



THE UNIVERSITY
OF THE
WEST INDIES



21st Annual
Faculty Student Research Day

FACULTY OF MEDICAL SCIENCES

THURSDAY 27 SEPTEMBER 2018
ERIC WILLIAMS MEDICAL SCIENCES COMPLEX
CHAMPS FLEURS



21st Annual Faculty Student Research Day

FACULTY OF MEDICAL SCIENCES

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FOREWORD

The Annual Medical Students' Research Day presents an opportunity to the University community and stakeholders to appreciate the work medical and dental students have undertaken as part of the Public Health curriculum during the second year of their medical and dental programmes.

This 21st Annual Faculty Student Research program under the Faculty of Medical Sciences (FMS) is special as it uniquely coincides with the 70th anniversary of the University of the West Indies.

This abstract book includes the summary of the research projects undertaken by 31 groups of students from School of Medicine, School of Dentistry and School of Veterinary Medicine. These projects undertaken have relevance to Public Health Medicine and current emerging infectious diseases. The students are advised to share their findings with relevant stakeholders (Ministry of Health, Regional Health Authorities, CARPHA etc.) to inform and improve health policy and practice where applicable.

The Unit of Public Health and Primary Care would like to acknowledge the Head of Department, Dr Gershwin Davis, supervisors of the projects, the Medical Sciences Library, the Campus Ethics Committee, the Centre for Medical Sciences Education, the Directors of various schools under FMS, the judges/chairpersons and the Dean of the Faculty- Professor Terence Seemungal for their commitment to the students and the programme.

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ABSTRACTS

Public Awareness of Antibiotic Resistance in Trinidad: a population-based survey of adults

O1 - THE RESISTANCE

Imtiaz Abdool, Jada Abraham, Aleema Ali, Ashley Ali, Chelsi Ali, Nyeil Ali, Subrina Alli, Azalia Antoine, Dr. Shalini Pooransingh

Background

Antibiotic resistance is a significant threat to global public health. It impacts society by increasing morbidity and mortality rates, lengthening hospital stays thus increasing healthcare costs and decreasing productivity, thereby impacting the economy. While antibiotic resistance takes place naturally, the human influence is a major contributor accelerating the crisis via misuse of antibiotics.

Objectives

(i) To determine the public's awareness of antibiotic resistance and (ii) to ascertain if demographic factors are associated with awareness of antibiotic resistance.

Method

A cross-sectional survey was undertaken in Trinidad using a modified WHO questionnaire. Fieldwork was executed in January 2018 via convenience sampling. The study sample of 550 participants included persons aged 16 years and older. Medical students conducted face to face interviews in public places. Data were analysed using SPSS Version-22.

Results

The response rate was 91% (502/550). The majority of respondents (53%) reported having taken antibiotics within the six months prior to the survey. More than 59% of respondents believed that sore throat and colds/flu can be treated with antibiotics. Sixty-seven percent of respondents believed that there was nothing they could do as individuals to combat the issue. Education level appeared to be associated with knowledge of antibiotic resistance. Respondents with a primary level education were significantly more likely than respondents with a higher level of education to agree that antibiotic resistance only affects those who use antibiotics frequently ($p = 0.002$).

Conclusion

It appears there is limited knowledge of antibiotic use and antibiotic resistance in the study population. There is therefore an urgent need for health education interventions in the general population.

Medical Students' Knowledge and Attitudes regarding the potential impacts of Climate Change on Public Health in a Small Island Developing State

02 - PLANETARY HEALTH PROTECTION COUNCIL (PHPC)

J Bellamy, A Dass, S Khan, A Ramsewak, V Samaroo, S Sieunarine, D Singh, A Wildman, Dr S Maharaj

Background

Climate change has become one of the most significant environmental health hazards faced by the world today. (Michael, 2001) Linkages have not only been made to many environmental disasters but research on its impact on mental and physical health are now coming to the fore. (Berry, 2009) The Caribbean region, although not a significant contributor to factors creating global warming and climate change, is a major recipient of the adverse outcomes (ACS, 2013).

