

Lone Wolf Terrorism Trends in Indonesia

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Abstract

In the past few years, lone wolf terrorism has become a trending topic in the world of terrorism. We look at various definitions and trends of lone wolf terrorism from previous literature. This research aims to determine if there is a trend in lone wolf terrorism in Indonesia. The profile of the attacker is categorized based on the attacker's age, gender, marriage status, occupation, and education, while the attack is categorized based on the attack's target, region, choice of weapon, survival, casualties, and ideology or motive. The data is presented as descriptive statistics of qualitative nominal data in pie charts, and the results are discussed and analyzed. It was found that lone wolf terrorists do not have a single profile, but there are trends found where the attackers are typically male, single, in the 20s to 30s, self-employed, and at least graduated high school. The attacks usually target police, are based on ISIS ideology, uses either sharp weapon or explosives, and does not result in death. The attacker also typically survives, and all the attacks happened in the island of Java, Indonesia.

Keywords: *Terrorism, Lone Wolf, Indonesia.*



A. INTRODUCTION

Terrorism and Islamic radicalism are big security threats in Indonesia. Islamic radicalization goes back to the Indonesian Revolution era after the independence of Indonesia, which eventually evolved into terror groups that are active within the country today. The Bali Bombing in 2002 became a turning point in Indonesia's counterterrorism measures. Whereas previously terrorism was considered a domestic criminal problem (Fitriani et al., 2018), in 2002, an Indonesian law on counterterrorism was created, and in the following years, a unit focused on counterterrorism within the Indonesian National Police, Counter-Terrorism Special Detachment 88 (*Detasemen Khusus 88 AT*), and an agency focused on Counter-Terrorism, the National Counter-Terrorism Agency (*Badan Nasional Penanggulangan Terorisme*), were established.

Along with the increased efforts of the government and law enforcement, as well as rapid change in technology, there has also been a shift in terrorism strategy, specifically on the recruitment and the attack pattern trends. While some big attacks are executed by extensive planning of structured terror groups, various attacks by lone attackers have started trending. There are lone attackers may have been recruited and instructed by terror groups to commit an act, but there are also attackers that have gone through the radicalization process, planning, and executing an act of terror all alone, completely disconnected from any formal terror networks.

The phenomenon of a lone, unaffiliated attacker is not unique to Indonesia nor is it new. In the United States, the tactic to utilize a lone attacker has been used since the 1990s by white supremacists, who encouraged committing crimes by acting alone where the attacker acts independently with no headquarters to report to or receive

instructions from. Going back further, individual attacks done in the 19th century were encouraged by anarchists, what is known as “propaganda by deed”. This strategy that has been adapted by terrorist groups by utilizing the internet in spreading propaganda to target potential lone wolves (Bakker and de Graaf, 2010).

An inevitable part of becoming a terrorist is the radicalization process. Radicalization is a strategy utilized by terror groups, and there is a distinction between radicalization and recruitment. This radicalization is divided into online radicalization and self-radicalization. One of the most prominent terrorist groups, Al-Qaeda, has a specific lone wolf planning model, and has published an online magazine, *Inspire*, that is considered the most comprehensive resource for the planning of lone wolf terrorist (Anderson, 2019). On the other hand, the Islamic State of Iraq and Syria (ISIS) has also adapted strategies to utilize potential lone wolf attackers. This group utilizes the internet and social media to spread propaganda by assigning dedicated members which operates various social media and digital applications to reach a wider audience (Yayla, 2021). Additionally, high internet usage further puts Indonesians at risk. As of February 2022, out of the population of 277.7 million, 73.7% or 204.7 million are internet users, while 68.9% of the population or 191.4 million people are active users on social media (DataReportal, 2022).

B. LITERATURE REVIEW

Terrorism is a social construct and is defined by those in power, hence the definition heavily relies on governments and their agencies (Spaaij, 2012). This indicates that there is no fixed definition of terrorism, and it varies from one country to another. Not only terrorism, but there is also a lack of consensus by experts on the definition of a lone wolf terrorist. The term lone wolf itself was based on “Operation Lone Wolf” by white supremacist (Hamm & Spaaij, 2017). Hewitt (2003) who refers to attackers in this phenomenon as “freelancers”, describe this term as an attacker who is not part of a terrorist group or under the order of an extremist organization. Hewitt in his perspective though, views anything coordinated with less than four people, is still considered a lone wolf attack. Phillips (2011) describe a lone wolf terrorist as someone who operates alone without any accomplice, outside of a formal organizational or command structure. Hamm & Spaaj (2015) state that attacks done by lone wolf is a type of political violence done by a lone actor who is not part of an organized group or network, and does not take any directions or commands, and has not been directly influenced by a leader or hierarchy. Bakker and de Roy van Zuijdewijn in Marlatt (2019) define lone wolf terrorism as an individual perpetrator who uses threat or violence and whose motive is not personal, without any support in any stage of the attack, and is not directly ordered by a group or another person, in order to influence a wider audience. Burton and Stewart in Spaaij (2012) describe a lone wolf as a standalone operative who acts alone and is not part of and has no relation to an organization and has not taken any sort of order. Spaaij (2012) explains

