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ABSTRACTS

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# A Study on the Factors affecting the Efficiency of DNA Technology in Sri Lanka's Criminal Investigation

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Deoxyribonucleic acid (DNA), is an organism's genetic material, inherited from one generation to the next and also it can be used to identify criminals with incredible accuracy when biological evidence exists. DNA evidence has exonerated people through post-conviction analysis of biological samples and it is not unassailable. Errors in the collection or handling of the biological samples used for the DNA analysis can result in the exclusion of DNA evidence at trial. Similarly, if a lab contaminates the biological sample or is found to use unreliable methods, a judge may reject the DNA evidence at trial.

Due to the increase of reported level of criminal cases it is an important aid that DNA helps to track criminals using biological evidences. Literature on DNA and criminal investigation has addressed the factors that affect the efficiency of DNA technology in criminal investigation. It is important to identify the strengths, opportunities, weaknesses and threats of the investigation field due to lack of studies based on DNA technology in the field of criminal investigation in Sri Lanka.

The main aim of this study was to identify the factors which affect the effectiveness of DNA technology in criminal investigation. This study was done using a semi-structured interview method as the primary data, with the officers and analysts in the DNA based investigation field. Also police reports data and case studies are used as the secondary data. The findings justified the hypothesis on to the accuracy of electronic devices and machineries, human resource error level and type of crime that highly influence the effectiveness of using DNA in criminal investigations

**Keywords:** Biological, Criminal Investigation, DNA, Efficiency, Genetic

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