



Medical Evidence in the Criminal Justice Delivery System in Bangladesh: Flaws and Fillers

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Abstract

Medical evidence is any evidence assessed and presented by medical professionals with medico-legal expertise to prove or disprove a fact regarding a case during court proceedings. It plays a pivotal role in the Bangladesh criminal justice delivery system. It includes medical certificates, medico-legal reports, and forensic evidence, which are documentary evidence in the eye of the law that helps criminal court judges reach their decision quickly and efficiently. However, due to existing flaws involving methods of collection, preparation, and presentation of medical evidence by medico-legal professionals before the courts, it frequently struggles to adequately address criminal justice issues that weaken the justice delivery system. This paper explores the current legislations, identifies loopholes and suggests some solutions by using the qualitative research method to collect data mainly from secondary sources, like books, research articles, newspapers, and professional experiences. This article also evaluates the efficacy of medical evidence and identifies areas for improvement and future research to have a significant impact in Bangladesh's criminal justice delivery system.

Keywords: Medical Evidence; Medical Certificate; Medico-Legal Report; Criminal Justice Delivery System

Introduction

Just as good exam results cannot be expected without adequate academic tasks and delivery of relevant material in the exam papers according to the questionnaires and requirements, so too if the evidence, be it general evidence, medical evidence or scientific evidence, is not properly prepared or submitted in court in a case, one cannot reasonably expect a fair outcome, or get justice, or have justice successfully administered. In order to ensure the fair delivery of justice in criminal cases, medical evidence is therefore crucial. Medical evidence means any medical report, letter, or other document provided by a health professional or an allied health professional that provides information relating to a patient's physical, psychological conditions, history, diagnosis, and treatment [1]. This

particular branch of knowledge plays an essential role in any criminal justice delivery system. In Bangladesh, the statement of the medico-legal professional is a significant piece of evidence that supports other sorts of evidence [2]. In accordance with the Code of Criminal Proceeding, 1898, the deposition of a doctor or other medical expert witness, acquired and attested by a magistrate in the presence of the accused, may be used as evidence in any investigation, trial, or other procedure. Although there are a few pieces of legislation that addresses the collection and preparation of medical evidence on an individual basis, there is no comprehensive manual or guidelines that outline the entire process of gathering, preparing, and presenting medical evidence to courts. Due to the lack of comprehensive code in this field, it sometimes loses its evidentiary value. Moreover, ineffective policies, inadequate procedures, and inefficient

implementation mechanisms hinder the justice delivery system and, sometimes, frustrate justice. Even yet, there have been cases where a court did not get medical evidence in a timely and prescribed methods indicated in law. This results in a delay in the delivery of justice, expenditures for the parties involved in the litigation, and an irregularity in the process of justice administration. Improving the existing scenario requires modification and modernization in terms of profession and practice by infusing modern medical technology within the medico-legal field so that people can ensure their rights more effectively and efficiently in Bangladesh's criminal justice delivery system. So, the purpose of this paper is to evaluate the significance of medical evidence as documentary evidence before the court, as well as any shortcomings that may have occurred in the preparation and production of medical evidence and any potential solutions. This article is primarily developed using the qualitative research approach, which involves gathering information from secondary sources such as books, research articles, newspapers, online journals, and medico-legal databases. The analysis and observations in this paper are based on extensive professional experiences and perceptions amassed from different stakeholders while working in Bangladesh's criminal justice delivery system.

Medical evidence in the criminal justice system: Theoretical overview

Medical evidence is crucial in the decision-making process in a criminal case and aids the judges in reaching a fair verdict. Criminal cases often begin when someone does or does not do something that the applicable law of the land commands them to do or forbids them to do, and criminal proceedings typically begin after filing a case or providing the initial information regarding an offense. Criminal processes, which are used in all criminal cases in Bangladesh, are based on a variety of court actions, police tasks, and prosecutions, including filing of a case, investigations, arrests, charges, trials, and convictions or acquittals [3]. A criminal proceeding consists of three crucial steps: filing a complaint with the court or providing information about an offense to the police; conducting an investigation or inquiry; and holding a trial [4]. It embraces the courts, attorneys, prosecutors, witnesses, law enforcement agencies etc. In general, law enforcement agencies, particularly the police, play the primary role in preventing crime through their law enforcement and filing cases against the offenders, and judges and magistrates play the role in delivering justice by adhering to all stages of the criminal proceedings after evaluating the evidence that has been presented to the courts in accordance with the law. In criminal cases, judges and magistrates play their role just like an umpire and do justice upon evaluating and appreciating the evidence those were adduced before them.

