Research Article **Published Date:- 2021-10-15**

[Awareness level on the relevance of forensics in criminal investigation in Nigeria](#)

The main aim of forensic science is to gather intelligence to enable the judge to credible and logical decisions in the court by means of scientific approach through evaluation of evidence for the administration of justice, and country around the world now considers forensic methodology as the gold standard for criminal investigation. Therefore, the present study examined the level of awareness on the relevance of forensics in criminal investigation in Nigeria. The design used in this study is the survey research design and the sample size of this study was a total of one hundred personnel of law enforcement and the judiciary. The study adopted descriptive statistics which involves the use of frequency and percentage. The result of the present study revealed that the participants were distributed socio-demographically as follows; there was an observable higher number of male participants (68%) relative to the female participants (32%), As per age distribution, a larger population of the participants were found to be > 40 years of age with 55%, and it was observed that age between 35-39 years ranked the least with 15%. On educational level, the result of the present study revealed that majority of the participants possesses a bachelor's degree as the highest level of educational qualification with 75% from a pool of 100% of participants. The present study further examined responses on the relevance of forensics in criminal investigation, and the result revealed an inadequate level of awareness on the relevance of forensics in criminal investigation. Therefore, the study recommends that the Nigerian Police Force and the Judiciary should collaborate with Universities running programs on forensics for trainings.

Review Article **Published Date:- 2021-08-25**

[Victim of violent death: what is the role of alcoholemia?](#)

Introduction: The tendency to impulsive behaviors and/or violence is exacerbated after alcohol consumption. Still, the relation between alcohol/violent deaths reported in the literature is not accurate, and in general, alcohol is only seen as a trigger to aggressive actions. The relationship of the victims with their blood alcohol is less studied. They were especially concerned about the role of alcohol as a risk factor for victims of unnatural death. Thus, our goal is to check the influence of alcohol in victims of violent deaths as homicides, suicides, and accidents.

Materials and methods: Retrospectively the medical records of 805 autopsies performed at the Institute of Forensic Medicine (IML) of Franco da Rocha, in the period 2001 to 2017 were reviewed. The variables studied were sex, age, types of violent death rates, and alcohol - these were considered positive when above 0.3 mg/ml.

The dosage of blood alcohol concentration (BAC) was performed using samples of 10 ml of blood collected at necropsy, is preferably taken from the cardiac chambers or of the right femoral vein. Dosages of alcohol in blood samples were done in the Forensic Toxicology Center of the IML by gas chromatography, using the technique of separation "headspace" and double column.

Results: Drug testing for alcohol was available for 488 (79.1%) of 617 necropsies. Of the 617 subjects studied, 532 (85.7%) were male, and 85 (13.8%) were females (with high rates of adolescents). The vast majority (n = 230) were killed, and 40.5% of victims had BAC above 0.3 mg/ml of blood. Traffic accidents came next, accounting for 181 deaths, with 41% of victims presenting positive BAC.

Discussion: High blood alcohol levels of the victims were associated mainly with the genesis of accidents (drowning, falls, traffic, aspiration/ smothering) and murder (with impaired ability to resist or by causing the release of impulses to engage in violent situations), about 40% of cases.

Conclusion: Our results indicate that alcohol abuse is a risk factor for victims of violent death. In these cases, alcohol has two types of action. Direct: contributes to accidents of various kinds - from traffic by decreasing powers of concentration, attention, and loss of reflexes, to other types of accidents such as drowning, falls, swallowing disorders causing airway obstruction, and mechanical asphyxia. And they were indirect, making it easier for individuals to engage in conflict (and thus become victims of crimes).

Review Article   **Published Date:- 2021-08-23**

[Application and utility of alternative methods in isolation of pure cells from forensic biological mixtures in modern-day: a review](#)

Development of genetic profiles from the biological mixtures has remained challenging, although modern-day technologies may help forensic scientists to attain a reliable genetic profile in the identification of the accused.

