safety Act stipulated that a situation room for probationary headquarters should be established and operated in the event of a disaster.

It may be controversial how far it should be considered as an initial measure, but in this study, it refers to the time the first person arrives at the site until the relevant experts for each type of disaster arrive and take professional action. Depending on the field situation, it can be a very short moment or a golden time can be included altogether.

2.2. The importance of initial measures

Depending on what measures are taken at Golden Time, the direction of the response will be determined and the risk situation may be blocked or human casualty and material damage may be minimized to prevent it from expanding to fewer resources.

Many media outlets and the Board of Audit and Inspection of Korea (hereinafter referred to as ‘BAI’) are discussing the inappropriate initial measures in the event of a crisis such as a disaster.

As previously seen, the ROKS Cheonan, MV Sewol, and wooden boat defecting were all criticized for poor initial measures and caused distrust in the government’s role in protecting the people. In addition, even in the event of large and small disasters, initial measures were always strictly evaluated, sometimes criticized, and sometimes highly regarded as active measures. In all disaster situations, the initial measures sector was an important part of the assessment, including follow-up investigation. Due to the nature of the disaster, such as suddenness and uncertainty, appropriate measures in the early stages of the outbreak can be very difficult even for experts. However, there is another reason why initial action is difficult.

First of all, Office of National Security centered disaster management seems to be efficient for an comprehensive disaster management system, but it can rather cause difficult in initial measure. The advanced disaster management system, in which the comprehensive disaster management system is established, places primary responsibility on local governments. The initial action is an emergency measure made by first-arrival person at the scene. The multilevel command system, which leads to the Office of National Security, the Prime Minister, and the Minister of Public Administration and Security, can cause delays. It is unreasonable to expect that appropriate initial response will be made in a timely manner while waiting for the command and control of higher institutions [1].

Second, in times of crisis, several agency’s disaster management headquarters can only add to the confusion. In case of MV Sewol, more than 10 headquarters has been established in provincial government, situation control center, Korea coast guard, ministry of education, ministry of oceans and fisheries, and headquarters’ connectivity and complexity of the command system hindered the rapid flow of information and only added to the confusion of command.

In urgent site, responsibility and authority shall be given to the field commander so that all disaster-related dispatch agencies can respond in a timely manner by focusing on the field commander’s response capabilities. The role of response agencies should be limited to the support of resources and the provision of necessary information through interdepartmental business links. In the early
stages of the ever-changing event, the focus should be on helping field commanders deliver the information they need most in a timely manner[2].

Third, the contents of command that do not properly grasp the site can only confuse the field response. Unclear order during the bombardment of Yeonpyeong raised criticism that it failed to respond properly at the site. In fact, immediate action in the field is taken by a well-trained first arriver. Sometimes even the action of the field commander may not be able to afford to wait. At the time of the Yeonpyeong, after an emergency chief secretary, the order was issued "to respond firmly, but not to be expanded," which ultimately prevented initial measures. As a result, Minister of National Defense and Secretary of National Defense were replaced due to unclear decision making and the propagation process[3].

Fourth, it is necessary to change the perception of crisis-related Korea coast guard and police officers, such as disasters, while expecting an active police role due to the revision of related regulations. Analysis of the impact factors on the police’s disaster management system shows that changing police officers' perceptions of disasters is more important than anything else. Despite many things police officers can do, such as establishing an internal and external cooperation system, preventive activities, education and training, and police activities in response to disasters, it can be attributed to the lack of recognition of the importance of disaster preparedness[4].

Since most of the measures taken by first arrivers are taken in the shortest time in urgent situations, it is not possible to have much information or expect help from related agencies. This is because initial action is often solely dependent on the personal capabilities of the first arrivers.

2.3. The initial measures of police and coast guard

Under the Disaster Safety Act, the coast guard and police are not in charge of disasters, but are responsible for protecting people’s lives and property(Article 4 of the Disaster Safety Act), and are obliged to dispatch emergency workers to the scene or provide equipment and supplies for emergency rescue(Article 3 of the Disaster Safety Act). Under “the Police Act”, it is also a natural task for the police.

The police and coast guard were not more active than crimes on the premise that it was actually a disaster, even though it was a natural duty to protect people in danger, whether it was a social disaster or a natural disaster. This is because the police were not in charge of disaster, but mainly in charge of disaster site control, so they tended to think that disasters were firefighting. In fact, researchers have also conducted comprehensive disaster response research to the extent that they do not deviate from existing research frameworks and regulations, and have not studied much about the role of police in disaster management[4].

However, as disasters continue to threaten people’s lives and property, calls are mounting for active use of police resources in disaster situations, given that more damage is being done in one disaster than in crime. The Disaster Safety Act should also clearly define the police’s initial response mission and consider the passive position, which is driven by the request of the agency in charge, to take initial measures with active judgment by field workers.