In the functions mentioned earlier, the most crucial role for the judges and magistrates to assess the evidentiary value and decide on, which were adduced before them to prove or disprove a case, such matters is called evidence. According to Evidence Act, 1872, "Evidence means and includes: (1) all statements which the Court permits or requires to be made before it by witnesses, in relation to matters of fact under inquiry: such statements are called oral evidence, and (2) all documents produced for the inspection of the Court: such documents are called documentary evidence" (Evidence Act, 1872, s. 3(1) & (2)). So, from this view point, there are mainly two types of evidence: 1) oral evidence and 2) documentary evidence. When a person states any fact or describes his own knowledge regarding any circumstance pertinent to a case and its proceedings is considered to be as oral evidence. This type of testimony is also known as oral evidence, which must be direct to prove or disprove all facts, excluding the content of documents (Evidence Act, 1872, ss. 59 & 60). Thus, section 59 of the aforementioned Act, however, gives us an indication that oral testimony cannot prove everything, as it states explicitly, "except for the content of document". So, here exists the other type of evidence: documentary evidence, which is needed to prove any fact by presenting documents before the court. Documentary evidence generally indicates those documents that might be able to prove something in relevant fact or fact in issue before the court. In criminal proceedings, the prosecution/petitioner and defense/accused usually adduced evidence to establish the guilt or innocence of an accused. Generally, the petitioner/prosecution tries to prove the accused guilty, and the accused attempts to make him/her innocent by producing evidence either in the form of a document or in the form of an oral statement before the court.

Document is defined as "any matter expressed or described upon any substance by letters, figures, or marks, or by more than one of those means, intended to be used, or which may be used, for the purpose of recording that matter" under section 3 of the Evidence Act, 1872. Medical evidence falls under the meaning of a document under this definition. There shall be no barrier in accepting it as documentary evidence if it becomes necessary to establish a fact in issue or a relevant fact.

As documentary evidence, medical evidence, particularly in cases involving bodily injuries, homicide, and rape, is crucial for the purpose of fairly assessing the evidence and reaching a just decision. Recent advances in medical research and the relevant evidence have made it possible to pinpoint previously unimaginable things, such as fingerprint analysis, physical examination of victims, and DNA testing for determining who committed a crime or how serious it was. Additionally, opinions of the medical experts in the form

of a medical certificate, medico-legal reports, or forensic evidence are also vital in every trial for homicide or for the crime of inflicting harm on a human body in determining the cause of death, the severity of the injuries, whether the injuries are post-mortem or anti-mortem, the likely weapon used, the impact of the injuries, medications, poisons, and the effects of wounds, including whether they are sufficient in causing the crime. The explanation above makes obvious how vital medical evidence is in criminal proceedings.

Nature and Classes of Medical Evidence

Medical evidence can be produced before a court of law in two ways; either in the form of documentary evidence or oral evidence. Primarily medical evidence are three types; (a) Medical certificates, (b) Medico-legal reports, (c) Forensic Evidence. Dying declarations is also included within the framework of medical evidence.

Medical certificates

Generally, a medical certificate indicates the nature, pattern, extent, shape, and mode of the injuries or death, or rape, as well as the findings at the scene of the incident when this occurs in criminal proceedings. Medical professionals examine both the assault's nature and the death's cause, including whether it was homicidal, accidental, or suicidal in nature. Each diagnosis is explicitly described in a medical certificate and any associated paperwork that helps to identify the true cause of the death or injury after summarizing of all the factors that were manifestly present in the case. These are the simplest types of documentary evidence and typically deal with things like sickness, mental instability, death, rape etc [5], which are vital in criminal proceedings. Generally, the certificate of insanity may exonerate one from criminal liability under Section 84 of the Penal Code.

Medico-legal report

Medico-Legal Reports are a different kind of medical evidence from the medical certificate. Unlike a medical certificate, Medico-Legal Reports are prepared by the medical officer in obedience to a demand by an authorized police officer or a court. They are referred to chiefly in criminal cases relating to assault, rape, murder, poisoning, etc. These reports consist of two parts; the facts observed on examination and the opinion or the inference drawn from the facts [5]. Furthermore, the medico-legal report has excellent evidential value in the criminal proceeding before a court. Such as, this report plays an important role in determining an offense's severity. For example, to differentiate between simple hurt to grievous hurt under sections 323, 324, 325, 326, and culpable homicide, murder, and attempt to murder under sections 399, 302, 307 of the Penal Code, 1860, Medico-Legal

Reports bring up necessary *prima facie*. Moreover, there are some other offences and to its severity can be varied by adducing medico-legal report. A medical certificate as well as medico-legal reports are required to prove the authenticity and gravity of the offenses covered by Sections 312 to 318 of the Penal Code (1860), which deal with miscarriage-causing, injuries to pregnant children, exposing babies, and birth concealment. In general, crimes against persons, bodily harm, causing a miscarriage of a child (as defined in sections 299 to 338A), rape (as defined in section 375), and unnatural crimes (as defined in section 377) are more or less tied to the use of medical and legal evidence to establish a case in court.

Forensic evidence

Forensic evidence is another branch of scientific medical evidence. In the current era, forensic science has grown more crucial to the investigation of crimes, and new forensic methods and tools are being created to assist [6]. Additionally, medical research has advanced to the point that it is now a trustworthy source of evidence that makes even the cases of very challenging deaths, such as children who have been beaten or shaken and are thought to have fallen accidentally, decapitated or dismembered murder victims, covered suicides, unusual causes of death like water intoxication or exotic drugs, rare genetic diseases, and deaths that appear unrelated in hospitals simple to be resolved Rahim [3]. Generally speaking, forensic evidence is any evidence that has been assembled using forensic techniques and in accordance with accepted forensic science standards. The query now is: What is forensic science? The application of forensic science is a key element of the criminal justice system. Forensic scientists use it to examine and analyze evidence from crime scenes and other locations in order to arrive at valid inferences that can help with the investigation and prosecution of offenders or clear an innocent person of suspicion [7]. Generally, latent fingerprints, tool and bullet marks, handwriting analysis, fire and explosives, digital evidence, and trace evidence such as hairs and fibers, paints and polymers, glass, dirt, etc are examined to find out something in suspicion. Aside from these, all chemical test findings are deemed forensic evidence and must be admitted in court [7].