In the case of rape, vaginal swab exhibits usually contain epithelial cells of victims and sperm cells of accused, such samples are more challenging when there is more than one contributor. In such cases, separation of distinct cells from a mixture that includes blood cells, epithelial cells and sperm cells for their single genetic profile is important.

In the last ten decades several new techniques were developed and invented for the separation of single cell from the biological mixture that includes differential lysis, laser micro-dissection, cell sorting (FACS), sieve-based filtration, (vi) micro-fluidic devices or immunomagnetic beads cell separation of fresh samples, and the magnetic activated cell sorting (MACS).

Out of them, some techniques have been commonly applied for cell separation in forensic biology. Each technique has its own limitation. Some recent studies showed, magnetic activated cell sorting (MACS), laser capture microdissection (LCM), DEPArray technology and fluorescence activated cell sorting (FACS) has proved to be effective in separation of single cell from cell mixtures.

Therefore, in this review we have evaluated these four alternative methods and their potential application in the modern-day over the others for the separation of a single cell from the mixture. In this review we also discuss the advantage of these methods and their modern–day applicability and acceptance in the forensic world.

Review Article   **Published Date:- 2021-08-10**

[Difference between conventional and modern methods for examination of fingerprints](#)

The impression of frictional ridges of the finger is known as fingerprints. Owing to this uniqueness, the fingerprints have long been used to identify a person since Ancient times. In any crime scene the presence of fingerprint makes the identification of the Culprit very easy. The fingerprints can also easily be embedded on any item such as paper, Clothing and body of the victim. To utilize this uniqueness of fingerprints forensic experts devised many techniques to obtain a clear fingerprint. These come under two categories i.e. Conventional and modern methods.

The conventional methods are although important but there are limitations of them. Just take the example of powder method. Powder method require different powders for different Surfaces and colors, but modern method like quantum dots method can easily detect Fingerprints on all surfaces regardless of their color giving great resolution in seconds. Other methods like physical developer method is very time consuming and expensive, carbon Black method creates mess and does not work on porous surface, iodine fuming and Naphthaloflavin does have an advantage that it can bring up prints on skin also but it does not Work on metallic surfaces. VMD also fails on heavy plastic polymers and body oils. But some modern methods like nanotechnology can obtain high resolution prints old and dried prints also within 3 minutes. Laser technology is very fast, accurate and can be used for Fingerprints up toten years old also on any surface without any mess. Multimetal deposition Method can even be used to identify smokers and drug addicts and can be used Porous, non-porous and wet surfaces.

Research Article   **Published Date:- 2021-03-26**

[Environmental influence on blood serum detection using ultraviolet 365](#)

The major use of alternative light sources (ALS) in the evaluation of bloodstains has been primarily focused on detection of whole blood, with relatively little attention to visualization of blood serum. Serum may become separated from blood pools during clotting, and because it is relatively invisible on certain backgrounds, go undetected by a perpetrator attempting to clean up a crime scene. Recently, Ultraviolet 365 (UV 365) was shown to be an effective tool in blood evaluation, useful for detection of even minute quantities of blood serum. Here the effects of environmental conditions on blood serum stain appearance were evaluated, including temperature, pH, protease sensitivity, solubility, and aging. Interestingly, it was found that the UV fluorescence of serum increases upon exposure to heat, which was accompanied by color changes under visible light and decreased solubility in multiple solvents. The efficiency of visualization of serum stains was somewhat variable, depending on the type of material on which it was dried. Finally, the current study documents the effect of heating on formation of fluorescent serum halo rings in dried bloodstains. Taken together, these data demonstrate that blood serum detection may be affected by certain conditions that influence its visualization under both visible and UV light.