several descriptions of a lone wolf terrorist which include individual operation, not part of a terror group or network, and their attack does not involve any outside party.

There are also studies on typologies of lone wolf terrorism, to view this issue in larger, multidimensional framework. These studies may be useful for broader analysis in order to see the bigger picture. Pantucci (2011) in his study, proposed four lone wolf typologies, which are as follows: the loner who does not come into any contact with a group or network, the lone wolf who might have come in contact with a group or network, the lone wolf pack which consists of a group who self-radicalize, and the lone attacker who is actually involved in a terror group or network. Borum et al. (2012) on the other hand proposed three dimensional spectrums of a lone attacker, which are the loneness, direction, and motivation. These three dimensions perfectly sum up the differences in definitions by various academics and researchers. Loneness refers to the direct involvement of another person, which covers the radicalization process, degree of contact and material support, source of inspiration, and assistance during the execution. Direction is the level of autonomy and direction in an attacker's decision making. Motivation is the reasoning behind the attack, whether it is personal or more political or ideological. Smith et al. (2015) also proposed a typology based on three operational variables, which are the affiliation of an individual, assistance while committing conducts prior to the terrorist incident, and assistance during the terrorist incident. The results are divided into two categories, into the ones with assistance, the lone conspirators and the cells/groups and the ones without any assistance, the loners and the affiliated loners.

Studies on lone wolf terrorism are mostly focused on terrorism in the United States and Europe. Hamm & Spaaij (2017) compared several studies that analyzed lone wolf terrorism in United States. In the study by Hewitt (2003) it was found that there are four types of lone wolf attackers, the right-wing supremacists, the Islamic extremists, black militants, and anti-abortionists. This indicated the varying ideology behind these attacks. At the time of the study, which looked at terrorism between 1955 to 1999, it was determined that it was largely a US phenomenon. Spaaij (2010) between the years of 1968 and 2010 determined that there are 198 lone wolf attacks from a total of 15 different countries, consisting of the United States, Australia, Canada, Russia, and other European countries. It was found that these attackers kill on average 0.62 each attack, with motives typically being a combination of personal, interpersonal, and political values, as well as circumstances relating to culture, and some may be sympathizers of extremist groups.

Smith et al. (2015) compared two categories of terrorist (the loners and cells/groups) based on their topology and found that in the United States, the age of indictment is slightly older for loners, but for both loners and cells/groups terrorists the average ages are both in the 30s. Loners are all male, while there is some female participation as much as 13% in cells/groups. Loners mostly have a college degree (90%) compared to 63% of terrorists in cells/groups. Loners also were mostly unmarried, while terrorists in cells/groups are likely to be married.

A study done by Schuurman et al. (2018) which focused more on the planning and preparation of a lone wolf attack in the United States and Europe, compiled information from previous studies, and found that firearms are the most used weapon, followed by explosives and some even showed interest in weapons of mass destruction. The preferred targets seem to be vehicles and civilians. The rate of attack completion is in general also low.

Lloyd and Pauwels (2021) in their research found that while lone wolf attackers in Europe do not have a single profile, their age range tends to be in their 30s, where Islamic extremists are younger than ring-wing extremists. The research also found that these attackers have typically finished high school or even higher education. From the attacks executed, only one out of three attacks have caused death.

