

**Proportion and characteristic of homicide victim examined in Forensic Medicine Installation
Sardjito Public Centre Hospital (2003-2013)**

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Abstract

Homicide is a global phenomenon but characteristic of homicide may be different in different areas of the world. This is a 10-year homicide study conducted in Indonesia to find out the various characteristics of homicide in Indonesia varying from personal features of victims, pattern of injuries and causes of death. Motives of assaulters and their relationship with the victims were also studied. In this study 339 victims of homicide were studied. Adults and men were mostly the victims. Trauma was the most important cause and beating by family members was the reason. Revenge was the reason behind most of these murders.

Keywords: Characteristics of homicide; motives of murder; cause of death.

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Introduction

Homicide-related violence is a global problem at this time. According to the World Health Organization (WHO), every day approximately 1424 people die from being killed. According to the United Nations Department of Drugs and Crimes reported in the April 10 Daily Mail April 2014 that the homicide rate in America and South Africa is still high that is four times higher than the global average of about 6.2 victims per 100 thousand people While the regions of Europe, Asia and Oceania the case of the homicide is still low.

In the jurisdiction of the Yogyakarta Special District Police (DIY), homicide cases increased in 2013 compared to the previous years. However, the police cannot infer the cause of the increasing crime that killed others. Criminologist Erlangga Masdiono (2011) said that the high level of criminality in Indonesia is caused by several factors such as poverty, dysfunction of norms and law, disharmony of related elements, shifting character of the nation, and also an education system that does not teach ethical values, including education religion that emphasizes the cognitive aspect only. The perpetrator killed the victim, usually based on the motives of revenge, jealousy, robbery, and

self-defense, but the motive is mostly due to revenge. Male criminals are generally more than women and their mode of operating (modus operandi) is more varied and sophisticated. This murder can be done in various ways, most commonly using firearms or sharp weapons, and also with explosives materials such as bombs. According to Putra and Wendi (2010), a criminal act in Lampung, Indonesia was influenced by many factors such as crime motive, job type, gender, the age of the perpetrator, and last education of the perpetrator (1). Characteristics of a murder victim generally are close or familiar with the culprit. While the characteristic of murderers does not know the gender. But the perpetrator of the murder of the female sex who underlies his murderous act is able to feel there is gender injustice (2).

Based on data in the world, murder cases in Indonesia, especially the Special Region of Yogyakarta tend to increase every year. The trend or mode of operating of the perpetrators also seems to be more varied and more sophisticated. This is certainly a challenge for law enforcement and indirectly for forensic medicine to assist the

law enforcement process. One of the first steps is to know the description and characteristics of the victim and the perpetrator of the murder. Therefore, a study aimed to obtain the description and characteristics of victims and perpetrators of the murders are handled in Forensic Medicine Installation RSUP Dr. Sardjito Yogyakarta.

Materials and Methods

This is a cross-sectional, observational analytic research. Data was taken from April to June 2014 at Forensic Medicine Installation of Dr. Sardjito Hospital, Yogyakarta. Research subjects were the autopsy report (*visum et repertum*/VeR) data of murder victims examined at Forensic Medicine Installation of Dr. Sardjito Hospital for the period of 2003-2013 and the chronological data of the incident or investigation report. The inclusion criteria were all VeR of murder victims examined for the period 2003-2013, while the exclusion criteria were VeR which was not murder cases and murder cases whose *visum et repertum* could not be found. The tool used in this research is using a checklist. Checklist contains variables to be observed, i.e. number of homicide cases, sex, age, type of examination, cause of death, location of injury, type of injury, presence or absence of rebel or tank injury, perpetrator relationship with male and female victims, murderer motives and differences of crime scene between male and female victims.

This research was conducted by collecting data of victims of death from the murder of *visum et repertum* and perpetrators of the murder of chronological sheets of events at Forensic Medicine Installation of Dr. Sardjito Hospital for the period of 2003-2013. The data is sorted into several groups, then presented in tabular form, then analyzed.