The police are the only state agency that can enforce third parties in dangerous situations, and that the police should carry out comprehensive risk prevention missions until professional national fire agency begins or if rescue operations continue[5].

In overseas cases, disaster response is all led by local governments and central governments are supporting and coordinating[6][7]. Although the National Police Agency is a central organization, it should actively participate in the role of a control tower for the heads of local governments in the event of a disaster to minimize damage. In the future, when enacting the Local Police Act, such problems can be solved naturally by including disaster missions in local police duties.

Many case studies point to the problem that the initial measures that could have been prevented were insufficient if appropriate measures had been taken. However, there is no specific provision for initial action in the statutory instruments. Despite the important process of minimizing damage and determining future directions, the National Fire Agency is the only agency responsible for disaster
safety response, so there is no regulation on measures until the fire department arrives at the scene and responds in earnestly.

Of course, firefighters who are dispatched after receiving a report at the scene of a disaster may arrive earliest and take initial measures. However, if no one reports while everyone is asleep, law and manual maintenance are needed to ensure proper initial action, as police officers and coast guard on 24-hour patrols are likely to arrive at the scene the fastest.

3. Case Study of Initial Measures in the Event of a Disaster

Inappropriate initial measures in post-evaluations are pointed out as problems every time a disaster occurs. We would like to check what problems are there through recent cases in Korea and draw implications for effective initial measures in the future.

3.1. 2010 ROKS Cheonan sinking

3.1.1. Event overview

The sinking of the ROKS Cheonan, which occurred in waters near Baengnyeong Island on March 26, 2010, took a long time to report the missing contents of the report and to the Blue House. Later, during the rescue process, a lieutenant of the underwater explosion team died and a civilian ship collided with a cargo ship, causing nine casualties. During the investigation into the cause, only part of the TOD video was edited and released, and there were constant problems from the initial response to the announcement of the final investigation results, which led to an audit by the Board of Audit and Inspection.

3.1.2. Analysis of countermeasures, such as initial measures

The 2nd Fleet Command and the ROK Fleet Command did not report this event, even though the ROKS Cheonan captain reported that he was "likely hit by a torpedo" at the initial stage of action. A nearby ROKS Sokcho reported that it was believed to be a North Korean anti-submersible for an unidentified object that provided the cause of the sinking of the ROKS Cheonan through a search radar, but the 2nd Fleet Command violated the guidelines stipulated not to modify or reduce the initial report.

More importantly, the immediate military response was insufficient even though 46 South Korean soldiers were killed and the ROKS Cheonan sank.

The communication system should be established as a top priority in national disaster management, but it has rather caused distortions and delays in the interim reporting process.

3.2. 2014 sinking of MV Sewol¹

3.2.1. Event overview

On April 16, 2014, the MV Sewol from Incheon to Jeju sank in waters off Jindo, Jeollanam-do Province. The control personnel of the Jindo Coastal VTS Center belonging to the Western Regional Coast Guard Headquarters were unable to track or observe the movement of the MV Sewol.

After hearing the news of the accident from the Mokpo Coast Guard situation room and communicating with MV Sewol from 9:07 to 37, passengers were not able to get out of the ship, and able to reported to the Western Regional Coast Guard Headquarters only, but not to 123 ships² and helicopters dispatched Mokpo Coast Guard.

¹ In this paper, the comprehensive reference to the sinking accident log and progress was based on the BAI's MV Sewol report and prior research[2][8][9].

² 123 Coast Guard vessels are designated as MV Sewol accident site command ships, but only 10 Coast Guard passengers are aboard, and the ability to respond to accidents is vulnerable because they do not have text-situation systems, on-site video transmission equipment, etc[8].
Mokpo Coast Guard and the Western Regional Coast Guard Headquarters did not deliver important information from MV Sewol crew that "they can't move 40° to 47°, they are broadcasting passengers to stand by on board" to the head of the situation room or rescue team. In addition, the Sea Special Attack Team and Mokpo 122 rescue force were delayed because they did not link the appropriate means of transportation to the rescue forces.

The Western Regional Coast Guard delegated all decisions, including relief measures, to the captain and did not grasp the situation at the scene afterwards, and the captain escaped from the ship first, so no prior relief measures were taken, including passenger withdrawal.

123 ships designated as field commanders under the Emergency Rescue Response Activities and Field Command Rules failed to properly understand the situation due to poor communication with MV Sewol.

The Central Coast Guard Headquarters, the Western Regional Coast Guard Headquarters, and the Mokpo Coast Guard did not share information on the scene, did not take active measures to rescue passengers waiting on board, and eventually killed 304 of the 475 passengers.