Gill et al. (2014) studied 119 lone-actor terrorists taken from LexisNexis database, and it covers up to data from 13 countries, although the overall data is more focused on the United States. Of these terrorists, three ideological domains were found, the ring wing, Al-Qaeda related ideology, and single-issue which covers animal rights, antiabortion, and environmentalism. The results show that lone-actor terrorism is male dominated with 96.6% of the actors being male. Social isolation was also seen in 52% of the samples, where 26.9% were radicalized away from their family, and 37% lived alone. Age-wise, while there is a high range from teenage years (15) to old adults (69) but the average age is 35 with a mode of 22. Of the ones with available data, it is known that half (50%) of them were single while the other half were either in a relationship (6.6%), married (24.5%), separated (3.8%), or divorced (15.1%). In terms of education, there is a generally even spread of education distribution from secondary education (24.7%), the ones who attended school equivalent to undergraduate school but did not graduate (32.5%), to the ones who graduated undergraduate level (22.1%). The smaller percentage started graduate school (6.5%), finished graduate school (6.5%), and received a doctoral degree (7.8%). Despite receiving high education, 40.2% of these lone actors were unemployed, 50% were employed and the remaining ones were students (9.8%). The ones employed were mostly within the service industry. The success rate of a terror attack is 51.2%

Despite these various trends, Ashghor (2022) highlights that in discussing lone wolf terrorism, there are massive differences in the characteristics of actions, discourses, and movements between right-wing terrorism versus Islamic radicalization-related terrorism, and that global *jihad* terrorism is a much more complex matter. A great part of western lone wolf literature focus on right-wing terrorism, and theories are applied to right-wing terrorism do not necessarily apply to Islamic radicalization-related terrorism.

Riyanta (2022) explains that the rise of lone wolf terrorism phenomenon in Indonesia is caused by a shift in radicalization pattern due to the development of digital technology. Theories such as staircase to terrorism by Mogghadam is not applicable to online radicalization process and lone wolf terrorism. This radicalization process that initially would require a long time in face-to-face meetings is accelerated

into just days or hours using social media. Moreover, radicalized individuals typically participate in spreading radical narratives, increasing the potential for lone wolves.

Because the scope of this article discusses lone wolf terrorism within Indonesia, and the data obtained is from a government institution, the definition of lone wolf terrorism is based on Indonesian law. The Indonesian law on terrorism, national law number 5 year 2018, states that terrorism has several characteristics, in which it states that (1) terrorism uses either violence or threat of violence towards a person's body, life, and freedom, (2) the threat of terrorism of violence (3) creates terrorizing atmosphere or widespread threat, (4) has the potential to create mass victims, (5) targets vital object, the environment, public or international facility, and lastly, (6) the motive can either be ideological, political, or be a disturbance of peace.

Based on these characteristics of terrorism, we determine a lone wolf attacker as someone who has attempted a terror attack, and acted alone in financing, planning, and executing the attack without coming in contact with a terrorism network, both online (through the internet) and offline (in person). Referring to the dimensional spectrum by Borum et al. (2012), the level of liveness would be completely independent in their initiation, planning, preparation, and execution, non-directed in their whole decision making, and the motivation can be either ideological or non-ideological.

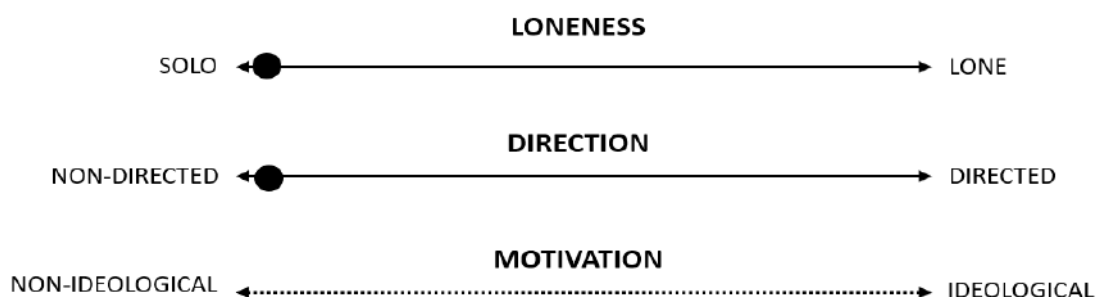


Figure 2. Dimension of Indonesian Lone Wolf Terrorism based on Dimensional Approach by Borum et al. (2012)

C. METHOD

At times, it is difficult to determine whether an attacker is a lone wolf terrorist. Additionally, information gathered by investigators on a case regarding the status of a lone attacker is unlikely to be announced to the public. There are groups in Indonesia, such as Jama'ah Ansharut Daulah, that utilizes radicalization into a lone attacker as part of their strategy.

This article will analyze and compare several known attacks done by lone wolves in Indonesia. Information is obtained from the Counter-Terrorism Special Detachment 88 of the Indonesian National Police. Data is collected using a non-probability sampling, with the requirement of the sample being a lone wolf attack. For someone to be determined a lone wolf attacker, an attempt of attack must occur, the attacker must not have any contact with a person from a terrorism group network,

and all phases of the attack, which includes financing, planning, and executing, must have been planned individually by the attacker with no involvement of another party.