Results

A number of homicide victims meet the inclusion criteria in this study as many as 339 victims with the frequency of victims per year shown in the picture and tables below:

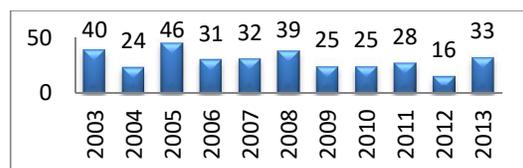


Fig 1. The frequency of homicide victims in 2003 – 2013

Table 1: Homicide victim's distribution

No.	Characteristic	Frequency	Percentage (%)
1.	Gender		
	Male	191	56,3
	Female	148	43,7
2.	Age criteria		
	Neonates (0-30 days)	85	25,1
	Infant (1-2 years)	0	0
	Young child (2-6 years)	5	1,5
	Child (6-12 years)	2	0,6
	Adolescent (12-18 years)	19	5,6
	Adult (18-64 years)	200	59,0
	Elderly (>64 years)	28	8,3
3.	Kind of examination		
	External examination	64	18,9
	External and internal examination	275	81,1

Table 2: Distribution of crime scene

Crime scene	Frequency	Percentage(%)
Outside the house	232	68,4
Inside the house	107	31,6

Table 3: Homicide victims wound distribution

No.	Characteristic	Frequency	Percentage (%)
1.	Cause of death		
	Trauma	262	77,3
	Intoxication	19	5,6
	Drowning	3	0,9
	Combustion	4	1,2
	Undetermined	51	15,0
2.	Site of wound		
	No wound	26	7,7
	Head	162	47,8
	Neck	52	15,3
	Chest	17	5,0
	Abdomen	7	2,1
	Extremity	3	0,9
	Genital	2	0,6

	Combination	22	6,5
	Cannot be assessed	48	14,2
3.	Type of wound		
	No wound	27	8
	Contusion	70	20,6
	Fracture	84	24,8
	Stab Wound	26	7,7
	Incised wound	13	3,8
	Chop wound	9	2,7
	Laceration	4	1,2
	Impact abrasion	28	1,8
	Combustion	4	5,6
	Gunshot Wound	6	14,5
	Combination	19	
	Cannot be assessed	49	
4.	Defense wound		
	Found	131	38,6
	Not found	208	61,4

Table 4: Victim and perpetrators relationship

Victim and perpetrators relationship	Frequency	Percentage (%)
Family	39	11,5
Friend/Acquaintances	28	8,3
Boy/girlfriend	6	1,8
Unknown	266	78,5

Table 5: Manner of homicide

Manner of homicide	Frequency	Percentage (%)
Hit	116	34,2
Snared	29	8,6
Stabbed	24	7,1
Burned	4	1,2
Intoxicated	19	5,6
Shot	6	1,8
Drowned	3	0,9
Strangulated	9	2,7
Smothered	3	0,9
Chopped	14	4,1
Combination	49	14,5
Unknown	63	18,6

Table 6: Mode of operation

Mode of operation	Frequency	Percentage (%)
Revenge	36	10,6
Self-defence	5	1,5
Robbery	25	7,4
Jealousy	10	2,9
Unknown	263	77,6

Discussion

According to the United Nations, the number of murderers all around the world has declined, although only slightly, for the US and South Africa, the murder rate is still very high. Even that figure is four times higher than the global average, about 6.2 victims per 100 thousand people. In Indonesia, especially in Yogyakarta Special Region, based on Yogyakarta Police Direskrimum (Directorate of General Crime Detective/Reserse) data there is a decline in the number of murders in 2011 to 2012 but then increased again in 2013.

From 2003 to 2013 there were 368 murder cases handled at the Forensic Medicine Installation of Dr. Sardjito, but only 339 murder cases were taken for this study because the other cases did not meet the inclusion criteria.

In 2003, there were 11.8% of homicides then decreased in 2004 (7.1%) but increased again in 2005 (13.6%). This trend continues over and over again in the years to come. In 2011 there was a decrease in murder victims from 8.3% to 4.7% in 2012 but then increased sharply to 9.7%.

According to Masdiono (2011), the high level of criminality in Indonesia caused by several factors such as poverty, dysfunction of norms and law, disharmony of related elements, shifting character of the nation, plus an education system that did not teach ethical values, including religious education that emphasizes the cognitive aspect only. Table 1 shows that 56.3% of murder victims were male, a similar proportion was found in Norway (58%). In Chicago, Finland, India, and Italy the proportion of male victims varied between 64% and 73.6%. The prevalence of male victims is demonstrated in many studies around the world, possibly linked to greater men's presence in social life and in organized crime, but can be attributed also to different biological properties of high testosterone levels associated with more aggressive behavior (3). The age group used in the study was the age group based on WHO. This study showed that most victims were from the adult age group (59%), 25.1% were neonates (0-30

days), 8.3% were elderly (elderly:> 64 years), similar results were also seen research Hagelstam et al (4) in Finland (2006) and Vij et al (5) in South India (2010). An autopsy or post-mortem examination is a dissection of the corpse. This is done for various reasons, including education and legal considerations. Autopsies may determine the cause, mode, and mechanism of death (6). The forensic examination of the corpse includes an examination of the corpse, without acts that damage the integrity of the mortal remains and the complete coronary examination by opening the cranial, neck, chest, abdominal and pelvic cavities (7).