3.2.2. Analysis of countermeasures, such as initial measures

First, the Jindo Coastal VTS Center had to continuously track whether there was a risk of stranded or crashing ships operating in the control area, but based on 09:00 shift hours, full-time workers did not observe or track MV Sewol on the control screen for 14 minutes and successor for 17 minutes. The mechanical system for managing risk factors should supplement the monitoring of managers by issuing an automatic warning when a vessel in pursuit, whether there is a worker or not, leaves the normal situation. It is necessary to establish an automatic risk factor management system by utilizing the achievements of the 4th industrial revolution.

Second, accurately identifying the on-site situation in the event of a disaster is paramount for initial measures such as emergency measures and secondary damage prevention. To this end, rapid identification of information and prior information on risk factors should be able to communicate and share interactive information between the field, dispatch elements, command and rescue headquarters. In addition, a communication system should be established that can be reported anywhere in Korea when it is in danger, such as mountains, seas, and islands.

Third, initial action in the event of crisis is a response activity that must be taken in a short period of time in a very urgent situation. The 123 captain, who was designated as a field commander, failed to take proper initial measures such as effective rescue activities and command of dispatch elements, and Mokpo Coast Guard, Western Regional Coast Guard, and Korea Coast Guard failed to properly understand the situation, share information, first aid, and follow-up rescue capabilities. For the specialization of workers in the disaster sector, thorough pre-education and training such as virtual training and command post training by disaster type, and personnel benefits are needed to provide conditions for long-term work.

Fourth, in order to respond to golden time in the event of a disaster, rescue capabilities should be put into the field quickly. The department in charge of disaster, such as the situation room, shall be aware of the means and methods of transportation at all times, as well as the regular availability of transportation. It is also very important to secure a travel route because rescue teams may not be able to arrive quickly due to surrounding congestion in the event of a disaster on land.

3.3. 2019 defecting of North Korean wooden boat[10]

3.3.1. Event overview

A small North Korean wooden boat waited in Jipsampo-gu, Gyeongseong-gun, Hamgyongbuk-do, around 8th of June, 9:00 p.m. and formed convoy and start sailing at 9th of June, 00:00 a.m. It is estimated that he arrived at the fishing grounds at 10th of June, 3:00 p.m. and started sailing to-

3 Ship specifications: 10m long, 2.5m wide, 1m high, 1.8t weight, 28hp engine, minimum speed 6~7 knots.
ward the Northern Limit Line at 12th of June, 07:30 a.m. and crossed the Northern Limit Line between the same night and the dawn of the 13th. It sailed toward land around 07:00 a.m. and reached 30 to 40 miles away from Ulleung-do on the night of the 13th. After dropping anchor and resting due to the high waves, it departed on the 14th morning and arrived 1.8 nautical miles (3.3 km) from land around 09:00 p.m., but after resting after dropping anchor and entering Samcheok Port around 06:20 p.m. on the 15th, fearing that it would hit a reef at night.

The North Korean sailor took turns waiting on the boat and waited for three to be cracked down on the embankment, but when there were five to six fishermen nearby, the defected captain urged another defector to "borrow a phone and call my aunt." In response, the defector approached the reporter and said, "Let's call my aunt in Seoul." When the reporter asked, "Where are you from?" he said, "I'm from North Korea." In response, the reporter reported 112 and the Samcheok Police Station patrol car and Coast Guard arrived at the scene to check the North Korean's wooden boat.

3.3.2. Analysis of countermeasures, such as initial measures

First, many mechanical identification devices were in operation for 57 hours before the North Korean wooden ship passed the Northern Limit Line and entered Samcheok Port, but they were not found. Navy vessels and air patrol force in the East Sea were operating in the extended area around 100 nautical miles for squid and saury fishing grounds. The Coast Guard’s large ships were deployed to fishing areas where many North Korean and Chinese fishing boats were working, and didn’t detected in the wooden boat. Coast Guard aircraft were unable to conduct air patrols due to poor weather conditions.

The Army radar operator mistook the wooden ship because of the reflective waves and failed to identify it, and the Thermal Observation Device was not operated during the wooden ship’s travel time. It was filmed twice in the Intelligent Video Monitoring System, but the video monitoring and management personnel judged it as a simple fishing boat, and the Coast Guard could not identify wooden boat’s entering because he was controlling fishermen collecting seaweed from civilian access control zones.

Second, Coast Guard notified the military by FAX, but the military spread the situation to the coast guard post through wire and video conference systems, and the Military Initial Action Unit arrived at the site after the Coast Guard had already towed the wooden boat.