Dying declaration

A dying declaration is a statement—verbal or written—made by a person who has passed away regarding the reason for their demise or any other factors that contributed to their passing [5]. Though a dying declaration does not directly fall in with the definition of medical evidence, if the declaration by a deceased person is stated to a medical office only, it may be regarded as medical evidence with a supportive medical certificate. In this regard, there is an observation

of the Appellate Division of Bangladesh Supreme Court that *“dying declaration cannot be considered as the sole basis for conviction and awarding sentence to the appellant, specifically in the absence of any of the witnesses who were present in the hospital during the time when the alleged dying declaration was made by such a critically injured person who was under intensive care and not supposed to be in conscious”* [8]. Consequently, a medical certificate corroborating the declaration is required to establish a dying declaration.

The Efficacy of Medical Evidence in Criminal Justice Delivery

In Bangladesh, the Code of Criminal Procedure, 1898 (*hereinafter* Cr.PC) is the set of prime rules on which criminal proceeding is mainly based. Around more than 120 years ago, Cr.PC gave medical evidence evidential value and had been used in criminal proceedings for the ends of justice. As per section 509 (1) from chapter XLI named “Special Rules of Evidence”, the deposition of a doctor or other medical witness, taken and attested by a Magistrate in the presence of the accused, may be given in evidence in any inquiry or trial. The post-mortem examination report is used as evidence. The Code of Criminal Procedure [9], even if the doctor who made the report is dead or is incapable of giving evidence or is beyond the limits of Bangladesh and his attendance cannot be procured without an amount of delay, expense, or inconvenience which, under the circumstances of the case, would be unreasonable, such report may be used as evidence (Cr.PC 1898). Furthermore, any document purporting to be a report under the hand of any chemical examiner or assistant chemical examiner to the Government or any serologist, handwriting expert, fingerprint expert, or firearm expert appointed by the Government is used as evidence in any inquiry, trial or other proceedings under this Code (Cr.PC 1898). Apart from these, the doctor’s opinion, either in the form as a report or oral statement, in Court plays a vital role as evidence to prove or disprove some of the matters prescribed by Cr.PC 1898, such as, under section 84 of the Penal Code, 1860, an act done by a person of unsound mind is not an offense. In order to prove a person of unsound mind, a doctor’s opinion is a must and has to be produced in the manner under section 464 of Cr.PC. Thus doctors’ opinion and medical evidence has become well-established evidence in each stages of the criminal proceedings that start from filling of cases like hurting for dowry, rape, death, and acid throwing etc. to declaration of judgements. Moreover, the assessment of criminal liability, including varying degrees of homicide, responsibility for accidental fatalities, inheritance rights, or life insurance benefits, is heavily influenced by medical evidence [3]. It is not only advantageous to ensure the administration of justice but also to secure the right of health of the community.

Statutes Relating to Medical Evidence

Although the Code of Criminal Procedure, 1898, and the Evidence Act, 1872, primarily describe the uses of medical evidence, there are several statutes in Bangladesh that include medical evidence, either in the form of medical certificates, medico-legal reports, or forensic reports. According to Rahim [3], there are 45 laws related to various aspects of health that deals with the medical evidence. Apart from this, there are some major laws, which have introduced medical evidence in the form of medical certificate, medico-legal report, or forensic evidence with evidential value in the criminal proceedings of Bangladesh; those are;

- ❖ The Evidence Act, 1872
- ❖ Nari o Shishu Nirjatan Daman Ain, 2000 (Translated as: Women and Children Repression Prevention Act, 2000) [10].
- ❖ The Narcotic Control Act [11],
- ❖ Deoxyribonucleic Acid (DNA) Act [12],
- ❖ The Acid Control Act, and the Acid Crime Control Act [13],
- ❖ The Children Act [14],
- ❖ The Dissolution of Muslim Marriages Act [15], (ACT NO. VIII OF 1939)
- ❖ Consumers’ Rights Protection Act, 2009
- ❖ Food Safety Act [16],