The data will then be divided into two, the profile of the attacker and the characteristics of the attack. These are qualitative nominal data, which will then be analyzed using descriptive statistics. Nominal data, also known as categorical data, are data that can be put into specific categories, while a descriptive statistical analysis provides an overall general summary of the data samples (Kalidayan and Kulkarni, 2019).

The profile of the attacker is categorized based on the following criteria:

1. Age
2. Gender
3. Marriage status
4. Education
5. Occupation

The attacks are categorized based on the following criteria:

1. Target of the attack
2. The location (province) of the attack
3. Weapon of choice
4. The survival of the attacker
5. Death or victims Injured, excluding the attacker
6. Ideology or motive

As the data used is nominal data, the only measure of central tendency that will be used is the mode, which is the value that appears most frequently. This data is visualized into pie charts for each category.

D. RESULTS AND DISCUSSION

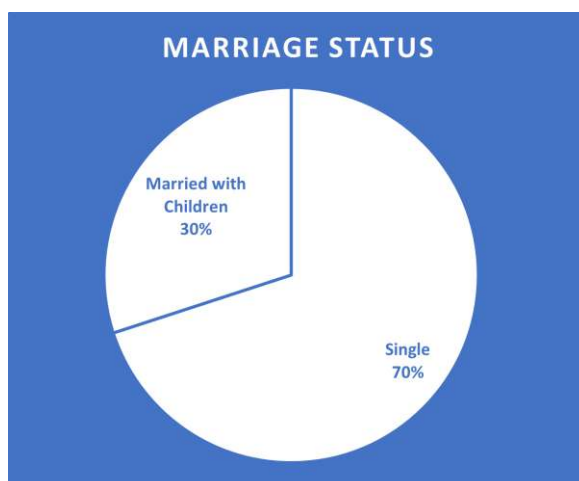
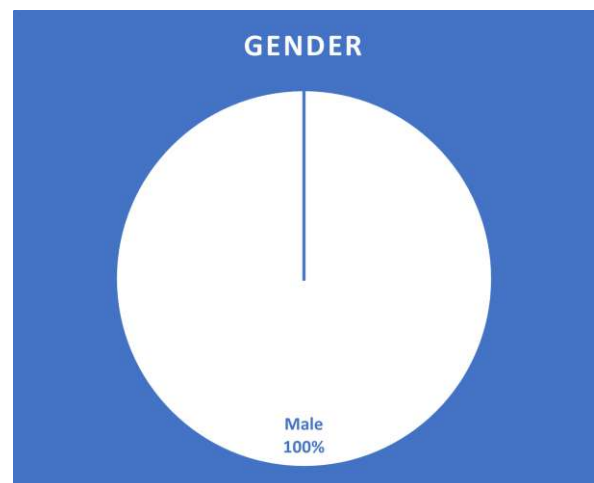
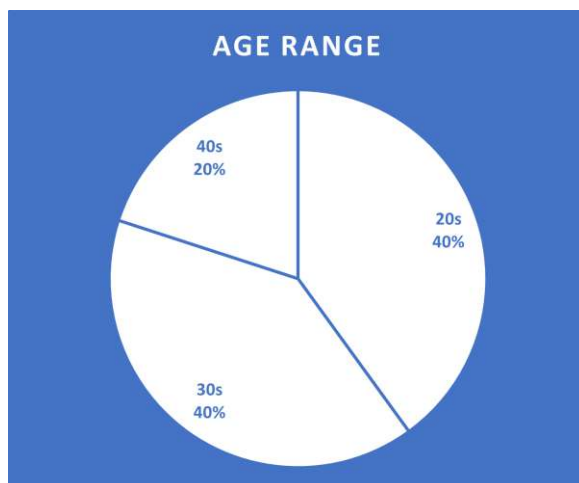
Like other researches on lone wolf terrorism, the sample size is one of the limitations in this study. The data collection provided twelve profiles, where two were eliminated as they do not meet the requirements stated above. The results are 10 lone wolf attacks in Indonesia. These attacks range from the year 2006 to 2022. Here we determine that there is a consistent trend since the year 2015, with at least one attack a year, with the exception for the years of 2019 and 2020.