Objectives

This project aimed to test: (i) the extent of knowledge, attitudes and perceptions possessed by medical students on the topic of climate change and its impacts on health, as well as, (ii) to collect relevant data on the impacts of climate change on public health, and to determine what recommendations can be made for its inclusion in the MBBS curriculum.

Method

Students in the Faculty of Medical Sciences, reading for the Bachelor of Medicine; Bachelor of Surgery (MBBS) at the St. Augustine campus of the University of the West Indies, were identified as the population to be surveyed. To gain insight into the concept, a validated survey instrument was distributed among the sample population, utilizing a stratified random sampling methodology, where each strata was defined as the student year of study. The instrument sought to elucidate from the students their understanding of the topics and to assess the extent of their learning through the medical curriculum.

Results

There was found to be an increase in student knowledge as they progressed through the programme, however, there was no significant increase noticed in the first to fourth year groups. It was also noted that 90% of recipients did not agree that enough was being taught in the curriculum to include climate change and its effects.

Conclusion

A majority was present in all student year groups which expressed a desire to learn more about the health implications regarding climate change, and also voiced their dissatisfaction with the emphasis placed on the subject by their academic curricula. It is therefore suggested that the academic curricula for the MBBS degree be updated to impart such information in greater detail and/or with much more emphasis being placed on the importance of these health-related implications.

Assessing the Effect Diabetes (Type II) has on Impulsivity Using Surveys and Behavioral Measures

03 - THE DIA-MELLITIA

Mohammed, S., Rolle, A., Sammy, N., Smith, D., Stubbs, L., Too-A-Foo, A., Toote, B., Watson, P., & Youssef, F.

Background

In 2010, diabetes mellitus accounted for 6.8% of the world mortality, and in 2012, diabetes was ranked as the number two cause of death in Trinidad and Tobago. Impulsivity has been known to be associated with unhealthy lifestyle factors such as obesity, unhealthy eating, and reduced physical activity, which are correlated with having diabetes.

Objectives

(i) to conduct questionnaire and behavioural tests on non-diabetic and type II diabetes subjects; (ii) evaluate the level of impulsivity in the sample size; (iii) analyze the data and estimate the correlation between the subject's diabetes status and level of impulsivity and (iv) either accept or reject the null hypothesis that type II diabetic patients are more impulsive.

Method

The analytical epidemiology study undertaken is a cross-sectional study which contrasts the mean differences between the Barratt Impulsiveness Scale questionnaire and the Balloon Analogue Risk Task computer-based game for 80 participants (diabetic and non-diabetic) who visited the Eric Williams Medical Sciences Complex. Data from the 30-item questionnaire and the computer-based game were analyzed using descriptive analysis, and ANOVA were used to analyze the data via SPSS (v19.0).

Results

In the data collected, patients who were diagnosed as type II diabetic showed a higher BIS total score when compared to non-diabetic subjects. The BART revealed adjusted number of pumps was greater for type II diabetics. Furthermore, type II diabetic subjects had a lower mean earning compared to the non-diabetic subjects. Finally, the number of explosions was greater for type II diabetic than the non-diabetic subjects.

Conclusion

It was concluded that there is a correlation between type II diabetes and impulsivity. However, the findings from this study suggest that an expanded study which encompasses a wider age range and the role diabetes-specific self-efficacy plays in the management diabetes must be ventured.

The prevalence of eyesight deterioration in persons over 50 years and its correlation with type II diabetes in Trinidad

04 - RESEARCH RS

Satesh Ramkesson, Varisa Ramkissoon, Tarun Ramlogan, Johann Ramnarine, Shania Ramnarine, Sharvana Ramoutar, Kesley Rampersad, Joshua Ramoutar, Prof. Shivananda Nayak

Background

Eyesight deterioration is prevalent in Trinidad in patients over 50 years with type II diabetes. Eyesight deterioration is prevalent in Trinidad in type II diabetic patients over 50 years.

