

# STATISTICALLY SPEAKING



- ESTABLISHED 2013 -

Newsletter of The Jamaica Statistical Society (JSS)

January 2019

## STATISTICS: IMPROVING HUMAN HEALTH WELFARE

*Greetings from the President .....*

In our world today there are increasing concerns in the areas of social, physical and mental status of all humans. These translate into the normal stability of each society, health of each individual, their security and development of intelligence in order to solve the problems that will surely arise in the individual lives, communities, nations and regions around the world.

The United Nations has identified 8 development goals for the millennium. These are geared towards the improvement of human welfare. They include eradication of extreme poverty and hunger, access to primary education, gender equality and empowerment of women, reduction of mortality, improvement of maternal health, combating the proliferation of HIV/AIDS and other diseases, ensuring environmental sustainability and the partnership for development. This is in line with Jamaica's 2030 vision as a place of choice to live, work, raise families and to do business.

Statistical science serves the purpose both to guide the process to represent the information necessary for decision making on various vital issues as well as to process that information to provide the basis for drawing correct and appropriate conclusions.

The Jamaica Statistical Society has positioned itself to initiate discussions and to guide government agencies,

private institutions and individuals in general in the proper use of statistical methods. The vision and mission of

the JSS pinpoints the purpose and role of this institution in the development and well-being of persons. Therefore, as we serge into the future, The JSS seek to offer these services to Jamaica, the region and the world at large.

**David Finlay, President  
The Jamaica Statistical Society**



### Mission:

The Mission of The Jamaica Statistical Society is to:

- ◆ Foster and encourage the growth, development and application of statistics in all areas to make reliable informed decisions
- ◆ Facilitate the use of statistical applications to provide valid explanations of relationships between variables
- ◆ Serve the interest of all persons participating in data analysis by providing myriad of continuous education opportunities through workshops and seminars
- ◆ Promote the public understanding of the importance of safeguarding the reliability of data as well as support education and training in statistics at the undergraduate and postgraduate levels.

The Society's over-arching goal is to become a key player in upholding and advancing high standards of statistical competence by providing consultative and training services to statisticians and data analysts in the private and government

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# JSS MICROSOFT EXCEL TRAINING WORKSHOP REPORT

## *JSS Microsoft Excel Training Workshop ...*

The Microsoft Excel Training Workshop was held on the 17th and 18th of September 2018. The two day workshop consisted of participants from the Ministry of Health here in Jamaica. All participants that chose to give feedback on the training session indicated that their objectives for the workshop were met and most believed that the workshop's effort to meet their objectives were good. Most participants also thought the workshop's facilities and the food was good. Some 87.50% of the participants would recommend the workshop training session to a friend. Some of the things that the participants liked most about the workshop include the fact that important areas that needed to be addressed were introduced within the workshop, they liked that the stationaries, laptops/machines and the flash drives were readily available for use and that the presenters were clear with delivery and took the time out to ensure that all understood before moving to the next topic.

## *Topics Requested for Future Workshops ...*

The participants indicated that they would like to see topics such as calculations commonly used in research, Microsoft Access, Statistics in general and also in relation to biological sciences and last but not least, Microsoft Word Hacks being featured as topics for some of our future workshop training sessions.

## *Overall Rating of the Microsoft Excel Training Workshop ...*

The Workshop was an overall success, building knowledge on several on Microsoft Excel topics such as Conditional Formatting, Working with Advanced Functions, Manipulating data with Pivot Tables in Excel, Creating & Using Macros, Referencing Sheets, Conducting T-tests, Conducting a Z-Test for Proportions and Conducting a Chi-Squared test to name a few. Most participants found the topics presented useful, easy to understand and were satisfied/very satisfied with the delivery of the lecture for each topic.



# MEMBERS' CORNER

**What was liked least about the MS Excel workshop?** According to the feedback submitted by participants, when asked what was liked least about workshop the participants stated that there were errors in the workbook and that the workshop was structured primarily for persons with a background of statistical knowledge. Some also said they wanted to work through the practical aspect of the workshop and lastly the workshop was not relevant to the area of work.

**Topics for Future workshops:** Participants indicated that in upcoming workshops they would like to see the following topics covered: Advanced application of R for health statistics; Importing large amount of data and generating tables (crosstabs with P-value) application of the programme; Conducting test such as ANOVA or regression or any higher level of analysis; Cover more SPSS.