Table 1. Number of Lone Wolf Attacks per Year

Year	Number of Attacks
2006	1
2010	1
2015	2
2016	1

2017	1
2018	1
2019	2
2022	1

The gap in 2019 and 2020 is likely due to the Covid-19 pandemic, which placed restrictions on the movement of people. Through the United Nations Office of Drugs and Crime under the Guyub Project, several discussions involving counterterrorism stakeholders were held on the impact Covid-19 has on terrorists in Indonesia. While it was found that extremists exploited the restrictions by increasing their online interaction, but narratives stating that the pandemic was a sign of the prophesied “End Times”, ended up slowing down terrorist activities in Indonesia (UNODC, 2021).



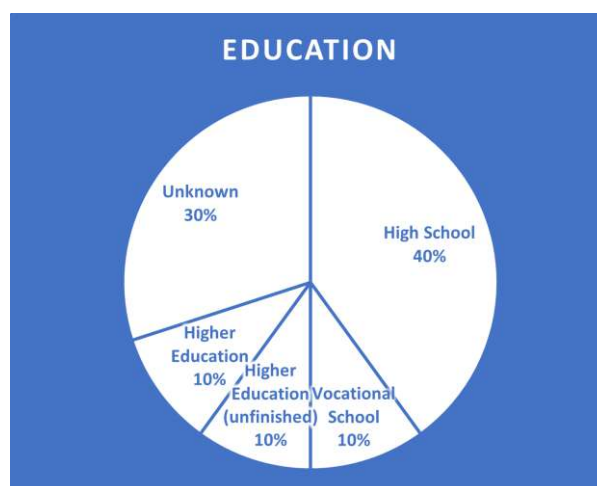


Figure 1. Profile Statistics of the Attackers

Age – Looking at the profile of the attacker, we can determine that attackers are typically in their 20s (age range 20 to 29), 30s (age range 30 to 39), and 40s (age range 40 to 49). This is the age of the attacker when they committed their act, with four attackers being in their 20s, four attackers in their 30s and the remaining two are in their 40s. The average is 32, with a range of 21-45. This is slightly lower than some of the other studies, but the age range is smaller.

Gender – These lone attackers are all male. While terrorism in Indonesia has found some female involvement, so far, they are found to have some sort of connection with Indonesian terrorism networks. This result is similar to other studies, where only a small minority is female and more than 95% of the attackers are male.

Marriage Status – It is found that seven out of ten are single, while the other three are married with children. This suggests that someone who is single is more likely to commit a lone wolf attack. This is likely due to the fact that a person with a family has more to consider in their decision making. Moreover, as stated by Riyanta (2022), the role of family can help prevent and suppress radicalization.

Education – In terms of education, four are high school graduates, and an additional one who has completed vocational school, with a total of five attackers who have completed secondary education. One has completed higher education, and another started higher education but didn't complete it. Similar to other studies, this is actually higher than the average education in the country. Based on data by BPS-Statistics, per December 2021, out of the population age 15 and above, 29,21% finished education until the equivalence to high school, while only 9.67% finishing higher education. The majority did not finish or are still undergoing education in secondary school or lower (BPS-Statistics, 2021).

Employment – Half of all the attackers are self-employed. The data did not provide details on their occupations, but self-employment in Indonesia typically refers to being an owner of a micro-businesses that may have uncertain, fluctuating income, indicating possible economic struggles. The other 20% are unemployed. Only 20% are known to be employed. Going with the assumption that self-employed have

fluctuating income, this would mean at least 70% are facing financial troubles. This is in line with other studies. Unemployment and self-employment also demonstrate that social isolation may be a contributing factor, as these do not have a work environment that involves people, hence smaller social circles than those that are employed. This supports the social isolation factor as a potential contributing factor to being a lone wolf terrorist.