Third, the Ministry of National Defense described the discovery site as "near Samcheok Port" in consideration of military security, but the Coast Guard described it as "by coming to Samcheok Port," providing the cause of the incident reduction and cover-up.

The military’s failure to detect the North Korean wooden boat incident is not a simple military issue in the event of a security-related crisis, and it shows that related information should be shared with the police and maritime police. In addition, on-site enforcement agencies, including the police, the Coast Guard, the military, and fire agency, shall establish an information sharing and situation propagation system and periodically check whether it is operated and maintain a regular response.

4. Review of Disaster Initial Measure

Case analysis of previous disaster’s initial measures show importance of initial measure. Researchers suggest that improvement measures must be prepared to utilize the police’s 112 system in times of crisis such as disasters. In this paper, researchers suggest two different way (legal and physical) to improve initial measure of the police and coast guards’ in the event of a disaster.

In legal way to improve initial measures, first, in order to utilize the police’s ability to take initial action in disaster situations, the Disaster Safety Act and “ACT ON THE PERFORMANCE OF DUTIES BY POLICE OFFICERS” should be new or separate regulations should be prepared.

The Disaster Safety Act stipulates that the police or coast guard are not the supervising agency and that most of the roles should be played only at the request of the supervising agency. There is no reason to take immediate action based on the judgment of the on-site officer. In the case of the
Anti-Terrorism Act, all initial action powers are granted to the Senior Superintendent. The Disaster Safety Act shall also refer to it and create a ground clause so that at least immediate measures can be taken against field police officers and coast guards. The rationale should be clarified so that the organization can have the authority to take initial action and hold it accountable.

Second, in order to prepare for an unexpected disaster, all personnel must secure the ability to perform one’s duties at any time through practical education and training. Periodic training is essential for effective initial action. According to the Disaster Safety Act, manuals are written for each type of disaster, but the creation of a manual should not be mired in manual syndrome as if safety were secured. In addition to enhancing participant capabilities, training can increase awareness of safety and strengthen practical response capabilities by providing relevant ministries and participants with an understanding of their roles and duties in the event of a disaster.

Third, a simple initial measures manual shall be created so that separate manuals for each type of crisis or disaster can be responded in the same manner in the initial stage of action. Too complex manual can make it more difficult to implement initial measures in a short period of time in urgent situations.

Fourth, on-site responses (such as initial measures) should be improved so that local governments which are most aware of the conditions of the site can respond first and central ministries can provide additional necessary resources. To this end, the ability of local governments to respond to disasters should be continuously strengthened with legal and financial support.

In physical way to improve initial measures, first, it is necessary to establish a wired and wireless networked situation system. The vertical and horizontal information sharing system at Golden Time is a basic response system that can save time and focus on emergency measures. It is necessary to use the police’s 112 comprehensive situation system, which can monitor and check the occurrence of a disaster 24 hours a day, as an emergency bell in the field of disaster management. More preparation is needed to equip the police 112 system with all types of disaster response capabilities. i) Specialized education and training for initial measures, such as emergency relief and disaster-type initiatives, ii) A unified radio system among emergency response authorities should be established so that the command can determine and disseminate directions. iii) A comprehensive support system to field personnel.

Second, a Safety Big Data Integration Platform or Center using the technology of the 4th industrial revolution should be established to support first-time arrivals. Only when on-site arrivals know what the disaster is and what to do first can they take the most effective action in a short time at the scene of the disaster. With big data, more appropriate initial response is possible if expert networking is available to analyze it. If real-time collection information using 4th Industrial Revolution technology such as information on vulnerable elements, sensors, and information collected by drones and robots in places where police and coast guards cannot easily access, it will increase the accuracy of analysis of disaster situations and secure the effectiveness of initial measures.

Thirdly, we need to secure initial measures experts. An expert with knowledge and experience can play an important role in initial response, such as determining important measures based on priorities and direction of response.

Fourth, equipment for initial response needs to be continuously reinforced. Since it takes a huge budget to prepare response equipment for initial measures such as emergency rescue, it is necessary to reinforce it with a long-term investment concept and reform it so that it can be used at any time.

Fifth, the state, local governments, and the private sector should establish cooperative governance. Disaster is difficult to respond to even if the overall national capacity is invested. In the event of a disaster, authorities shall inspect risk factors and conduct education and training jointly to encourage active participation. In addition, it is necessary to operate a disaster reporting system in which all citizens participate in the event of a disaster. There is a limit to disaster response capabilities and equipment that can check all disaster sites. In order to complement this, the government should actively encourage public participation. By attracting public participation, it will provide a tremendous synergy effect for all citizens to raise awareness of safety and secure safety for their
neighbors.
Sixth, when preparing for the implementation of the autonomous police system under the current government, it is necessary to prepare law and institution’s regulations to respond to a crisis in the event. In the event of a crisis, the relevant regulations shall be clarified so that the first priority shall be dispatched regardless of the classification of the national and the autonomous police. To this end, it will be necessary to specify it as autonomous police duty in the “Autonomous Police Act” and clarify the relationship between the national police and the autonomous police.

