

Prediction of criminal profiles based on forensic medical investigations in Banda Aceh, Indonesia



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ABSTRACT

Background: Criminal profiles are also often referred to as psychological profiles or engagement profiles. Profile means a description the term profile to be discussed when discussing techniques and determining the possible characteristics of the debate about the results of research on crime itself. The following paper aims to present the case in predicting criminal profiles in Banda Aceh Indonesia based on forensic medical investigations.

Case presentation: The victim is a male 16-year-old which is conducted a forensic medical examination. The result of forensic medical autopsy findings is the destruction of face-forming bones and skull fractures in the victim. According to the autopsy finding, the doctor concluded that the violence was carried out by someone who is powerful. The doctor states that the alleged criminal's profile consists of someone close to the victim, someone likely to be male, and someone who engaged in violence by using blunt objects. The police investigator is an Indonesian National Police in Banda Aceh district who has done the interview. The discussion with police investigators was conducted to predict the alleged perpetrator's profile. Based on the doctor's statement, the police conducted an investigation looking for the suspect, and the doctor's prediction was correct about the criminal profile of the perpetrator. During the trial, the panel of judges stated that the perpetrators used blunt objects to attack the victim.

Conclusion: There is an association between the results of forensic medical examination, police investigations and facts at the trial in predicting the profiles of criminals.

Keywords: criminal profiles, forensic medicine, police investigations, prediction.

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INTRODUCTION

The criminal profile is one of the characteristics of the physical and psychological criminality of the criminal.^{1,2} Criminal profiles are also often referred to as psychological profiles or engagement profiles. Profile means a description the term profile to be discussed when discussing techniques and determining the possible characteristics of the debate about the results of research on crime itself.³ Criminal profiles review a process or chronology, which is intended to determine suspects in connection with serial killings, section assaults, and specific cases with the intention of supporting unknown conversions, through detailed examination of victims, crime scenes, special victims and related persons identified through a similar case before.⁴

The criminal profile is applied in seven steps. The first step is to gather evidence that supports the creation of profiles such

as examination of victims, examination at the scene of the crime and the collection of other evidence. The second step is crime assessment where all evidence is evaluated. In the third step, crime classification, criminals are classified in one of the following three categories organized crime, unorganized crime and mixed types if the crime cannot be categorized in one of the two previous categories. The fourth step is crime reconstruction by simulating the crime. After the scenario is formed from the simulation, the fifth step will be carried out criminal profiling. Based on the profile of the perpetrators, then the sixth step is to investigate the suspects and have their testimony taken. The final step is arrest (detention of the suspect) and after that the trial is held. Among these steps, the most important are the steps in which the criminal profile is built.^{1,2}

The criminal profile is an activity inferring or depicting anthropometric physical characteristics (height and

weight), demographics (age, sex, ethnic background, etc.), and psychological (personality, motivation, lifestyle, fantasy, as well as the behavior before and prediction of behavior after the crime) of the possibility of the perpetrators of crime based on their actions on a crime event.^{1,5} Crime scene data can also be taken from photographs, investigative reports, autopsy results, and so on, which will compile a criminal profile - including criminal careers - from criminal offenders.⁶

Given that the existence of a criminal profile becomes so important in identifying crimes and perpetrators, the authors try to conduct scientific studies that will bridge the medical and investigative needs in identifying criminal offenders. Therefore, this study aims to help determine the criminal profile based on the results of forensic medical examinations of victims. In terms of identifying criminal profiles, there are three approaches applied worldwide: diagnostic evaluation,

criminal investigation analysis, and behavior analysis.⁷ In this case, the criminal investigation analysis approach is carried out in seven steps, namely: (1) Evaluation of the crime itself through forensic medical examination of the victim; (2) Comprehensive evaluation of police investigators on the chronology and reconstruction of events at the scene of the case; (3) Comprehensive analysis between the forensic doctor and the investigator about the results of the victim's examination; (4) Evaluation of police reports in the form of taking minutes of examination; (5) Evaluation of the autopsy protocol from the examining physician; (6) Development of profiles, with the characteristics of the perpetrators based on the results of forensic medical examinations; (7) Provision of criminal investigations is based on the construction of predetermined profiles.^{4,7}

Prediction of the criminal profile is actually very similar to the determination of the diagnosis of the disease made by a doctor and this criminal investigation analysis cannot also be one hundred percent correct because the results are strong suspicion or prediction of the identity of the perpetrator, by identifying people who are likely to have committed crimes with certain unique characteristics. This criminal profile involves examining and interpreting physical evidence, forensic victimization, and analysis at the crime scene.^{4,7}