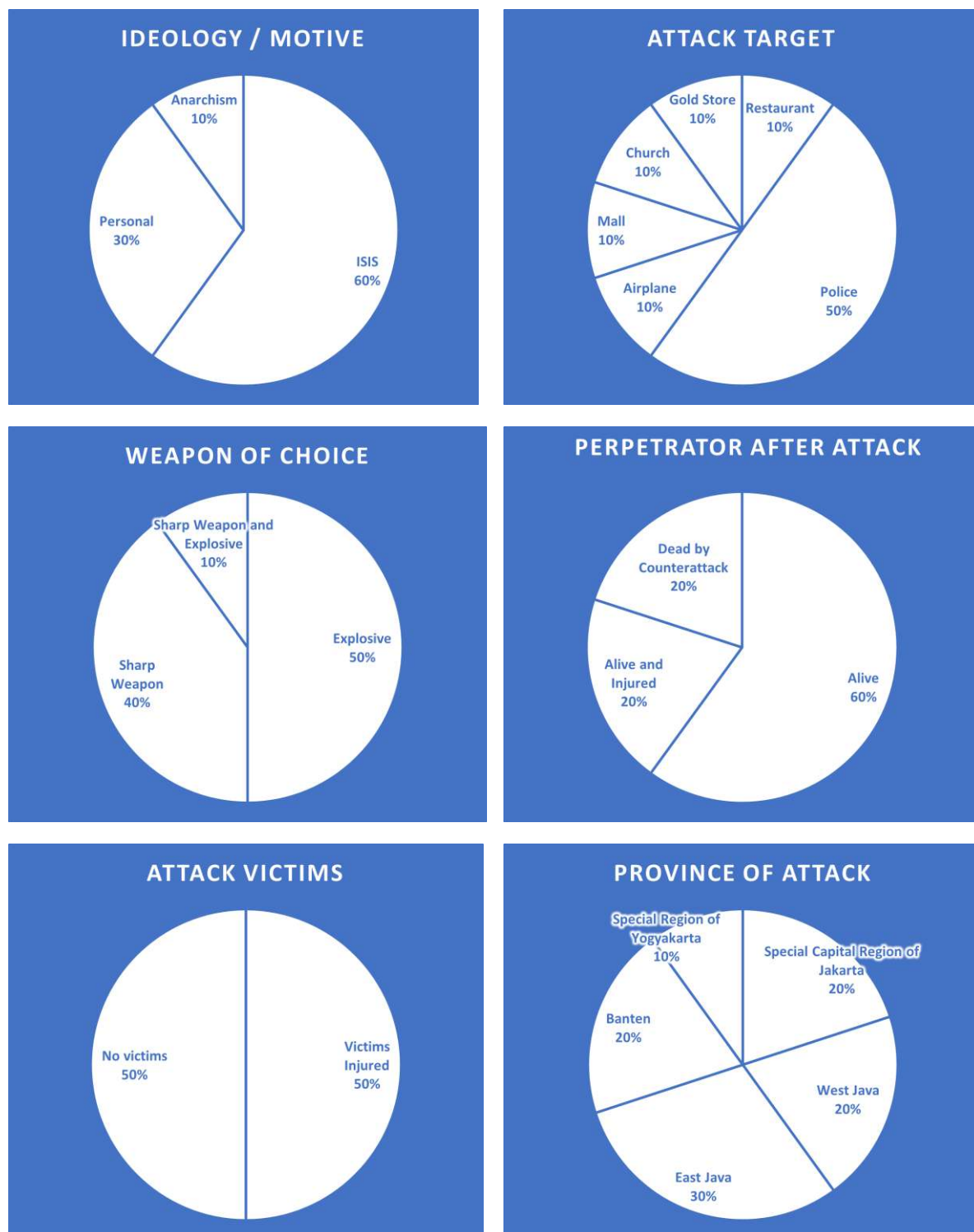


Figure 2. Profile Statistics of the Attacks

Ideology – Most (60%) of these attacks are based on the ideology of ISIS, who view man-made laws, and secular beliefs such as nationalism and communism as a nullifier of Islamic faith (Bunzel, 2015). One of the attacks was an act of anarchism, while the other attacks are based on personal motive. Several studies do not view personal attacks as terrorism, but in this case because these attacks created widespread fear, targeted specific object, or had potential for mass victims, these were categorized as terrorism.

Target – Focusing on the attack patterns and trends, here we have determined that the number one target of lone wolf attacks are police. The police force who enforces laws of a country that is not run based on Islamic faith are considered Infidels by Islamic extremists (Bunzel, 2015). In fact, all the attacks aimed towards the police are based on ISIS ideology. This includes attempts directly done towards police officers or attempts to attack a police station. The other targets are public places, one of which is a place of worship.

In a book titled *Perkembangan Terorisme di Indonesia* (Development of Terrorism in Indonesia), published by the National Counter-Terrorism Agency, it is stated that there has been a shift in the targeting by terror groups since Indonesia's Reformation Era year 1998. Previously, terror groups focused on houses of worship, but ever since the first Bali Bombing in 2002, public places have become a more favorable target, and more recently, terror groups are even more eager to target government building, law enforcement, and especially police (Damayanti et al., 2013). The other attacks are more goal-based. The attack on the gold store and mall both are motivated by financial reasons. The attempts on the restaurant and church are also based on ISIS ideological belief, while the attempt on the airplane aimed at one of the attacker's family due to personal conflict.