Objectives

To determine the prevalence of eyesight deterioration and its correlation with type II diabetes in persons aged 50 and above. To determine the prevalence of eyesight deterioration and its relationship with and without type II diabetes in persons of Trinidad aged 50 and above. In addition, this study specifically focuses on assessing the relationships between demographics, various eye conditions and regression with respect to type II diabetes.

Method

This was a retrospective study which comprised of a sample population of 268 patients with eyesight problems. These participants were selected from the ophthalmology and diabetic eye clinics of San Fernando General Hospital and Eric Williams Medical Sciences Complex. Both males and females over the age of fifty (50) of different racial and ethnic groups with a history of eyesight problems or form of eyesight deterioration and/or type II diabetes were included in this study. Random stratified sampling was utilised to obtain samples from both hospitals. Data collection was done via questionnaires.

Results

Out of all the eye diseases, the most prevalent disease was Cataracts with 59.3% (159) of participants affected by it. The second most common disease was Glaucoma with 19.4% (52) of respondents and the least common disease was diabetic retinopathy with 3.0% of people affected by it. In addition, 2.2% (8) of participants had no eye conditions.

With participants with the eyesight conditions, 181 people had type diabetes while 87 did not, indicating a correlation between diabetes and eyesight deterioration. The most common diabetic eyesight condition being cataracts with 110 while 49 had cataracts without having diabetes. The least common eyesight condition was diabetic retinopathy with 8 participants. Only 5 participants had diabetes with no eyesight conditions.

Conclusion

This study determined that there is to an extent, a correlation between the incidence of eyesight deterioration and type II diabetes in persons over 50.

Analysis of patients admitted to two major hospitals in Trinidad for attempted suicide to determine associated factors and methods utilized in their attempts

05 - SUICIDE SQUAD

K. Archibald, B. Arjoon, K. Austin, A. Bachan, S. Bail, Y. Baksh, E. Balkaran, P. Balkaran, Dr. V Chattu, Dr. N Baboolal

Background

Suicidal behaviour is identified as one of Trinidad's major public health problems as per the available information. The country has the second highest suicide rate in the English speaking Caribbean. Due to Trinidad and Tobago's high suicide rate, this topic was chosen.

Objectives

(i) To assess reasons for suicide attempts and establish sex-related trends (ii) To explore different methods being used in planned and impulsive suicide attempts (iii) To assess correlations between method, lethality and sex of planned and impulsive attempts (iv) To determine the impact of family history of mental illness and/or previous exposure to suicide attempts by a close relation on current suicide attempts (v) To investigate alcohol consumption and comorbidities amongst attempters.

Method

A retrospective cohort study using purposive sampling was conducted to obtain information from patients who attempted suicide from June-August 2018. Patients were interviewed via questionnaires at two major hospitals across Trinidad: San Fernando General Hospital and Eric Williams Medical Sciences Complex.

Results

41 patients were obtained. Of this, females constituted 58.5% whereas males constituted 41.5%. 64.7% of males consumed alcohol prior to suicide attempts as compared to 35.3% of females. 75% of female attempters were unemployed whereas 35.3% of male attempters were unemployed. Pesticide ingestion was the males' preferred method whereas females opted for pill ingestion. Patients with family histories of mental illness were more likely to have multiple suicide attempts

Conclusion

Alcohol consumption, gender and method used, reason for attempt and lethality, family history of mental illness and employment status were found to be significant factors associated with suicide attempts in Trinidad.

Effects of a Health Education Intervention Program on the Risk Factors for Childhood Obesity

06 - THE ROLLERS

S Maharajh, A Mano, V Mathura, A McCarthy, G McKellar, D Miller, A Mohamed, A Mohammed, Professor S Teelucksingh

Background

Childhood obesity is becoming more prevalent and can prove detrimental to the public as obesity increases the risk of diseases like diabetes and hypertension. This study provides evidence on the knowledge and lifestyle practices, attitude of children towards changing to healthier practices once education is provided

Objectives

To investigate the effectiveness of a health education intervention targeted towards increasing knowledge of risk factors and reducing unhealthy behaviors among children as measured by pre- and post-intervention questionnaires.