This article emphasizes the role of forensic victimization in determining

criminal profiles. Forensic victimology is a branch of forensic science that studies victims of crime with violence and aims to answer the question of forensic investigations.⁷ This includes describing the physical examination of the victim for damage leading to injury, and from any danger or loss suffered by the victim.^{8,9} In the context of crime or criminal investigation, making criminal profiles is often equated with the offender's physical profile and/or the offender's psychological profile. Making other profile perceptions in a forensic context can also be applied in recognizing types of crime or a history of previous law violations.^{3,10}

One of the fundamental things in creating a criminal profile is gathering information available and then searching for all people or their relationship with objects that fit this profile, in cases like this often used Edmond Locard's theory which states there is always a relationship between victims, perpetrators and crime scenes, so it's often referred to as the Locard triangle. Another Locard theory states that every contact always leaves a trace.¹¹ A person's footsteps will be traced to the scene of the crime, for example bullets collected at the crime scene can indicate the brand and model of firearms used, in traffic accidents cases can be found paint marks from cars can lead to brands and models of the cars involved. This may indirectly lead to someone. Other examples of digital traces when someone has accessed an internet site even though the history of internet searches are deleted, the source can still

be traced, also if someone has entered data into a computer or flash disk, digital traces can show the computer brand and printer model used to print recovered documents.^{11,12}

This study intensively focuses on one particular object that studies it as a case by asking what, why and how an event occurred.^{13,14} Case study data can be obtained from all parties concerned, in other words in this study collected from various sources in the form of documents, interviews, observations and articles.¹⁴ In this case study aims to investigate the relationship between the findings of a forensic medical examination of murder victims (observation) with the criminal profile of the suspect perpetrator. Data tracing is done by interviewing the investigator about the crime scene and chronology of the event and synchronizing with the facts of the trial.

CASE PRESENTATION

We discussed the case of a 16-year-old male victim, middle-range economic status, who was allegedly killed by someone. The victim was a high school-level student in a government-bonded school. During an external examination, bruises were found on the forehead and face, and signs of a skull fracture were found. From the autopsy findings, the examiner found destruction of the bones forming the face and fractures of the skull in front and back. On the front, fractures were found in several places namely



Figure 1. Fractures of the forehead bones and forming facial bones.



Figure 2. Occipital bone fracture.

the forehead, temples, nose, cheek, and lower jaw (Figure 1). In the back, a large hematoma and occipital bone fracture are found. The discharge of brain tissue debris is found on the surface of the back of the head of the bone (Figure 2).

The interview was done by the examiner to the police in the criminal investigation agency of the Indonesian National Police in the Banda Aceh district. The interview was done in 4 sessions, each for approximately 2 hours. The interviews took place in the forensic medical office at Zainoel Abidin Hospital Banda Aceh. The interview result was written in the police official report and the examiner discussed the chronology, crime scene investigation, and reconstruction and all of the results were written in the sheet of the interview result. From the examination results, the examiner tried to make a criminal profile that would later be matched with the results of the police investigation and facts at the trial.

The results of forensic medical examinations on the victim were victims who suffered blunt force on the face with bruises on the forehead and signs of broken bones of the victim. The autopsy findings found the destruction of the bones forming the face and the rupture of the skull front and back. From the examination results, the examiner made a criminal profile with physical characteristics: The physical profile of the alleged perpetrator was male, almost the same age as the victim, strong-powered because of alleged violence with great force and using blunt objects to injure the victim. The sociological relationship between the victim and the perpetrator has a previous relationship. Because the victim is a student bound by the official service then the alleged perpetrator is not far from himself, the examiner suspects that the perpetrator is also a student or person close to the victim in the same school.

The results of interviews with investigators found that the suspect was the victim's upper class, male and had a problem with the victim's debt. The perpetrator initially confessed to violence against the victim by kicking the head of the victim in sport's shoes. The perpetrator claimed to have kicked several times. The investigator consults with the examiner (forensic doctor) regarding the admission

of the criminal suspect. From the results of discussions with the investigator, there was a mismatch between the magnitude of the impact of the violence and the strength of the kick. So that investigators make a deepen of how the actual violence carried out.

The facts in the trial panel of judges explained that the possibility of the perpetrators attacking the victim using solid and hard objects. The judge also stated that the perpetrators carried out repeated blows to the victim's head. From this fact, the examiner concluded that the perpetrator did not seem to provide true information (pretending) to the investigator but during the trial the perpetrator revealed honestly to the judge about his actions. During the trial, the examiner met with the perpetrator. The physical profile of the perpetrator of a 16-year-old male, his body is not too high, and perpetrators are indeed the victim's upperclassmen. From this description it can be concluded that the perpetrators tried to hide their actions to reduce their involvement in the victim's death.