Choice of weapon – Different from their counterparts in the United States and Europe, all attacks in Indonesia utilized either explosives, sharp weapons, or both. The explosive type varies, ranging from small, improvised explosives to high explosives. Firearms are not a weapon of choice for lone wolves in Indonesia. This is because rules on firearms ownership states that unless one is part of the army or police force, they are required to register with the National Counter-Terrorism Agency based on the Decree by the Indonesian National Police.

Victims – There were no death tolls in any of the attacks, but in half of the attacks, there were injured victims who were then immediately taken for urgent care at the hospital. The death toll is lower than in all the other studies.

Perpetrator after Attack – The attacker's status after the attack is interesting to discuss, as it could indicate success in any suicide bombings. Fortunately, so far there are no recorded cases of deaths of the attacker due to suicide bombing. Instead, two out of ten cases died from counterattack, while the majority were captured alive.

Geography – Region-wise, these attacks are scattered across several provinces but all the provinces in which lone wolf attacks happened are located in the island of Java, Indonesia's most populous island, and also the Island that hosts Indonesia's

capital city, the Special Capital Region of Jakarta. Based on the data taken from BPS-Statistics Indonesia on population percentage, by December 2021, 56.07% of Indonesia's population live on Java Island. In fact, lone wolf attacks are distributed in 5 provinces out of 6 that are on Java Island, bearing in mind that Indonesia is an archipelagic state that hosts a total of 16.766 islands which are distributed amongst five major islands and four archipelagos (BPS-Statistics Indonesia, 2022).

E. CONCLUSION

Lone wolf attacks in Indonesia are a new phenomenon, with the first attack identified in 2006, and in recent years, these attacks have become frequent. A total of 10 lone wolf attacks have been detected. Similar to results in other studies, there is no specific profile on lone wolf terrorists, but there is an overall trend. It was found that in Indonesia, lone wolf attackers are all male, predominantly in their 20s or 30s. They are usually single, typically self-employed and have mostly finished secondary education. The most common target are police officers, and the attacks are executed using a sharp weapon or a type of explosives. People that become victims of lone wolf attacks in Indonesia are usually injured or do not become victims at all, but no fatalities have been recorded by a lone wolf attack in Indonesia, putting the success rate of lone wolf attacks at 0%. The attacks are mainly motivated by ISIS-based ideology. All the attacks occurred in the most populous island in Indonesia, Java.

REFERENCES

1. Anderson, R. A. (2019). Online Utilization for Terrorist Self-Radicalization Purposes. In J. R. Vacca (Ed.), *Online Terrorist Propaganda, Recruitment, and Radicalization* (1st ed., p. 30). CRC Press.
2. Ashghor, A. (2022). Redefine The Concept of Lone Wolf in the Context of Global Jihad. *Journal of Terrorism Studies*, 4(1), 14. <https://doi.org/doi.org/10.7454/jts.v4i1.1047>
3. Bakker, E., & de Graaf, B. (2010). *Lone Wolves: How to Prevent This Phenomenon?*. International Center for Counter-Terrorism - The Hague.
4. Borum, R., Fein, R., & Vossekuil, B. (2012). A dimensional approach to analyzing lone offender terrorism. *Aggression and Violent Behavior*, 17(5), 389–396. <https://doi.org/10.1016/j.avb.2012.04.003>
5. BPS-Statistics Indonesia. (2022). *Statistik Indonesia Statistical Yearbook of Indonesia 2022*. Retrieved from <https://www.bps.go.id/publication/2022/02/25/0a2afea4fab72a5d052cb315/statistik-indonesia-2022.html>
6. BPS-Statistics Indonesia. (2021, December). *Persentase Penduduk Berumur 15 tahun Ke Atas menurut Daerah Tempat Tinggal, Jenis Kelamin, dan Jenjang Pendidikan tertinggi Yang Ditamatkan, 2009-2021*. Retrieved from <https://www.bps.go.id/statictable/2012/04/20/1610/persentase-penduduk->

[berumur-15-tahun-ke-atas-menurut-daerah-tempat-tinggal-jenis-kelamin-dan-jenjang-pendidikan-tertinggi-yang-ditamatkan-2009-2021.html](https://doi.org/10.24054/ijss.v4i1.1043)