Method

Pre-interventional questionnaires were administered to Form One students of a local secondary school to assess baseline knowledge, behaviours and attitudes. A week later, the educational seminar was conducted to educate students on the topic. A week later, the same questionnaires were re-administered. The results were compiled and analysed.

Results

Overall, participants scored higher post-intervention than pre-intervention by 9.2%. The greatest improvement was seen in the knowledge questions, where one score increased by 48.5% from a mean pre-test of 3.03 to a mean post-test of 4.5 with a statistical significance of $p < 0.05$ and another score increased by 66.9% from 18.5% to 85.4%. In contrast, the effect on consumption of salty snacks showed very little impact from 20% pre-test to 15.4% post-test, a decrease of 4.6%.

Conclusion

The study proved that educational intervention is effective in increasing knowledge and practice of healthy lifestyle habits. However, the improvement of knowledge was greater than that of practicing healthy behaviours, indicating that further efforts must be made to change behaviour and reduce childhood obesity as a result.

The psychosocial effects of the demands of medical school on medical students as compared to students of other faculties

07 - THE MENTALISTS

John Mohammed, Narissa Mohammed, Samiyah Mohammed, Shamir Mohammed, Stefanie Mohammed, Chelsea Mohan, Meenakshi Mohan, Sameeka Mohan, Dr Nayak

Background

A student makes social compromises, time management, embraces a substantial curriculum and commits to strenuous working hours. We have designed this study in order to further encourage the understanding of what both medical and non-medical students face at university life.

Objectives

- To investigate the signs/symptoms of clinical depression among medical students.
- To compare the signs/symptoms of clinical depression of pre,para and clinical students.
- To see the signs/symptoms of clinical depression between medical and other students of the faculty of medical sciences.
- To compare the signs/symptoms of clinical depression of students of the faculty of medical sciences to different faculties in U.W.I.

Method

A questionnaire containing both open-ended and closed-ended questions was shared amongst students in 4 faculties of the University of the West Indies in the academic year 2017/2018. The faculties included were MBBS, Social Sciences, Pharmacy and Engineering. 100 questionnaires were distributed to each faculty.

Results

Medical students have a higher incidence of depression. Medical students tend to abuse much "harder" or even illegal drugs more than three times as much as students of other faculties. One in every four medical student is suffering from suicidal thoughts. Medical students (100%) admitted to knowing someone that has considered suicide, whilst lower values were found in all other faculties, yet a lower percentage of medical students seem to seek advice or professional help as compared to students of other faculties.

Conclusion

Drastic measures have to be taken to diminish the high levels of depression and suicidal thoughts among medical students.

Various Social Media Platforms and how they relate to Depression amongst university students in Trinidad and Tobago

08 - DOPA GANG

Jeremy Edwards, Mikail Beatty, Rayhanna Boland, Mark Hall, Diann Harrichan, Chyian Huggins, Anriana Jalsa, Damali Jules, Dr. EM Davis

Background

There has been an increasing set of unfortunate events recently involving university students in Trinidad and Tobago that may be attributable to depression. Previous studies have found interesting associations on the frequency of social media use, purpose of use and how the use of different sites affect depression. Our study plans to investigate these associations by quantifying and analysing the usage of various social media and relating this to depression amongst university students in Trinidad and Tobago.

Objectives

To quantify and analyse the usage of various social media platforms amongst university students in Trinidad and Tobago and determine whether there is a relationship between use of social media and depression.

Method

A cross-sectional study was consisting of 393 participants (students) from The University of the West Indies (UWI), University of the Southern Caribbean (USC) and University of Trinidad and Tobago (UTT) who met our inclusion criteria of being full time students with no prior history of known mental disorder. Potential subjects were recruited through means of convenience sampling allowing any consenting student who met the inclusion criteria to participate without restriction. Social media use was assessed by self-reported survey assessing frequency of use, purpose of use, sites used. Depression was assessed using the well-established Patient Health Questionnaire-9 (PHQ-9)

Results

There was found to be a significant association with social media usage and depression amongst University Students of Trinidad and Tobago

Conclusion

This study found a strong association between social media use and depression. Given the massive prevalence of social media and the recent set of unfortunate incidents involving university students that can be associated with depression that inspired us to choose this topic in the first place, the strong association we found between social media use and depression has important ramifications for public health both nationally and globally.