5. Conclusion
In modern society, disaster situations are treated as a national crisis along with national security situations and terrorist situations. As society becomes dense, complex, and wide-area, even small accidents cause a series of infrastructure collapses or human casualty and material damage, developing into a national crisis.

The government has been criticized for every accident and has made many suggestions and measures to prevent the same accident from occurring, but similar types of accidents have occurred repeatedly over a certain period of time[11][12][13].

Problems commonly pointed out in the BAI reports, media, civic groups, and investigative agencies that have analyzed accidents in the past are inexperienced initial measures within Golden Time[14]. There is a golden time in every crisis, so appropriate measures can save people, minimize property damage, or end the case early by putting only a small national capability in dealing with it afterward[14].

Researchers believe that limited national resources can be efficiently responded in the event of a disaster by first strengthening the field of initial measures[15].

The police agency and coast guards are the national resource that can collect disaster information in ordinary times and carry out initial measures most effectively, especially in the event of a disaster.

Many police officers, coast guard, patrol cars, police substation, and 112 comprehensive situation management systems (which can dispatch police officers to disaster sites quickly within five minutes) need to be actively used to respond to disaster management among national resources[16]. This is because the police’s 112 initial measures process which responding quickly to crimes that are becoming more advanced, intelligent, and wide-ranging is similar to responding to crisis situations that are at risk due to disasters[16]. However, improvement measures must be prepared to utilize the police’s 112 system in times of crisis such as disasters[17][18]. In this paper, researchers suggest two different ways (legal and physical) to improve initial measure of the police and coast guards’ in the event of a disaster.

In the future, when the autonomous police system is implemented, the national - autonomous police officers will be separated and the 112 system will be separated too. In that situation, Central Disaster and Safety Countermeasures Headquarters, local government, National Coast Guards, and National Fire Agency will have hard time in communication and chain of command. In the event of a crisis while receiving a crisis-related report or on-site patrol, it should be clearly stipulated that all reports should be dispatched first regardless of authorities.

7. References
7.1. Journal articles


7.2. Books


7.3. Additional references


8. Appendix

8.1. Authors contribution
<table>
<thead>
<tr>
<th>Initial name</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Author</td>
<td>SH</td>
</tr>
<tr>
<td></td>
<td>- Set of concepts ✔</td>
</tr>
<tr>
<td></td>
<td>- Design ✔</td>
</tr>
<tr>
<td></td>
<td>- Getting results ✔</td>
</tr>
<tr>
<td></td>
<td>- Analysis ✔</td>
</tr>
<tr>
<td></td>
<td>- Make a significant contribution to collection ✔</td>
</tr>
<tr>
<td></td>
<td>- Final approval of the paper ✔</td>
</tr>
<tr>
<td></td>
<td>- Corresponding ✔</td>
</tr>
<tr>
<td></td>
<td>- Play a decisive role in modification ✔</td>
</tr>
<tr>
<td></td>
<td>- Significant contributions to concepts, designs, practices, analysis and interpretation of data ✔</td>
</tr>
<tr>
<td></td>
<td>- Participants in Drafting and Revising Papers ✔</td>
</tr>
<tr>
<td></td>
<td>- Someone who can explain all aspects of the paper ✔</td>
</tr>
<tr>
<td>Corresponding Author*</td>
<td>SL</td>
</tr>
<tr>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>
Purpose: The purpose of this study is to examine whether evidence-based police activities can be one of the alternative methods in situations where the Korean police’s counter-terrorism response capabilities are limited in various ways.

Method: The concept, function, and content of evidence-based police activities were reviewed to achieve the research objectives. Based on this, the possibility of applying evidence-based police activities as an alternative philosophy for improving the Korean police’s ability to respond to terrorism was discussed.

Results: As a result of the study, evidence-based police activities based on the scientific method of verification and analysis will be able to contribute to securing the legitimacy of the police’s counter-terrorism activities, and it is thought that the application of this will be necessary.

Conclusion: This study is meaningful in that it was the first to examine the applicability of the philosophy of evidence-based police activities to counter-terrorism police activities in Korea.

[Keywords] Evidenced-Based Policing, Counter-Terrorism, Policing, Rule of Law, In Korea

1. Introduction

In 1998 Lawrence Sherman in a lecture at The Police Foundation argued that the police’s job must be based on scientific evidence of what is most effective. Of course, the concept of the use of investigation and analysis in the field of the police at that time was not entirely new, but Sherman’s argument was innovative in that the police had to use the investigation and analysis more frequently, practically and directly[1].