7. Bunzel, C. (2019). *From Paper State to Caliphate: The Ideology of the Islamic State* (Vol. 19). Center for Middle East Policy at Brookings. Retrieved from <https://www.brookings.edu/wp-content/uploads/2016/06/The-ideology-of-the-Islamic-State>
8. Damayanti, A., Hemay, I., Muchtadlirin, Aziz, S. A., & Pranawati, R. (2013). *Perkembangan Terorisme di Indonesia*. Badan Nasional Penanggulangan Terorisme.
9. DataReportal. (2022). *Digital 2022 Indonesia*. Retrieved from <https://datareportal.com/reports/digital-2022-indonesia>
10. Fitriani, Satria, A., Sari, P. P. N., & Adriana, R. (2018). The Current State of Terrorism in Indonesia: Vulnerable Groups, Networks, and Responses. In G. Iacovino & F. Manenti (Eds.), *The Evolution of Jihadist Radicalization in Asia*. Centre for Strategic and International Studies.
11. Gill, P., Horgan, J., & Deckert, P. (2014). Bombing Alone: Tracing the Motivations and Antecedent Behaviors of Lone-Actor Terrorists. *Journal of Forensic Sciences*, 59(2), 425–435. <https://doi.org/10.1111/1556-4029.12312>
12. Hamm, M. S., & Spaaij, R. F. J. (2017). *The age of lone wolf terrorism*. Columbia University Press.
13. Hamm, M., & Spaaj, R. (2015). *Lone Wolf Terrorism in America: Using Knowledge of Radicalization Pathways to Forge Prevention Strategies*. U.S. Department of Justice.
14. Hewitt, C. (2003). *Understanding terrorism in America: From the Klan to al Qaeda*. Routledge.
15. Kaliyadan, F., & Kulkarni, V. (2019). Types of variables, descriptive statistics, and sample size. *Indian Dermatology Online Journal*, 10(1), 82. https://doi.org/10.4103/idoj.IDOJ_468_18
16. Law of the Republic of Indonesia Number 5 of 2018 on the Amendment to Law Number 15 of 2003 on the Establishment of Government Regulation in Substitute of Law Number 1 of 2002 on the Eradication of the Criminal Act of Terrorism Becoming a Law
17. Lloyd, M., & Pauwels, A. (2021). *Lone Actors as a Challenge for P/CVE* (Radicalisation Awareness Network). European Union.
18. Marlatt, G. E. (2019). *Lone Wolf Terrorism – A Brief Bibliography*. Naval Postgraduate School, Center for Homeland Defense and Security.
19. Pantucci, R. (2011). *A Typology of Lone Wolves: Preliminary Analysis of Lone Islamist Terrorists*. International Centre for the Study of Radicalisation and Political Violence.
20. Phillips, P. J. (2011). Lone Wolf Terrorism. *Peace Economics, Peace Science and Public Policy*, 17(1), 31. <https://doi.org/10.2202/1554-8597.1207>
21. Riyanta, S. (2022). Shortcut to Terrorism: Self-Radicalization and Lone- Wolf Terror Acts: A Case Study of Indonesia. *Journal of Terrorism Studies*, 4(1), 21. <https://doi.org/doi.org/10.7454/jts.v4i1.1043>

22. Schuurman, B., Bakker, E., Gill, P., & Bouhana, N. (2018). Lone Actor Terrorist Attack Planning and Preparation: A Data-Driven Analysis. *Journal of Forensic Sciences*, 63(4), 1191–1200. <https://doi.org/10.1111/1556-4029.13676>
23. Smith, B. L., Gruenewald, J., Roberts, P., & Damphousse, K. R. (2015). The Emergence of Lone Wolf Terrorism: Patterns of Behavior and Implications for Intervention. In M. Deflem (Ed.), *Sociology of Crime, Law and Deviance* (Vol. 20, pp. 89–110). Emerald Group Publishing Limited. <https://doi.org/10.1108/S1521-613620150000020005>
24. Spaaij, R. (2010). The enigma of lone wolf terrorism: An assessment. *Studies in Conflict & Terrorism*, 33, 854-870. <https://doi.org/10.1080/1057610X.2010.501426>
25. Spaaij, R. (2012). *Understanding Lone Wolf Terrorism*. Springer Netherlands. <https://doi.org/10.1007/978-94-007-2981-0>
26. UNODC. (2021). *Adjustment and Resilience: Preventing Violent Extremism in Indonesia during COVID-19 and beyond*.
27. Yayla, A. S. (2021). Prevention of Recruitment to Terrorism. In A. P. Schmid (Ed.), *Handbook of Terrorism Prevention and Preparedness*. ICCT Press Publication.