## FEATURE ARTICLE — *Statistics and the improvement of Human Welfare*

The welfare of human population continued to evolve as the world witness advancement in science and technology. Statistics is a science which involves data collection as well data analysis with emphasis on decision making. These decisions often impacted human activities and these activities seldom lead to the improvement in the living standard of human beings. The role played by statistical science on the welfare of human population is ubiquitous. On the global stage, the United Nations Development Programme (UNDP) regularly produce Human Development Index (HDI), a statistical index used to measure key development dimension of a country population. This index demonstrate one of the ways statistics can be used to understand the status of the wellbeing a country population.

Over the years, several fields of endeavor that directly and indirectly impacted on human development have all benefitted from the application of statistical science. These includes the field of

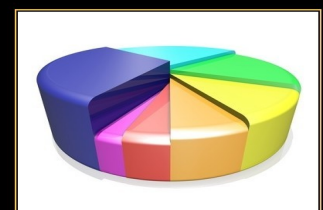
medicine especially drug development, diagnosis of disease, transportation, manufacturing, insurance, banking to mention a few. For example, the development of drugs for acute disease seldom involves some application of statistical analysis to ensure safety of the drugs before releasing for consumption by the human population. As a result of this quality control measures based sound statistical science, drugs have been developed for many medical conditions affecting human beings thereby improving the quality of life.

In concluding, human welfare continues to benefit from the advances made in statistical science as the world experience improvement in the available technology. This is the reason why the Jamaica Statistical Society continues to promote the use of statistics in Jamaica and the wider Caribbean.

*By Olusegun Afis Ismail*

### OF INTEREST TO YOU!

- ⇒ Watch Video on "**How to determine Sample Size**". ([http://info.statsols.com/sample-size/how-to-determine-sample-size?dm\\_i=1ALM,3MSY3,8B85H2,D28BR,1](http://info.statsols.com/sample-size/how-to-determine-sample-size?dm_i=1ALM,3MSY3,8B85H2,D28BR,1))
- ⇒ World of Statistics Activities: <http://www.worldofstatistics.org/>



**DATA**

PEOPLE CAN MAKE UP STATISTICS TO PROVE ANYTHING!  
...14% OF ALL PEOPLE KNOW THAT

motifake.com



# HIGHLIGHTS OF THE MINI-SYMPOSIUM—NOVEMBER 1, 2018

## SHAPING JAMAICA'S ROAD SAFETY POLICY USING STATISTICS

The Mini-Symposium titled “*Shaping Jamaica's Road Safety Policy Using Statistics*” was held at the UWI Mona Main Library Multi-functional Room on Nov 1, 2018. The event featured a variety of guest speakers from various organizations such as the Ministry of Health, Ministry of Transport, Works and Housing, Mona Geo-informatics Institute, The Jamaica Constabulary Force (JCF) and the University of the West Indies (UWI) Department of Health and Psychiatry. Presentations included:

**Dr Lucien Jones** who presented on “*Statistics Aiding to Form Improved and Effective Road Safety Policies*” - “Road traffic fatalities were the 9<sup>th</sup> leading cause of death in 1990 and are expected to be the 3<sup>rd</sup> leading cause of deaths by 2020”. Jamaica to date has not achieved effective and efficient allocation of financial and human resources to address its road safety issues. A 50% reduction in road fatalities will result from 5% reduction in vehicular speed. Electronic surveillance will be introduced to reduce the braches of road safety.

**Mrs Lisa-Gaye Greene**, Senior Projects Manager at the Mona Geo-informatics Institute (MGI) spoke about “*Shaping Jamaica's Road Safety Policy Using Statistics*” - The MGI's first interest in road safety was initiated when a client approached them for road traffic data for their insurance components. Roads with different features had the same speed limits and a review needs to be conducted to categorise roads and assign speed limits based on the similarities of features along the roads. If the MGI's data is currently not being used to inform the government's decisions or policies because the MGI is not a government entity and is funded by private sector companies.

Presenter **Mr. Kenute Hare** addressed “*Understanding the “Black Box”*” - Vehicular data is collected through various media such as airbag systems and Event Data recorders (EDR/Black Boxes). The Black Box is the “informer” in one's car and is used to assist Crash scene investigators to determine who was right vs. who was wrong based on the various data it collects, such as: the wearing of seatbelts; speed of vehicle; position of steering wheel; front, back, side, and roll-over crashes; among others. Since September 2012 manufacturers had to ensure that an EDR is placed in all vehicles manufactured. The Black box is being integrated into crash reports done by the JCF.