Sherman’s argument can be said to reflect common values in a modern free democracy. This is because evaluation and objective accountability must exist for administrative actions and expenditures in democratic countries[2]. Furthermore, Evidence-based policing(EBP) is particularly important to the police because the police play an important role in ensuring the rule of law.

Since liberation from Japanese imperialism, the Korean police have undergone many changes from the US military government to today. The pace of change was as fast as Korea’s economic development, and established Korea’s unique police system incorporating the British-American police system based on the continental law-based police system. And today, the reform of the Korean police is still ongoing.

However, the process of change was not smooth, and there is a history that the Korean police under the military dictatorship in the past were abused as a means of maintaining the regime. At that time, the police manipulated the espionage case to maintain the regime of the military dictatorship. This is one of the reasons for the low confidence of the Korean people in
the Korean police today. Low confidence in the police leads to public fear of the expansion of the police agency, which in turn leads to the reduction of authority of the police agency.

The problem is that South Korea is the world’s only divided country, and North Korea’s terror threats against South Korea still exist. In addition, as the role of Korea in the international community increases, the threat of terror against Korea is increasing. However, the weakening of the police’s authority as the primary counter-terrorism organization leads to a weakening of the ability to respond to terrorism.

Therefore, in order to strengthen the police’s ability to respond to terrorism, it is essential to strengthen the police authority, which can be achieved when public trust is premised. Only when police activities are based on the rule of law and evidence, the police will be able to restore the public’s trust.

In the end, in order to strengthen the Korean police’s counter-terrorism capabilities, it is necessary to restore public trust by applying the strict evidence-based policing, and to strengthen the police authority based on that. Therefore, this study examines the applicability of evidence-based policing to the Korean police.

2. Theoretical Discussion on Evidence-Based Policing

2.1. Definition of evidence-based policing

EBP as a method of making decisions about whether or not the police’s duties can be performed most effectively means an attempt to test numerous hypotheses through empirical research results[3].

This can be approached from two aspects, one is that the results of rigorous scientific evaluation of law enforcement strategies and tactics must be used. The other is to create and use ‘analytic information’ about the organization’s own issues and criminal issues[4]. Therefore, the police are not just consumers of evidence, they are in the position of consumers as well as production subjects. In other words, EBP does not mean that the police simply play a role as a consumer of evidence, and therefore, should passively engage in security activities based on the research results of researchers[5].

And Lum & Koper argues that EBP is the perspective and philosophy on law enforcement that emphasizes the use of research, evaluation, analysis and scientific procedures in decision making, and it is not a specific area or type of researcher, but a holistic concept of the use of research in police activities[6].

In order to achieve the research purpose, this study conducts a literature review. The subject of literature study is research papers and books on Evidence-Based Police Activities(EBP), and through this, the core philosophy and functions of EBP are reviewed. Based on this, the applicability of EBP to counter-terrorism activities in Korea is reviewed.

2.2. History of evidence-based policing

In the 1960s, the United Kingdom and the United States faced problems of rising crime rates and increasing racial conflicts. Both countries were recognizing that security-related issues were becoming political issues in an unprecedented way, and the fact that the police responses of the two countries were different is a special point, far deeper than the military cooperation between Britain and the United States in World War II. It made it possible to form a relationship. Through this, both countries tried to “upgrade” the police through the establishment of an authoritative committee.

However, until the early 1970s, opinions for police reform were not connected/integrated, but were divided individually. And the UK’s Home Office and the US Department of Justice, which were encouraged by it, conducted research on the police, but the efforts of these government agencies did not yield great results.
Until 1975, Anglo-American law states such as the United States, United Kingdom, Canada and Australia adhered to a one-size-fits-all policing strategy called “three Rs” stands for random patrol, rapid response, reactive investigations, which served as a standard model for city police policy. But through a series of studies funded by the Police Foundation founded by the Ford Foundation in 1970 and the US government, skeptical questions about the 3Rs began to be raised.

In particular, Reiss’s research served as a catalyst for creative thinking away from police activities at the time of staying at 3Rs, and expanded the concept of police discretion from case-by-case to institution-specific decision-making, enabling the emergence of a triple-T strategy [7].

After Goldstein insisted on the practice of Problem-Oriented Policing (POP) in 1979, until 2012, POP was firmly established as a “police activity” in the “social welfare” area, while the Evidence-based Policing (EBP) continued to develop. EBP can be said to be essential to practice POP with SARA Model as its core content [8]. This is because the SARA model, which is the core content of POP, consists of scanning, analysis, response, and assessment procedures, and analysis and assessment must be based on scientific evidence. Korean police also adopted the philosophy of POP, but no research has been conducted on EBP.