Medical evidence under the Evidence Act, 1872

The Evidence Act of 1872 deals with the provisions of how evidence in a trial can be produced before a court of law in Bangladesh. Though the term ‘medical report’ is not expressly and directly incorporated in the Act, a comparison of the medical evidence with the expert opinion provided under section 45 of the Evidence Act of 1872 may be given a conclusive status rather than a corroborative one [17]. Expert opinion is defined under section 45 of the said Act, as it has stated that *“when the Court has to form an opinion upon a point of foreign law, or of science, or art, or as to identity of handwriting or finger impressions, the opinions upon that point of persons specially skilled in such foreign law, science or art, or in questions as to the identity of handwriting or finger impressions are relevant facts, such persons are called experts.”* Here we find that only five types of opinion is considered as an expert’s opinion, such as if the person becomes an expert on foreign law, science, art, handwriting, and finger impression. Similar to this, medical evidence is the expert opinion of medical professionals who have scientific knowledge, medical experience, and who provide findings in line with medical jurisprudence [18]. According to the definition, medical evidence easily transitions into the category of expert opinion because it fits under the definition of scientific opinion set forth by the Evidence Act. Medical evidence is corroborative, albeit, as it has been previously

established that, in accordance with section 509 of the Criminal Procedure Code of 1898, medical evidence must be testified to in front of the Court by a medical officer. However, the Report itself can be considered as substantial evidence under section 32 of the Evidence Act in the event of the doctor's passing or lack of availability; the circumstance can be testified by another professional Slam Pratap [19]; Gofur Sheik [20]. Medical evidence, such as DNA tests, can now be used to demonstrate that a husband and wife do not have access to one another for sexual intercourse in accordance with Section 112 of the Evidence Act.

Women and Children Repression Prevention Act, 2000

Women and Children Repression Prevention Act, 2000 is a special law enacted to protect women and children from persecution and deliver speedy justice if persecuted. This Act states that a medical checkup is necessary for victims in case of rape. As it says, the medical test of a woman or a child being raped shall be taken to a public or approved private hospital no sooner had the rape been committed. The medical officer, who completes the test or examine the victim, will give the victim a certificate and inform the local police station about the offense. Suppose the medical test is not taken immediately under sub-section (i), or the medical officer is responsible for not completing the test within a reasonable time. In that case, the Tribunal can direct the appointing authority of the doctor to take steps against him for negligence in duty, for that action shall be taken against misconduct (Women and Children Repression Act 2000, 2029). Moreover, HCD has given 18 directives where these formalities of medical examination of the victim and collecting DNA have been discussed in detail [21]. Only the most crucial directives are highlighted here in the following way:

"When a rape victim woman or child goes to a government health center or a government-designated health center without a police reference, it is the duty of the doctors of such facilities to carry out necessary tests immediately. Chemical/ DNA testing is mandatory in all cases of rape or sexual assault. DNA and other samples should be sent to the concerned Forensic Science Lab or DNA Profiling Center within 48 (forty eight) hours of the alleged incident. Doctors and clinic assistants must provide the necessary medical care to the woman or child. After the test is over, the doctor will immediately inform the nearest police station and give a copy to the victim.

One female police officer, at least a full-time constable, shall work at every police station. When a rape or sexual assault is reported, the officer in charge of recording the information will telephone the female police officer who is on duty at the police station to help the victim and her family members feel at

ease. The victim support facility should be covert and equipped with all tools required for victim recovery. Negligence on the part of the investigating agency is penalized when it results in failure to collect the report or transport the victim to the nearby hospital for a medical checkup. The investigating officer will make every effort to wrap up the inquiry quickly."

Additionally, medical evidence is critical in determining the difference between minor injuries and severe injuries for dowry under Section 11 of the said Act.

The Narcotic Control Act, 1990

The Narcotic Control Act of 1990 is enacted to control drugs and provides the procedures and punishment for the offense under this Act. A chemical examination report is necessary to identify which substance is a drug or narcotic and which is not, in the event that the suspected criminal has actually taken or used any drugs that are prohibited by the law. The Chemical Examination Report meets the criteria for expert opinion under section 45 of the Evidence Act, 1872, which demands scientific expertise. In essence, this Act's main goal was to regulate drug usage so that young people couldn't use drugs to get high and become bad influences on others. For carrying out the purpose of this Act, this Act provides to set up a chemical laboratory under the principle of forensic evidence. As it provides in section 62 of the said Act [11].

"The Government may, for carrying out the purposes of this Act, establish a laboratory for the chemical examination of any narcotics or any ingredient of narcotics and appoint a chemical examiner for the purpose. Whenever a chemical examination of any article becomes necessary at any stage of any proceeding under this Act, it shall be sent to the chemical laboratory. The Report of any chemical examination signed by the chemical examiner may be used as evidence in any investigation, trial, or other proceedings under this Act".

Additionally, scientific knowledge that falls under the definition of expert opinion under section 45 of the Evidence Act is also needed to analyze the authenticity of a video clip or still shot of a criminal, smuggler, or perpetrator. Section 56 of the Narcotic Control Act also states: *"Notwithstanding anything contained in the Evidence Act, 1872 (Act No.1 of 1872), a video or still image of any person or member of an investigating agency or any other person committing or preparing to commit or assisting in the commission of any narcotic offense or damage. If recorded or received or any conversation or conversation recorded on a tape record or disc, the said video, still image, tape or disc shall be admissible as evidence during the trial of the case related to the crime or loss."* Additionally, in some cases, DNA testing may be necessary to identify the real offender who used drugs and committed crimes under the Narcotics Control Act.