**Nurse Menzie** presented on “*Injury Surveillance Data & Road Safety*” - The injuries are categorised by six (6) categories; which are severity, setting, activity, mechanism, intent and the nature. Road traffic injuries are monitored using data from the Hospital Clinical Summary Report, Hospital System' Jamaica Injury Surveillance System, Mortality Data, among other data sources.

**Prof. W. Abel's** presented on “*Substance Use & Road Safety*” - The decriminalization of cannabis could pose potential harm to public health. Cannabis can be designated into three (3) categories: High THC, High CBD and a mixture of THC & CBD. Edible cannabis has a 0.5 to 1 hour window after ingestion before it takes effect.

**SSPC. Allen** presented on “*Traffic Management & Road Safety*” - 80% of things that happen on the road is caused by the 20% of the drivers. He went further to say that if we correct that 20% then we will reduce the 80%. For the period 2001-2014 the higher prevalence estimate was that of pedestrians' fatalities. Four categories of road consistency of carnage were discussed (pedestrian, motorcyclists, private motor car passengers, and private motor car drivers).



JSS Mini-Symposium, November 1, 2018

St. Catherine North is the #1 hot area for fatal collisions and death, followed by Westmoreland, St. Catherine South, St. Ann and Hanover.

## What you've missed

### JSS Members' Meetings:

**February 26, 2017** – The feature presentation was given by **Mrs. Rose Marie Edwards**, Manager, Scotiabank Jamaica Limited, University of the West Indies (UWI), Mona Branch. Her presentation was entitled "Advancing and Enhancing Productivity using Statistics".

**September 26, 2017** – The feature presentation was done by **Mrs. Uki Atkinson**, a research analyst at the National Council of Drug Abuse (NCDA) in Jamaica. Her presentation was entitled "The National Drug Situation – Studies, Methods & Findings".

**January 11, 2018** – The feature presentation was given by **Mrs. Lisa-Gaye Greene**, Senior Projects Manager, Mona Geoinformatics Institute (MGI), UWI, Mona Campus. Her presentation was entitled "Deadly designs: the impact of road design on road crash patterns along Jamaica's North Coast Highway".

**May 1, 2018** – the feature presentation was given by **Dr. Christine Walters**, Lecturer and Health Research Scientist, UWI, Mona. Her presentation was entitled "Conveying the Weight of Evidence: The Role of Statistics in Forensic Evidence".

**July 26, 2018** – the feature presentation was given by **Dr. Joanne Smith**, Lecturer, Epidemiology Research Unit, Caribbean Institute for Health Research (CAIHR), UWI. Her presentation was entitled "Macronutrient Intake Influences Change in Body Composition and Metabolic Characteristics in Jamaican Adults".

**JSS General Members' Meeting held on Tuesday, October 18, 2018.** The Feature Presentation, '*The Evolution: From Spreadsheet to Analytical and Statistical Powerhouse*' was done by **Mr. Andrew Diedrick**,

November 1, 2018 JSS 5th Anniversary Celebrations



JSS at the Math Expo 2018

## Upcoming Events ....

- \* **JSS General Meeting:** The next Members' Meeting will be held on **Thursday, February 21, 2018 at 5:30 pm** at Faculty of Science and Sports Seminar Room, University of Technology, Jamaica. **Our guest presenter will be Miss. Dian Beecher**, PhD Candidate
- \* **Math Expo 2019: March 29, 2019, University of the West Indies**
- \* **Save the Date! International Jamaica Statistics Symposium and Pre-conference Workshops (JASSYM) 2019** will be held **October 29 — November 1, 2019** in Kingston, Jamaica.

## Contact Us

THE JAMAICA STATISTICAL SOCIETY

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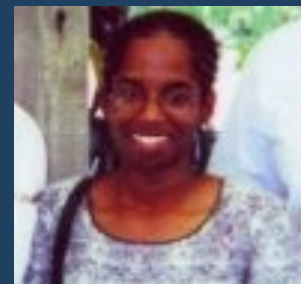
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## JSS Officers: 2018—2020



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David Finlay



Immediate Past President  
Novie Younger-Coleman, PhD



1st Vice-President  
Olusegun Afis Ismail, MSc.



Treasurer  
Shelly McFarlane, PhD



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