Is there justification for refusal to vaccinate in Trinidad and Tobago?

09 - THE RISK TAKERS

J. Sinanan, S. Sinanan, C. Singh, D. Singh, S. Singh, R. Singh
Supervisor: Dr. W. Labastide

Background

Autism Spectrum Disorder (ASD) is a neurobehavioral disorder that impairs communication and behavior. Certain adjuvants used in vaccines, primarily thimerosal, have come under scrutiny for their possible link to ASD. There have been several studies presenting arguments for and against this hypothesis. Thus this matter remains unresolved and due to the widespread usage of vaccines, needs further investigation.

Objectives

To identify/determine- 1. Numbers of individuals in Trinidad and Tobago(T&T) that are suffering from autism spectrum disorder(ASD); 2. Presence and amounts of adjuvants in vaccines used in T&T; 3. Changes that took place in the diagnostic procedure for ASD; 4. The changes in vaccination protocol over last 20 years and 5. any association between vaccination and ASD.

Method

This study was retrospective and used a census of of the number of families registered with the autistic society from 1999 – 2017. Statistical data concerning vaccine coverage, policies and purchasing history were obtained from the Expanded Program on Immunization (EPI). T&T population census data were obtained and analyzed to determine whether changes in vaccine protocols affected autism statistics.

Results

29% of the patients with mammography BIRADS 0-3 were ultimately confirmed to have breast malignancies. A discordance between mammogram (MMG) and the work-up breast ultrasound (BUS) BI-RADS classifications was experienced by 26 patients, suggesting that the significant BI-RADS change was 16%. There was 100% use of core needle biopsy in the diagnosis of breast cancer in confirmed patients. 97.91% of the confirmed breast cancer patients were diagnosed with ductal carcinoma in situ. 68.75% of the 48 women diagnosed with malignancies presented with breast lumps. A family history of cancer was observed in 29% of those diagnosed with breast cancer.

Conclusion

Mammography as a standalone diagnostic tool is not adequate and requires further evaluation through correlation with breast ultrasonography, and biopsy for accurate diagnosis. Core needle (tru-cut) biopsy is the preferred choice by local cytologists as a diagnostic tool for breast malignancy when compared to FNAC or stereotactic biopsies.

Adherence with anti-hypertensives and related factors among Trinidadian primary care centre attendees

010

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Background

According to the Chronic Risk Factor Survey conducted by the Ministry of Health in 2011, the prevalence of high blood pressure in Trinidad and Tobago is approximately twenty six percent of the nation's population. With Heart Disease as the greatest contributor to annual mortality figures in Trinidad and Tobago the question then arises "Why are so many still succumbing to their hypertension?" International studies have identified non-compliance with antihypertensive medications as a leading causes of failed treatment.

Objectives

To determine the antihypertensive adherence of Trinidadian primary health care attendees using the Morisky Medical Adherence Scale (MMAS-8) and associated factors.

Method

This was a cross sectional study where an interviewer administered questionnaire was given to 225 primary care patients who attended Chronic Disease Clinics at Health Centres throughout Trinidad. The selection criteria of persons above the age of 18 years and non-pregnant females was applied.

Results

It was found that 62% of the entire sample population displayed low adherence, 36% medium adherence and 1.8% high compliance. Younger patients, being employed, a higher average diastolic blood pressure, clinic attendance outside appointment times, a history of side effects of medication and self-reported use of herbal/alternative medicines for high BP were all significantly associated with low adherence. Obtaining BP medicines from the CDAP (chronic disease assistance program) was protective against low adherence.

Conclusion

In a Trinidadian primary care population high adherence with anti-hypertensive medications was extremely poor. Initiatives such as blood pressure monitoring in combination with patient education programmes, involvement of family members, and discussions of herbal use, are proposed as effective means of improving patient compliance.