Deoxyribonucleic Acid (DNA) Act, 2014

Globally, the DNA test has opened a new era in Criminal Justice System. Now many cases are easily solved through the advancement of DNA identification which was once unimaginable. In tune with the global investigation process, Bangladesh enacted the Deoxyribonucleic Acid (DNA) Act in 2014 to gather and assess DNA evidence. The purposes of enacting this Act are mainly to develop a procedure for collecting and analyzing DNA samples, to regulate the use of DNA samples and DNA profiles, to establish a Forensic DNA Laboratory to establish the National DNA Database, and to formulate rules on other related matters [12]. The purpose of preservation of DNA samples and DNA tests shall be to identify a person or the person associated with crime, to identify a missing or anonymous person, to determine of the relation between two or more persons, to identify dead bodies, to resolve disputes and any other purpose prescribed by rules under this Act.

Moreover, every DNA report contains a forwarding note signed by the Head of the DNA Laboratory, a brief of the conduct process of DNA analysis, the procedure of DNA analysis, and others prescribed by the rules (DNA Act 2014) Furthermore, this Act provides provision to establish either or more DNA Lab for carrying the purposes of this Act (DNA Act 2014) Apart from these, The Government shall set a 'National DNA Database' consisting of the Index of Crime Scenes, Convict Offenders, Index of Anonymous Persons, and any other Index the Government determines. (DNA Act 2014) DNA profile shall be preserved in the DNA Database according to the procedure prescribed by the rules (DNA Act 2014) and access to the held information shall be restricted except those prescribed by the rules for the purposes of the Act (DNA Act, 2014) Besides these, this Act provides punishment for offenses under this Act, which is up to 10 years of imprisonment but no less than three years or a fine of up to 3 lack taka or both (DNA Act 2014).

The Acid Control Act, 2002

This piece of legislation was implemented in order to safeguard the victims, provide them additional legal options, and prohibit the use of acid as a corrosive substance. Consequently, it was designed to give acid victims access to legal aid. The criminal justice system also handles incidents of acid violence. Under the Acid Control Act of 2002, Special Courts have been formed. A special court must be established in each district, according to the statute. In actuality, these courts are comparable to those with exceptional jurisdiction established by the Special Power Act of 1974. When deciding issues involving the two aforementioned Acts, Special Courts must adhere to a similar process to that outlined in the Special Power Act of 1974. Since acid is a corrosive substance, it is also covered by Sections 324 to 326A of the

Penal Code, 1860 in addition to the Act mentioned above, and anyone who intentionally uses corrosive substances, such as acid, to harm their hands, faces, or eyes will be punished in accordance with the severity of the harm. To identify which chemical is corrosive, a forensic study is required. In order to guarantee that justice is done, the forensic lab's findings is considered as medical evidence and evaluated by the court.

The Dissolution of Muslim Marriages Act, 1939 (ACT NO. VIII OF 1939)

According to the Dissolution of Muslim Marriage Act (hereinafter DMMA), 1939, a woman married under Muslim law is entitled to obtain a decree for the dissolution. In order to obtain a divorce on this ground, the woman must prove that the husband was impotent both at the time of the marriage and up until the lawsuit was filed. If the spouse requests it, the court is required to grant him a year to increase his potency. (DMMA, 1939, s.2(v)). Medical proof may be needed in the specific situation to support or refute the reality [22].

The Children Act, 2013

According to the Children Act of 2013, if a child suspected of a crime is brought before the court for reasons other than delivering testimony, the court may do the requisite hearing and inquiry if there is any question as to the child's age. The Children's Court shall record its findings and determine the child's age based on the facts presented during the inquiry and hearing. For purposes of this Act, the child's age as established and declared by the Children Court according to this section must be assumed to be the child's actual age. If it is required, the court may send the child to a forensic department to have its bones or teeth examined in order to ascertain the child's actual age [14].

Consumers' Rights Protection Act, 2009

The Consumers' Rights Protection Act of 2009 was enacted to protect consumers' rights. In doing so, this Act provides a provision to establish a food laboratory and also provides the procedures. As it stated, In determining the truth of a complaint about any defect of any goods or find out the contaminated items, if the Magistrate thinks that it is not possible to determine the truth of the complaint without proper analysis or examination of that goods, he shall collect a sample of that goods or items from the complainant and attest that sample with a seal therein and send that sample to any appropriate laboratory with necessary directions to examine the presence of the defect or contamination raised against, or any other defect of, the goods sealed. Furthermore, the examination report about any goods sent to any laboratory for examination shall be submitted to the Magistrate Court within 2 (two) months from the date of sending Consumers' Right Protection Act 2009) Thus, this Act by itself expands

the possibilities for conducting laboratory testing of tainted goods or items that are harmful to humans or otherwise dangerous, much like an expert opinion described in section 45 of the Evidence Act of 1872.

Food Safety Act, 2013

This Act has also provided the lab facility for food testing, which can broadly confer forensic evidence. As it provides that at the stage of investigation or trial under this Act, the Food Court may, if necessary suo-moto or upon an application by the plaintiff or defendant, pass an order directing the Authority to analyze or examine a sample of any article of food or food ingredient sample [16]. Furthermore, in ascertaining the veracity of any complaint, where the Food Court is of the opinion that it is not possible to determine the merit of any complaint without proper analysis or testing of any food; the Court may ask the complainant to submit a sample of such food, cause it to be authenticated with a seal in the manner determined by it and send it to the such laboratory as designated by the Government or the Authority with a direction to analyze or examine the sample for tracing the presence of prohibited substance inside it. If any food sample is sent to a laboratory for the test, the laboratory shall forward a test report to the Court within 1 (one) month from the date of sending the sample [16].