3. Functions and Core Contents of Evidence-Based Policing

The functions of EBP can be approached in terms of strategic functions and operational functions. Strategic functions consist of political functions, economic functions and social functions.

3.1. Political functions of EBP

First, as a political function, EBP contributes to securing accountability and legality of police administration. This is because when there is clear 'evidence' that police actions and strategies are effective, their justification can be secured. In this regard, Sherman argued that ‘police legitimacy is not achieved simply because it is based on the rule of law, but can be secured when it shows that the police administration is based on a complex of knowledge generated through scientific methods of verification and analysis.’ [9].

Responsibility in today’s police activities is of paramount importance. Since most of the police action is an action of power, the basic rights of the people are often limited. Therefore, legality in police activities is of paramount importance [9][10].

However, in practice, whether the exercise of the police power in the field is mostly left to the discretion of the police officer, and whether or not the exercise of the police power in the case of a risk premised on uncertainty is legal or not is subject to a later judicial review.

This is also one of the reasons for the passive intervention of on-site police officers on the danger. However, the terror risk inflicts enormous damage to the state and society when realized. The damage is difficult to recover, and it requires enormous social costs.

However, sometimes police activities to prevent terrorism have been abused as a means of maintaining power and as a means of eliminating the opposing party for political purposes.

The vagueness of the existence of danger makes it difficult to present guidelines for police intervention, and in the end, police intervention based on the arbitrary judgment of the state power is also a means of limiting the political freedom of the people.

Therefore, we need to establish a reference point for determining whether or not to intervene in the police to prevent terrorism. I’m sure we’ll find this possibility at EBP.

Next, EBP has an economic function of contributing to securing resources for police activities. In a situation where competition among agencies for resource acquisition is fierce, security activities based on clear evidence are necessary for the continued development of the fu-
ture police. In addition, EBP performs social functions by contributing to securing the police's expertise[11].

3.2. Operational functions

EBP increases the effectiveness of organizational operations by reducing frustration and criticism caused by time, cost, and trial and error[6]. It also improves the organization's information function[11][12].

Furthermore, since the evidence-based transformational approach involves creative and active thinking, it gives more satisfaction to both managers and subordinates, ultimately enhancing the job satisfaction of police officers[13][14][15][16][17].

In addition, EBP can reduce internal problems within the police organization, solve problems in the community, or derive strategies and tactics to reduce the fear of crime damage[18][19]. And it makes it possible to increase citizens' confidence in the police through strengthening transparency, legitimacy and accountability in security activities[6].

3.3. Core contents of evidence-based policing

The core contents of EBP can be called targeting, testing, and tracking.

Targeting refers to a strategy for setting priorities to bring out the maximum effect through the use of the least police manpower. Select the crime-prone area (ie, hot spot of crime), ex-convict or re-victim as the target of police activities, and conduct discriminatory police response[20].

Testing means verification of the police's actions (Examples are the verification of the effectiveness of vehicle patrols and the effectiveness of the 'mandatory arrest policy' against domestic violence crimes.). For example, as a result of verification of the effectiveness of random foot patrol, it did not affect the reduction of crime rate, but it was found that it had a positive effect on citizens' perception of crime and disorder[21][22].

Finally, tracking means accumulating data through experiments and conducting follow-up investigations. In the mid-1970s, whenever police officers used police equipment or physical force, such as weapons and handcuffs, a report was submitted to the manager. This not only allowed the police manager to check statistical indicators on the use of physical force, but also physical force in arbitration or appeals. It is also used as a justification for use.

4. The Applicability of EBP to Counter-Terrorism in Korea National Police

4.1. Counter-terrorism agency in Korea

Counter-terrorism agencies in Korea include the National Intelligence Service, KNP, and the military[23]. Among them, KNP function as the primary counter-terrorism agency based on the strong national police system[24][25]. As a divided country, South Korea has been exposed to threats from North Korea in the past, and there have been numerous North Korean terrorist attacks on South Korea historically[17][26][27]. After the Korean War, in the 1960s, terrorism targeting civilians was carried out mainly by kidnapping South Korean fishermen. The 1970s saw more violent and daring acts of terrorism, including hijacking aircraft, kidnapping South Korean embassy staff, and South Korea's attempted assassination of President Park Chung-hee. Also, the "axe atrocity incident" that occurred in the Joint Security Area in 1976 was an incident that showed the brutality of North Korean terrorism. In the 1980s and 1990s, North Korea's terrorist acts against South Korea or the United States continued. In 2010, although the form of terrorism in North Korea changed, such as GPS disturbance and cyber terrorism, there were still numerous terrorist attempts against South Korea.