Factors Determining Uptake For Cervical Cancer Screening Versus Non-Screening Amongst Women Seeking Healthcare In Select Primary Healthcare Facilities in North/Central Trinidad – A Cross Sectional Study

011 - CERVICAL CANCER CRUSADERS

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Background

Cervical cancer, the second leading cause of death by cancer in women worldwide, is an abnormality in the growth of cells of the cervix. In Trinidad and Tobago between 1976 – 2006, 678 deaths were attributed to cervical cancer. Previous research done in 2012 found that the incidence and mortality rates of cervical cancer in Trinidad stood at 13.5% and 12.9%, respectively. The World Health Organization stated that cervical cancer screening can reduce the incidence of cervical cancer in women by as much as 64%.

Objectives

(i) Describe the barriers to cervical cancer screening (ii) Determine factors that positively influence the uptake of cervical cancer screening (iii) Assess the compliance with best practice standards for cervical cancer screening (iv) Describe the demographics of women going for cervical cancer screening in select primary health care facilities.

Method

This was a descriptive study utilizing a cross sectional design where 663 respondents were obtained through convenience sampling. Information on the prevalence of and the factors influencing cervical cancer screening was collected via a questionnaire based on the Health Belief Model. The study was conducted at the St. Joseph, Arouca and Tacarigua Health Centres, over a period of six months from February to July 2018.

Results

Overall, the results of this study showed that only 65.6% of all participants had a Pap smear test. Women who had a Pap test was significantly higher: in older females; those in a relationship; those of African ethnicity; heterosexuals and those not diagnosed with a STD.

Conclusion

This study revealed a prevalence of 65.6% for cervical cancer screening at select Health Centres in North/Central Trinidad. As such further work is required in order to improve policy, change perception and improve knowledge of cervical cancer and cervical cancer screening.

The common risk factors, histopathological features and epidemiological characteristics of Breast Carcinoma in Trinidad

012 - TEAM RANKS

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Background

Breast cancer (BC) is the leading cause of female cancer death globally (estimated 500,000 deaths/year). Moreover, Trinidad and Tobago have the highest BC mortality rate in the Americas. However, a paucity of local research into the risk factors and characteristics of breast tumours exist; which influence prevention and management strategies.

Objectives

(i) Determine common risk factors present in BC population in Trinidad; (ii) Identify features in the histopathological presentation of local cases of BC through analysis of breast specimen reports; (iii) Determine current local trends in age, ethnicity and geographical location of BC incidence.

Method

A retrospective study of 52 Adult female BC patients at the EWMSC in Trinidad, was undertaken. The cases were investigated for risk factors associated with BC which included menstrual status, ethnicity and lifestyle habits. Additionally, breast tumour characteristics were evaluated through assessment of histopathological reports. Data collection sheets were adapted from CAP Breast Cancer Protocol and US PHS Women's Health Study.

Results

Women were mainly Indo-Trinidadian with mean age of 58.69 years from East Trinidad (58.8%). The most significant risk factors were elevated BMI (61.5% had a BMI ≥ 25) and the presence of co-morbidities (diabetes). 92% exhibited IDC; 62% Grade 2. DCIS (46.2%) observed with mainly comedo type (62%), usually high grade (52%). Lymph node metastasis (51.9%) and angio-lymphatic infiltrates (53.8%) were prominent. Immunohistochemistry (IHC) was performed on 36.5% of subjects with 42.1% having ER+, PR+, HER-2- profile.

Conclusion

Age at diagnosis was older than expected with Indo-Trinidadians having a slightly higher incidence. Elevated BMI and prevalence of diabetes may influence BC incidence. Histopathological features follow global trends, however, IHC testing is not common practice which limits efficacy of treatment and diagnosis. Thus, BC protocols focussed on more effective detection and therapeutic standards are integral to diminishing BC mortality.