Research Article   **Published Date:- 2021-03-16**

[Economic disparities and suicides: The dynamic panel data analyses of 50 states in the United States](#)

The economic inequalities associated with suicide risks among 50 states in the United States were identified in this paper to form the dynamic panel data set from 1981 to 2016. The effects of growing income inequalities on suicides in the Unites States were estimated using the Arellano–Bond method. This paper is the first to associate the social inequalities with suicides using the state-level dynamic panel data in America. It is found that the change of unemployment rates significantly and positively impact the changes of the overall suicides rates, female and male suicides rates. The changes of Top 10% income index are uniformly positive to the change of female, male and overall state-level suicide rates. The Gini index has positive correspondence within the overall and female groups, along with the insignificantly vague evidence within the male groups. The potential endogeneity problem inferring from the fixed effect estimation has been also investigated accordingly.

JEL Classification: A13, A14, I18.

Research Article   **Published Date:- 2021-03-08**

[Forensic analysis of private browsing mechanisms: Tracing internet activities](#)

Forensic analysts are more than ever facing challenges upon conducting their deep investigative analysis on digital devices due to the technological progression. Of these are the difficulties present upon analyzing web browser artefacts as this became more complicated when web browser companies introduced private browsing mode, a feature aiming to protect users' data upon opening a private browsing session, by leaving no traces of data on the local device used. Aiming to investigate whether the claims of web browser companies are true concerning the protection private browsing provides to the users and whether it really doesn't leave any browsing data behind, the most popular desktop browsers in Windows were analyzed after surfing them regularly and privately. The results shown in this paper suggest that the privacy provided varies among different companies since evidence might be recovered from some of the browsers but not from others.

Research Article   **Published Date:- 2021-02-26**

[Pattern of injuries in different types of victims of road traffic accident in central India: A comparative study](#)

Death due to road traffic accident (RTA) was one of the leading causes of mortality and morbidity in India. In the present cross-sectional study, only the victim using two-wheelers, four-wheelers, and pedestrians were included for comparison to determine the pattern of injuries in these victims of the road traffic accident. There was a predominance of males in all three types of victims of RTA with a peak age of incidence seen in 21-30 years in two-wheeler victims, 41-50 years in four-wheeler victims, and 51-60 years in pedestrian victims. Four-wheeler (HMV/LMV) was the commonest type of offending vehicle involved in all types of victims with collision/ dash as the commonest manner of an accident. Head was the commonest region involved in pedestrian and two-wheeler victims as compared to the thorax in four-wheeler victims of accidents. Abrasion was the commonest surface injury in two-wheeler victims and pedestrians. The laceration was more common in two-wheeler victims as compared to crushed injury in pedestrian victims of road traffic accidents. The brain was the commonest organ involved in two-wheeler and pedestrian as compared to lungs in four-wheeler victims. The liver and spleen were more commonly involved in two-wheeler victims as compared to kidneys and bladder in pedestrian.

Review Article   **Published Date:- 2021-02-26**

[An update on outpatient competence restoration outcomes: The Washington DC Model](#)

This study provides an update to a previous study exploring time to restoration of adjudicative competence within an Outpatient Competence Restoration Program (OCRP). Authors examined the probability of restoration for individuals referred for outpatient competence restoration in the U.S. capital, and revisited the requirements of American Law, taking a closer look at how programmatic changes improve restoration and encourage adherence. Competence to stand trial remains a critical screening function of the judicial system to ensure that defendants have a basic understanding of courtroom procedures. Competency restoration is therefore an attempt to protect both the integrity of the system and the rights of defendants. Aggregate data from the OCRP's previous four years of competence restoration efforts were reviewed for demographic characteristics, restoration rates, and time to restoration. Poisson regression modeling identi?ed probability di?erences in restoration between sequential restoration periods. Since our initial analysis, the DC OCRP has been successful in restoring 97 of 345 participants (28.1%), with referral rates increasing from year to year. 39.2% are now restored after the 3rd round of competency restoration. Poisson regression modeling of individuals attaining competence during six successive restoration periods showed that di?erences for the first five rounds of restoration were not statistically significant ($p = 0.418$). In the 6th round, however, the difference in percentage of restored participants was statistically significant compared to previous rounds (irr = 0.32; $p = 0.0001$). We discuss the policy implications, especially those that suggest that the DC OCRP has improved its ability to restore competence beyond the 1st round of restoration.