Table 1 shows that 81.1% of homicide victims were examined outside and inside while the remaining 18.9% only performed outside examination of the corpse. In the corpse only examined outside the corpse alone, the conclusion of visum et repertum mention the types of injuries or abnormalities found and the types of violent causes, while the cause of death cannot be determined because of no surgical examination of the corpse.

Table 2 shows that 68.4% of homicide victims were found outside the home while 31.6% of homicide victims were found inside the house. These results differ from those of Kristoffersen et al(8) in Norway (2014), Hagelstam and Hakkanen(4) in Finland (2006) and Verzeletti et al (3) research in Brescia County, Italy (2013) where more casualties were found in the home, 76 %, 54% and 51%. This is possible because victims who are outside the home get help more often because of people passing by.

The results in Table 3 are similar to those obtained in the Coelho et al (2010) study where the most wound sites were on the head (9), followed by the chest and neck, and Vij et al (2010) study where the most wound sites on the head (22.4%)(5). But different results were found in Verzeletti et al (2013) showing 28% of the most lethal wound sites located on the chest and 25% on the head (3). This can be because the location is a well-known anatomical area for human vital interests.

Characteristics of types of injuries in Table 3 and Methods of victims killed in Table 5 are interrelated. If grouped, it is mostly caused by dull and sharp violence, while in Verzeletti et al (3)research, many male victims were killed using firearms and sharp objects, followed by blunt objects, while women used firearms, sharp weapons, and asphyxia. This type of wound difference is possible because of the availability of

such weapons where there is a strict law on gun ownership or it may also be due to cultural differences. As many as 8% of victims in this study had no injuries, this was possible because the victim was killed by a poison that did not cause injury to the outside of the victim's body. There are 14.5% of victims cannot be assessed the type of wound, this is due to the condition of the victim that has happened further decay, making it difficult to know the type of wound on the victim.

Defense wound is a wound caused by the victim's effort to self-protection and is commonly found in the hands, arms and even upper arms, potentially involving both extensor and flexor aspects (10). A total of 38.6% of murder victims in this study have signs of badminton injuries, This result is similar to the research from Hugar et al (11) and Vij et al (5) whereas both of them explained defense injury on the victim as much as 33% and 22.47% respectively. Victims without defense injuries were possible because of an unplanned murderer or multiple (more than one) perpetrator (5). Hugar et al (2012) explained that the highest number of defensive injuries appear in the 20-29 years age group but no defense injuries in the age group 0-9 years (11), this could be due to the incompetence and unawareness of children about what happened to them.

The underlying motives for the murder of men against men are social status conflicts, pride, and reputation, and also conflicts over material resources. Table 6 shows that the motive for the killing is caused by revenge (10,6%), robbery (7, 4%), self-defense (1.5%) and jealousy (2.9%). This result is similar to that of Lemard and Hemenway (2006) where most of the motives are revenge (12). In Canada, Serran ,and Firestone (2004) and in Finland, Hakkanen-Nyholm (2009) murder in women is based on jealousy by their spouses (13)(14). According to Coelho et al (2010) robberies became the highest motive to murder in the elderly, although some cases still unknown motive (15). In this study as many as 77.6% of cases unknown motive killing, this is because there is no information on the death of the victim.

In this study, 11.5% of the perpetrators relate to the victim, 8.3% of the perpetrator is the victim's acquaintance, 1.8% of the perpetrator is the victim's girlfriend, while 78.5% of the perpetrators are unknown to the victim because this is possible because the perpetrator is unknown victim or perpetrator is still unknown. This result is slightly different from the research of Hakkanen-Nyholm (2009) (14) 53.8% of the perpetrators are victims

acquaintances, followed by the victim's partner, victim's family, and unknown person, while Kristoffersen et al (2014) (8) explained that in Norway 21% murderer done by victim's partner.

Conclusion

Based on this research we can conclude that there are 339 murder victims from 2003-2013, with the proportion of most men and adulthood, 81.1% of cases carried out outside and inside examination, the cause of death is the most trauma and type of wound most is the wound of broken bones and bruises, the location of the most common wound is the head., the most common victim is killed by beating, and 38.6% of the victims are found worst injured, the perpetrator is dominated by the victim's family, the most because of revenge motive, the victim is more found outside the house, and there is a significant difference in the crime scene between men and women, where more male victims were found outside the home rather than inside.

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