The prevalence of diarrhea experienced with Kayexalate use in adult renal patients at the North Central Regional Health Authority

013

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Background

Sodium Polystyrene Sulfonate (SPS) is a cation exchange resin used to treat Hyperkalemia. It was introduced as the drug Kayexalate and approved by the FDA in 1958 before the requirement for manufacturers to prove safety and efficacy of drugs. In Trinidad and Tobago, the treatment regime for hyperkalemia has remained without major advances and there is no recent data to report the gastrointestinal side effects of Kayexalate on the local population.

Objectives

The research aimed to retrospectively study the frequency of diarrhea experienced by patients prescribed Kayexalate, who attend the nephrology and pre-dialysis outpatient clinics within the North Central Regional Health Authority (NCRHA) at the Eric Williams Medical Sciences Complex (EWMSC) in Trinidad and Tobago.

Method

A retrospective census was carried out on adult patients who attended nephrology and pre-dialysis outpatient clinics at EWMSC for the period May 15th 2018 to June 30th 2018. In total 20 patients on Kayexalate treatment were included for this study. The primary outcome was to determine the prevalence of diarrhea with Kayexalate use. Secondary outcomes were prevalence of the use of Kayexalate, frequency of other side effects and efficacy of Kayexalate in reducing serum potassium levels.

Results

The prevalence of diarrhea was 5% (n=1, p=0.395). Other side effects reported were abdominal pain and vomiting (n=1, p=0.395). Variation of serum potassium before and after Kayexalate use was 1.16 ± 0.588 mmol/L (p<0.001, 95% CI [0.855, 1.435]). The frequency of Kayexalate use in the clinic was 5%.

Conclusion

Diarrhea and other side effects were not prevalent with the use of Kayexalate. The drug proved effective in reducing potassium levels for our patient population. However, the small sample size provided limited evidence to further conclusions. A prospective study of this kind is warranted in a larger population to be more conclusive.

Quality of sleep in Trinidad among the Adult population

014 - INSOMNIACS

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Background

Sleep is a determinant of a positive life which is heavily influenced by the individual's lifestyle. Findings of this study may provide vital information in understanding sleep quality and its relationship with health status.

Objectives

(i) To assess the quality of sleep among the Trinidad population and effects of associated demographics. (ii) To assess the determinants of poor sleep quantity and quality in this population (iii) To evaluate Participant's knowledge about sleep and importance of sleep.

Method

A cross-sectional study among the residents of Trinidad aged 18 and above was conducted from 18th May 2018 to 31st June 2018. Non-probability convenience sampling was utilized to obtain information at public malls including: Trincity Mall, Gulf City Mall, Long Circular Mall, West mall and Valpark Mall.

Results

1505 participants were interviewed where 56.1% were poor sleepers while 43.9% were good sleepers. Participants over 40 years were found to have the lowest number of good sleepers. Diabetes Mellitus and Gender status was not found to be a significant determinant of sleep quality ($p=0.865$; $p=0.351$ respectively). Employment status was found to affect sleep quality ($p < 0.001$) where 66.3% of this population were found to be poor sleepers. Their subjective sleep quality ($p < 0.001$) was found to vary as being a night shift worker as 24.0% indicated that their sleep quality was 'Fairly bad'. 217 of 321 persons lived in noisy areas and were poor sleepers.

Conclusion

The determinants of sleep quality in the adult Trinidad population were found to be age, night shift workers and participants who lived in noisy areas or streets.

Herbal Medicine used among pregnant and postnatal women attending a tertiary health institution in Trinidad

015 - HERBAL MEDICS

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Background

Herbal medicine use is quite prevalent in pregnancy in Trinidad due to perceived safety and effectiveness. There is high incidence of pregnancy- and postnatal-associated symptoms and this study was conducted to determine the use and perceived effectiveness of herbal medicines amongst these women.

Objectives

This study sought primarily to determine the most common symptoms for use, the most common herbal medicines used and their perceived effectiveness.

Method

This study was cross-sectional in design and women were recruited by convenient sampling from the antenatal and postnatal clinics at the Mt. Hope Women's Hospital in Trinidad. 220 women were interviewed with a de novo pilot-tested questionnaire to collect demographic and herbal medicine use data. SPSS (Version 22) was used for data input and analysis.