Korea is one of the few countries that has achieved rapid economic growth and democratization at the same time over the past half century. Based on the 11th largest economic power
in the world, today, Korea has a higher role and status in the international community, and the threat of terrorism is also increasing. However, in the course of the democratization movement against the dictatorship, the KNP, who had fallen as a means of maintaining the government, lost their trust from the people and were ridiculed as 'the maid of the government'.

After the establishment of a democratic government, the public's distrust of the police gave legitimacy to the police reform in the direction of weakening the authority of the police. Eventually, the Korean police's ability to respond to terrorism was limited due to legal restrictions imposed on human rights protection. In other words, today's democratic government and people in Korea have an instinctive fear that the police's counter-terrorism activities will be abused as a means to infringe on the people's basic rights. In the end, this fear weakened the police's counter-terrorism function, and it could be said that it increased the terror threat to the people.

The reason the police's counter-terrorism activities are restricted may be due to the historical reasons mentioned above, but also the uncertainty of "danger". In other words, the threat or risk of terrorism is inherently characterized by uncertainty. In addition, "risk" is a subjective concept, and objective measurement is not easy. Therefore, it is not possible to allow unrestricted police intervention for the purpose of preventing uncertain and subjective 'risks'. Then, we can determine the scope of possible police counter-terrorism activities at a level that does not infringe on the basic rights of the people if uncertainty is an acceptable level of certainty and maximum objectivity is guaranteed. An alternative that can make this possible is EBP's philosophy.

4.2. The applicability of EBP to KNP

The most important task of the police in Korea is to prevent danger. Unlike criminal investigation activities, police activities to prevent danger are recognized as expedient, and ultimately, the decision on whether to intervene in the police to prevent danger is often at the discretion of the police agency.

However, even if the police agency did not intervene, if it is objectively judged that there would be no danger, the intervention may be illegal. This is also one of the reasons for the passive response of police agencies to danger.

Therefore, it is necessary to set standards for judging whether police agencies are involved in terrorism risk. It can be said that it is the philosophy of EBP that can be used as a guide for setting this standard. In other words, if the EBP philosophy is applied to the police's counter-terrorism activities, it will contribute to securing the accountability and legitimacy of police intervention to prevent the risk of terrorism. In addition, this can be a guideline for the police to actively engage in counter-terrorism activities within the scope that does not infringe on the basic rights of the people.

Furthermore, in terms of organizational operation, the use of EBP enhances the effectiveness of the police's counter-terrorism function.

5. Conclusion

Due to the limitations of democratic mechanisms for human rights protection today, the counter-terrorism activities of the Korean police are severely limited.

For counter-terrorism activities, the Korean police must obey strict laws, and this is also the case in the field of information gathering related to terrorism. Investigations against terrorists must also comply with strict procedures and achieve the purpose of guaranteeing human rights at the same time. In fact, it can be said that it is not easy to even activate the police authority to prevent terrorism. In this respect, I think that evidence-based police activities can be an alternative methodology for the counter-terrorism activities of the Korean police.
As mentioned above, studies on EBP in Korea are very scarce. Therefore, this study attempted to discuss the theoretical basis for the active intervention of the police to reduce the risk of terrorism by correlating the anti-terrorism activities of the police with the function of securing the legitimacy and responsibility of police activities, one of the political functions of EBP. In addition, the originality of this study exists in that it confirmed the possibility of presenting the basis for scientific and rational judgment in the area of police discretion through the preparation of standards for police intervention using EBP.

6. References

6.1. Journal articles

6.2. Books


6.3. Thesis degree


7. Appendix

7.1. Authors contribution

<table>
<thead>
<tr>
<th>Initial name</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td></td>
</tr>
<tr>
<td>EK</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-Set of concepts ☑</td>
</tr>
<tr>
<td></td>
<td>-Design ☑</td>
</tr>
<tr>
<td></td>
<td>-Getting results ☑</td>
</tr>
<tr>
<td></td>
<td>-Analysis ☑</td>
</tr>
<tr>
<td></td>
<td>-Make a significant contribution to collection ☑</td>
</tr>
<tr>
<td></td>
<td>-Final approval of the paper ☑</td>
</tr>
<tr>
<td></td>
<td>-Corresponding ☑</td>
</tr>
<tr>
<td></td>
<td>-Play a decisive role in modification ☑</td>
</tr>
<tr>
<td></td>
<td>-Significant contributions to concepts, designs, practices, analysis and interpretation of data ☑</td>
</tr>
<tr>
<td></td>
<td>-Participants in Drafting and Revising Papers ☑</td>
</tr>
<tr>
<td></td>
<td>-Someone who can explain all aspects of the paper ☑</td>
</tr>
</tbody>
</table>