DISCUSSION

Forensic medicine aims to provide legal evidence to the investigator, analyze the fact, and determine causal relationship between an action allegedly committed by suspect and a medically observed harmful outcome to the victim.¹⁵ In the criminal investigation phase, the main purpose of profiling is to reduce the number of suspects.¹⁶ In terms of identifying criminal profiles, there are three approaches applied throughout the world, namely diagnostic evaluation, criminal investigation analysis, and behavior analysis.⁷ In this case study, we have chosen the criminal investigation analysis approach. The entire criminal profiling process is similar to the process of collecting data in qualitative research, namely subjects, informants, written documents and unwritten documents. Data analysis in research takes place simultaneously with the process of collecting data including through pattern matching, building explanations, discovering logic models, conducting time series analysis.¹⁴

This approach includes describing the physical examination of the victim for damages leading to injuries, and for any

danger or loss suffered by the victim.^{1,7,15} Here we are going to explain step by step about determination of criminal profiles based on forensic medical investigation. Step 1: Evaluation of the crime through the victim's forensic medical examination. The results of the forensic medical examination of the victim showed a victim who suffered blunt force trauma to the face, with bruises on the forehead and signs of broken bones. Autopsy findings revealed destruction of the bones forming the face and ruptures to the front and back of the skull. Step 2: Comprehensive evaluation by police investigators of the chronology and reconstruction of events at the crime scene. Case location analysis is an analytical process that interprets the specific characteristics of a crime and looks for evidence related to the crime at the crime scene. The results of forensic analysis, forensic victimology, and case location analysis are examined to look for behavioral patterns and clusters that show the characteristics of the perpetrators during a forensic investigation.^{7,15}

Step 3: Comprehensive analysis between the forensic doctor and the investigator about the results of the victim's examination. Autopsy findings can provide a picture of the violence perpetrated by the offender, which illustrates the offender's physical strength.⁶ Step 4: Evaluation of police reports in the form of taking notes on the examination: Because the victim was a student restricted the boundaries of the school, then the alleged perpetrator was someone close to him, the examiner suspects that the perpetrator is also a student or person close to the victim at the same school, the same age as the victim, and strong because of the alleged violence perpetrated with great force and with a blunt object. Step 5: Evaluation of the autopsy protocol from the examining physician. The autopsy findings in this case provide few suggestions about the nature of the crime, including evidence of antemortem and postmortem injuries. Autopsy findings can illustrate the emotional anger of the perpetrator so that forensic medicine experts can at least consider the possibility that the person who died may be a victim of crime.^{1,7,9,16}

Step 6: Development of profiles, using the perpetrator's characteristics based

on the results of the forensic medical examinations. According to the autopsy finding, the forensic doctor concluded that the violence was carried out by someone who is powerful. From the examination results, the examiner created a criminal profile with physical characteristics. The physical profile of the alleged perpetrator was male. Step 7: Provision of criminal investigations based on the construction of predetermined profiles. The forensic doctor states that the alleged criminal's profile consists of someone close to the victim, someone likely to be male, and someone who engaged in violence by using blunt objects.^{1,7,9,16}

Based on the doctor's statement, the police conducted an investigation looking for the suspect, and apparently the doctor's prediction was correct about the criminal profile of the perpetrator. According to the police investigator's findings, the suspect was older than the victim, male and had a problem with the victim's debt. The perpetrator initially confessed that he had conducted violence against the victim by kicking the head of the victim while wearing sports shoes. The perpetrator claimed to have kicked the victim several times. The investigator consults the examiner (forensic doctor) regarding the suspect's admission. The results of the discussions with the investigator found that there was a mismatch between the magnitude of the impact of the violence and the strength of a kick. Therefore, the investigators increased their understanding of how the violence was carried out.

In the context of criminal investigation, creating criminal profiles is often equated with the physical profile and/or the psychological profile of the offender. The determination of other profile perceptions in a forensic context can also be applied by recognizing types of crimes or a history of previous law violations.^{3,10} One of the fundamental issues related to creating a criminal profile is that of gathering the information available and then searching for all the people that fit this profile and their relationships with certain objects, in cases such as this, Edmond Locard's theory is often used, which states that there is always a relationship between victims, perpetrators and crime scenes and is thus often referred to as the Locard triangle.