Flaws in Preparation and Presentation of Medical Evidence

Medical evidence plays a pivotal role in arriving at a right and fair decision in the criminal justice delivery in Bangladesh. Since Bangladesh maintains the common law legal system and assesses the evidences to resolve disputes in its criminal courts under the Evidence Act, 1872, without changing it much as time requires, Bangladesh's criminal justice delivery system likewise accords evidentiary value to medical evidence as a documentary evidence. The Evidence Act of 1872 and the current system for presenting evidence in the criminal courts are typically used to evaluate any document and determine its probative value in Bangladesh. Medical evidence, however, cannot adequately serve the interests of the litigants due to a number of administrative inefficiencies, defects in the legal process, and a lack of well defined criteria for producing medical evidence. Here, the shortcomings that are impeding the administration of criminal justice are highlighted in the following ways:

Absence of comprehensive law

It has already been discussed that the criminal proceedings of Bangladesh entertain medical evidence, and the country's basic laws do not create any bar from doing so. Nevertheless,

presently, there is no comprehensive guideline or code that explains the complete process of gathering, preparing, and presenting medical evidence to courts, despite the fact that many pieces of legislation handle the collection and preparation of medical evidence on an individual basis. A medico-legal advisory committee can be formed for it to be successful.

Lack of central database

Bangladesh employs the customary process for presenting evidence before the court. There is currently no digital system in place in Bangladesh for gathering and presenting scientific evidence to a court. Furthermore, there isn't a sizable digital repository for data relating to medical evidence. Despite the fact that the DNA Act of 2014 permits the establishment of a central DNA bank, there is no online centralized database system. However, CID started running a DNA bank after the Act's guidelines were followed.

Lack of uniform prescribed form and Medical Record Number (MRN)

Even though it is crucial to assign a unique MRN number to each patient in order to increase efficiency and transparency in the process of presenting medical evidence in court and speed up the resolution of criminal cases, the absence of a centralized patient database system and unique MRN makes it extremely difficult to satisfy the need of litigants for prompt justice. In addition, this study discovered that there is no uniform prescribed form containing unique code and mark available in the medical system across Bangladesh on which medical reports and certificates may be prepared, giving opportunity for fraudsters to prepare and produce false reports before the courts in order to escape criminal culpability.

Fake Medical Certificates and medico-legal reports

As stated earlier that medical certificates and medico-legal reports are crucial medical evidence for dispensation of criminal justice fairly and efficiently. From granting bail to trial, almost at every stage of criminal proceedings, a medical certificate plays a significant role for the judges in making the right decision. However, it is a matter of letdown that some bribe-influenced person creates fake medical certificates for minimal money [23]. Besides counterfeit medical certificates, sometimes so-called doctors are found to be fake [24]. Even though it happens infrequently, it is often seen that local medical centers issue medical certificates that do not correspond to those provided by other healthcare facilities. Even two medical professionals from two different local hospitals or medical centers issue certifications that conflict with one another. Occasionally, some influential local person

assists in manipulating medical certificates or medico-legal reports, typically seen in cases involving injury and rape, to aid a culprit in evading custody or dragging him through the court system. Recently, a hospital owner who operated two medical centers in the capital city Dhaka and provided about 6,300 fake COVID-19 test results was apprehended while attempting to flee to India [25]. These type of fraudulent and counterfeit medical certificates can be obtained for cash or by other persuasive means, frequently affecting the outcome of criminal justice delivery and tarnish the image of overall judiciary and the medical professionals. In a case involving the issuance of bogus Covid-19 certifications, a Dhaka court recently imposed up to 11 years of rigorous jail [26]. The fake medical certificates and medico-legal reports also damage Bangladesh's reputation and impact criminal justice delivery system hugely.

Poor Reumeneration

Under section 509 of the Code of Criminal Procedure, 1898, Civil Surgeons and other medical officers must come to the Court for their producing their evidence either documentarily or orally. In such cases, they are not paid sufficient compensation for their Travel Allowance and Dearness Allowance on time. According to Rahim [3] it seems sense that state hospitals have trouble filling medical posts given that they pay their employees relatively little and that many of them opt for work at private clinics. Due to this insufficient allowance, medico-legal professionals sometimes feel demotivated to go to Court as a witness. Furthermore, excessive work pressure is another reason for doctors to be reluctant to appear before the courts for producing evidence.

Lack of medico-legal training

Medical practisoners are without a doubt subject-matter specialists with in-depth knowledge of their specialties. However, most of them are lack of sufficient medico-legal training required to testify in court, present evidence, and explain how their understanding of forensic science, in particular, often create hinderance and prevents judges from making right decisions. Due to this reason, the delivery of justice is sometimes hampered and the medical evidence often loses its evidential value in the eye of the law.

Insufficient Number of Medical Personals

In Bangladesh, another drawback in producing medical evidence is an insufficient number of medical personnel. Bangladesh is declared one of the 58 crisis countries facing an acute Human Resource for Health by WHO [27]. Furthermore, many reports show that Bangladesh has a minimal amount of medical personnel compared to its population. Therefore it is tough for the doctor to prepare medical evidence besides their regular duty routine.

Inadequate modern medical equipments and labs

Nowadays, developed countries collect and preserve medical evidence using sophisticated technology. On the other hand, Bangladesh is falling behind in this regard as both the District hospital and the Upazila Health Complex are insufficiently equipped with state-of-the-art medical technology to accomplish the same. The World Health Organization's standards cannot be met in Bangladesh, which is unable to install advanced technologies and lacks sufficient medical equipment to treat patients. Even though the capital is home to some top-notch laboratories, access to them by the less fortunate patients is occasionally limited. Even occasionally, it is impossible to diagnose and treat serious ailments in the capital; as a result, those with the means typically seek care in nearby nations like India, Thailand, and Singapore [28]. According to a survey by the Times of India on July 24, 2021, with 54.3% of them coming from Bangladesh, the vast majority of medical tourists who visited India last year were from that nation [29]. An extensive portion of people travel from Bangladesh to other countries largely for medical treatment, according to a new survey study from the Bangladesh Bureau of Statistics (BBS). The data also states that India was the sole destination for 60.41 percent of Bangladeshi tourists who left the country during the 2018–19 fiscal year [30].

In addition to this, Section 73 of the Food Safety Act of 2013 mandates that the Court issue an order for samples to be collected and sent for testing, which must be done within one month, although it takes too long to do so because of a lack of laboratories and testing expertise. Furthermore, the government is required by special legislation, such as section 50 of the Narcotic Control Act of 1990, to establish chemical laboratories for chemical testing, although it only has a few chemical laboratories to do the same. Due to inadequate laboratories located mainly in the capital, testing or examining all samples collected from a large backlog of cases by a few experts while complying with court guidelines is challenging, leading to late preparation, reporting, high costs, and ultimately defeating its fundamental purpose of criminal justice in Bangladesh.

Modus Operandi to Mitigate the Existing Lacks

Medical evidence is one of the most important and crucial parts of Bangladesh's criminal justice delivery system, yet it faces several administrative, procedural, and legal challenges. To assist the courts in arriving at a correct decision, the mechanism of preparing and adducing medical evidence should be updated to accommodate the demands of the litigants to have their just decision and make the criminal justice delivery system meaningful. However, putting the following recommendations into practice can improve both

the process and the complete delivery of criminal justice:

Enacting standard procedures and statute

At present, there is no comprehensive standard or regulation that outlines the complete process of gathering, preparing, and presenting medical evidence before the criminal justice delivery, despite the fact that a few pieces of law discuss the issues relating to medical evidence in the form of medical certificates, medico-legal reports, or forensic reports. Besides, unlike developed countries, Bangladesh currently does not have a witness protection law. Medical experts who have issued medical certificates, medico-legal reports or forensic evidence sometimes feel the same feelings of fear and embarrassment as ordinary people when called to testify against accused terrorists or serial killers in criminal cases. It provides an opportunity to withdraw criminal charges against the offender. So, in addition of enacting a Witness Protection Act, it requires a specific guidelines in the form of a statute containing provisions for medical evidence on preparation, collecting, preserving, and producing before the Court. If it were possible, it would be much easier to assure accountability and transparency throughout the entire medical system and when producing medical evidence for a court case.

Creating digital central database

Creating a digitized central database for the medical evidence is now a demand of time. All of an individual's medical information should be stored online with a unique medical number. It would bring two positive outcomes; one is it would be easier for a doctor to make decisions in emergency cases as all the previous reports are easily found online. Another positive outcome is that it will prevent fake medical reports, and the judiciary may easily verify the authenticity if needed. Furthermore, it is difficult to serve them with a summons from the court because the medical experts who gave the medical certifications have moved on to other medical institutions, and it is difficult to retrieve their records. It would only take a click to find out their most recent update if there were a central database for the entire medical system, which would speed up the criminal justice system as a whole.

Incorporating unique birth and death registration number

In Bangladesh, sometimes, legal disputes arise over dates of birth or death in hospitals or medical centers. Due to lack of digitized database, sometimes, the opportunists grasp the chance by fabricating false medical records, which they then present in court to establish the person's as genuine date of birth or death. This allows them to either shield the person from criminal responsibility by claiming that they are minors,

or they can try to seize their property. Moreover, sometimes, it requires to assess the age of an offender by examining the bone or teeth of that offender when his/her actual date of birth is not found. In case, only digitized medical birth and death registration system can play a important role. Therefore, an attempt might be made to give the infant a unique birth registration number on the day of his birth in any medical facilities in Bangladesh, similar to what is done in the USA. The same birth-date must also appear on all other documents, such as a person's passport, NID, and academic transcripts etc. In a similar way, death registration should be stored in the main database. To ensure consistency, these birth and death registrations must be sent to the city corporations and other relevant departments with the relevant papers. Every medical facility has to have someone on staff who collects and compiles all the pertinent data for this process. Each person will therefore have their own chronology, which will help in the future to settle any legal disputes over these matters and court validation of the facts.