Another one of Locard's theories states that every contact always leaves a trace.¹⁰

From the point of view of a forensic pathologist, a criminal profile can be determined through findings during a forensic medical examination both at the crime scene and in the hospital. In criminal cases with deaths in custody, deaths involving the police, deaths involving famous people, such as politicians and entertainment personalities, and various deaths involving unusual circumstances such as deaths due to violence in official schools, strange deaths, or deaths highly public or politically charged, a criminal profile is needed.¹⁷

Murder can occur at all levels of society both in terms of social, cultural, and economic (financial) aspects. However, there seems to be an inverse relationship between social status (income) and murder tendencies. Experts have found that individuals who are at risk of committing, or who have committed murder tend to be socially dysfunctional family members, live in sub-standard economic conditions, and tend to use drugs and alcohol and behave antisocially.¹⁸

In all criminal cases, forensic pathologists must continue to try to predict and overcome any problems that might occur.¹⁷ Other factors contributing to killings, which are often found among violent/antisocial groups, are poor school performance, lack of special skills, and lack of permanent employment.¹⁸ In this case there is a social relationship that is less harmonious between the perpetrator and the victim. According to the investigator's report, the mode of perpetrators of violence was triggered by the fact that the number of accounts payable and debts is not large, but the result of the problem has a big impact because the perpetrators committed violence which caused the death of the victim.

During the initial examination the perpetrator admitted to the investigator that he had committed violence by kicking the victim's head, but it was later discovered that during the investigation process and the case title in the court, the perpetrator indicated violence with a hard blunt object. The initial statement of the offender is the ego's defense mechanism from offender by refusing (denying) or

trying to find other reasons to alleviate the charges by lying. This is in accordance with the opinion of the forensic neuropsychologist regarding the relevance of the neuropathological sequel of criminal responsibility to the damage caused by his actions. The competence of criminals becomes an important part of testimony in court.¹⁹ But the defendant's statement is not entirely reliable because the defendant will generally provide information that can alleviate the accusation against him. Therefore in the evidentiary method in Indonesia in accordance with article 184 of the Criminal Procedure Code, it is stated that "Legal evidence is: (a) witness testimony, (b) expert statement, (c) document/letter, (d) the instructions, (e) The statement of the defendant (Indonesian Article Law No.8, 1981), it is clear that the testimony of the perpetrators ranks last in the power of proof.²⁰

The autopsy findings in this case can suggest the possibility of crime, including evidence of murder, torture, mutilation, and ante-mortem and postmortem injuries. Autopsy findings can illustrate the emotional anger of the perpetrators, so that forensic medicine experts can at least consider the possibility that the person who died may be a victim of crime.¹⁸ At the same time, forensic medicine experts can help establish the criminal profile of the autopsy findings obtained. However, some people suspect that criminal profiling from autopsy findings is false science (pseudoscience) because the success of criminal profiling in making accurate predictions about the perpetrators of crimes may not be based on specialist knowledge about the peculiarities and uniqueness (idiosyncrasies) found in the crime scene being faced profile.²¹ Nevertheless the autopsy findings can provide a picture of the violence perpetrated by the offender which illustrates the offender's physical strength. Although forensic medicine experts do not have the educational basis to carry out a professional criminal profile, it can at least assist the task of the police in exposing suspects. The police also often succeed in uncovering a criminal profile from minimum standard information (base rate), because data from the findings of forensic medicine experts support it.⁶

Even in a controlled study, there was no significant difference between the ability to predict between professional and non-professional profilers.²¹

The strength of this study is easy to compare forensic medical examination findings with a criminal profile. This study can also predict criminal character by seeing the strength of the violence committed by the perpetrator to the victim. Autopsy findings can also determine whether or not the victim was mistreated many times. The weaknesses of this study are lack of information related to the chronology of the event because the perpetrator covered up action that he did and criminal profile cannot determine whether the action done by single perpetrator or in a group.

CONCLUSION

Forensic medicine has a valuable contribution in determining the criminal profile. It cannot be denied qualitatively that there is an association between the results of forensic medical examinations on victims with the results of investigative investigations and the evidence and facts at trial in determining the profile of criminal offenders. This study can help the investigator to make criminal profile which is easier to determine the criminal suspect.

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CONFLICT OF INTEREST

The authors declare that there are no competing interests related to the study.

ETHICAL CONSIDERATION

Consent for publication represented by the Police investigator because it included a medico-legal case and autopsy performed at the request of the police investigator.

AUTHOR CONTRIBUTION

All authors had contributed for manuscript writing and agreed for final version for publication.

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