Adequate allowance for medical officers

In the current situation, the allowance typically given to medical practitioners is insufficient to cover the total cost of travel and lodging for a day for testifying before the court because they could potentially make more money in a day by private practice if they were not called to give the evidence on the same day. However, since it is a government official's primary responsibility to carry out court orders, in order to ensure justice, civil surgeons and other medical professionals who are involved in preparing and presenting medical evidence before the court should be fairly compensated when they leave their workstations to appear in court as witnesses. It will inspire them to do so.

Introducing legal training for medical professionals

In Bangladesh, forensic science, forensic psychology, forensic criminology, and medical jurisprudence are less popular among medical professionals because they call for a thorough understanding of medico-legal issues. Additionally, medical professionals typically find giving testimony in court to be too complicated and uncomfortable. Moreover, those disciplines do not command a higher price in terms of pay and prestige than other subjects and medical professionals. They therefore frequently lack interest in either learning or working in this subject. Although medical evidence, especially forensic evidence, is a vital ingredient to arriving at the right decision in a criminal case, due to lack of sufficient expertise, in fact, hinders the criminal justice delivery process. So, medical personnel should be trained enough in medical jurisprudence and forensic criminology with existing laws so that they can legally discharge their duty in a timely manner and gain interest in this field to work. It might help the doctor to preserve medical evidence with adequate evidential value.

Additionally, all legal professionals-including judges, prosecutors, attorneys, and law enforcement-need to be well-versed in medico-legal issues. All stakeholders involved in this field should receive adequate training to enable them to carry out their duties successfully and efficiently for the benefit of the litigants in order to ensure the implementation of a complete and equitable criminal justice system, as approximately 30% of criminal cases in Bangladesh involve this medical evidence. The concerted effort of Bangladesh Medical and Dental Council (BMDC), Directorate General of Health Services, and the Ministry of Health may help to improve the situation.

Appointing more Medical Personnel

Currently, the medical officers, who are working in the field of health sector for serving to the people, is not sufficient to meeting up the need of the people. So, a sufficient number of medical officers should immediately be appointed throughout Bangladesh. It will mitigate their work pressure to work with more care and dedication. Provide that because of the insufficiency of medical personnel, now doctor's work often becomes excessive, even more than Labour Code allows. According to the WHO, Bangladesh now ranks second-to-last among South Asian nations in terms of the number of doctors per 10,000 people (5.26) [31]. According to Rahim [3], only 18 physicians and 5 nurses are employed for every 100,000 people in Bangladesh. There were 25,739 registered male doctors (47%) and 28,425 registered female doctors (53%) in Bangladesh between 2006 and 2018, according to the Bangladesh Medical and Dental Council [32]. Moreover, Bangladesh does not have enough female doctors, especially forensic experts to handle crime against women. As doctors have various other responsibilities apart from conducting forensic and other medico-legal examinations. So, in order to improve the recent condition, there is no alternative increase the number of medical professionals in Bangladesh.

Installing modern labs, medical centers with cutting-edge technologies

Although Bangladesh has recently introduced new technology to catch cybercriminals and identify them by their DNA, it is not enough to meet the demands of the litigants and the criminal cases that involve them, which results in delays in the processing of examination reports, the police investigation that follows, and the trial itself.

Moreover, medical support facilities are currently subpar in rural areas or even in some districts, as was demonstrated during the COVID-19 pandemic situation in Bangladesh, painting a very disappointing picture. Victims frequently put off receiving the necessary medical care. If there were a way to increase the number of hospitals and introduce more cutting-edge technology into an area, it would be

advantageous for the victims to receive early medical care and testing, particularly in rape and severe injury cases. As a result, it will deliver accurate medical reports that are valuable for use as proof in the criminal justice delivery system

Along with the aforementioned steps, the government should right away establish a sufficient number of laboratories in accordance with the requirements of special laws like the Narcotic Control Act of 2018, the Digital Security Act [33], the Consumers' Rights Protection Act of 2009, the Food Safety Act of 2013, and the mandate of the Bangladeshi Constitution, which guarantees equal justice for all. As a result, it would be possible to obtain the lab report by the deadline since it takes the court a long time and costs a lot to the litigants for getting justice [34-39].

Conclusion

Medical evidence plays a crucial role in proper dispensation of justice, whether in Bangladesh's criminal justice delivery system or the other countries of the world. In addition to producing medical evidence conventionally, scientific methods and technology can be employed to prove the veracity or falsity of a claim, ensuring that no one is punished or left unpunished without committing a crime. As the nature and styles of committing crime have changed, those must be attained innovatively rather than the conventional way. Medical evidence is one of the innovative tools by which complicated cases can be easily resolved. Therefore it is high time to consider medical evidence earnestly and the Government of Bangladesh should immediately outline the hurdles in this regard and solve them. Thus a revolutionary change may come to the criminal justice system of Bangladesh. As this study did not investigate much about how modern technologies can be more infused to improve the overall criminal justice delivery system in Bangladesh, there is a scope to further research in this field.

Declaration of Funding and/or Conflicts of interests/Competing interests

I declare that this is my original writing, contains no plagiarized content, has no conflicts of interest or other affiliations, and has no financial interest in publishing this paper in this journal.

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