Results

From the 220 women interviewed; 220 answered for antenatal and 110 for postnatal. Eight-two of 220 antenatal women (37.3%) used ginger, garlic, spices and orange peel being the most commonly used. Ginger was used for nausea and 'gas', garlic for 'gas' and high blood pressure, orange peel for 'gas' and nausea, while spices were used to induce labour. Sixty-six of 110 postnatal women (60%) used turmeric, vervain, castor oil, and ginger being the most commonly used. Turmeric was used to remove 'blood clots', vervain to induce lactation, castor oil was to remove blood clots/detox and ginger for 'gas' and nausea.

Conclusion

There is a high prevalence of herbal medicine use amongst women attending the antenatal and postnatal clinics at Mt. Hope Women's Hospital in Trinidad. Generally, most women using herbs perceived them to be at least fairly effective.

The pH of Commonly Used Toothpastes and Mouthwashes In Trinidad and Tobago and in The CARICOM Countries

016 - THE ROLLERS

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Background

Prior research suggests that low pH in oral hygiene products such as mouthwash and toothpaste have had undesirable effects on patients, such as xerostomia and enamel erosion.

Objectives

1. To determine the pH content of the various brands of mouthwashes and toothpastes used in Trinidad and Tobago and CARICOM countries in comparison with previously tested dental products. 2. To evaluate the titratable acidity of the various mouthwashes and toothpastes. 3. To evaluate the suitability of the products tested for use by patients.

Method

An open ended, semi-quantitative comparative study was conducted on a sample size of 10 (4 mouthwashes and 6 toothpastes) in order to determine the pH and titratable acidity of various dental materials.

Results

The results of the questionnaire have shown that the Listerine mouthwash is purchased most frequently in all responding pharmacies of this study and it also is the least expensive in most pharmacies. According to the survey results, Colgate was the least expensive and thus, most frequently purchased toothpaste sold by the pharmacies, despite Sensodyne being the most commonly recommended toothpaste for adults. Also, despite Crest and Aquafresh being the most recommended for children, Crest was purchased only half as frequently as Sensodyne, according to the respondent data, whereas Aquafresh was purchased even more seldomly. From the experiments done in the laboratory, Topcare mouthwash had the greatest mean pH of 5.21 while Listerine mouthwash had a low mean pH of 3.48, which is less than the critical pH (5.5).

Conclusions

The results obtained along with literature review have revealed that mouthwashes are quite acidic and pH values are often below critical pH of 5.5. This may lead to dry mouth and associated issues. However, their titratable acidities suggest that some of the products possess buffering capacities that, despite their endogenous pH being close to the critical value for caries, they will not alter the salivary pH to produce these adverse effects.

Medication Adherence in patients with Type II Diabetes Mellitus treated at the Eric Williams Medical Sciences Complex & San Fernando General Hospital in Trinidad

017 - THE SUGAR PILLS

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Background

Diabetes mellitus is listed as the second leading cause of death in Trinidad and Tobago. Therefore, it is of utmost importance that diabetic patients adhere to their medication regimen, since non-compliance can pose a great obstacle to diabetes management. Without proper adherence, the optimal benefits of prescribed drugs are not received, which results in deterioration of patients' health.

Objectives

1 To assess medication adherence and to determine factors that are associated with non-adherence in Type 2 Diabetes Mellitus patients at the Eric Williams Medical Sciences Complex and the San Fernando General Hospital in Trinidad.

Method

Data was collected from Type 2 Diabetes Mellitus patients at the EWMSC and SFGH in Trinidad. Patients were selected via random sampling and were asked to complete the presented standardized questionnaire. The sample size consisted of 600 patients, that is, 300 from the EWMSC and 300 from the SFGH. The inclusion criterion consisted of male and female patients of all ethnicities over the age of 18 years with Type 2 Diabetes Mellitus.

Results

A majority (64.5%) of the target population displayed Low Adherence when it came to following their treatment plans. The major factors, which contributed to this overall non-adherence included patients forgetting to take their medication (46.9%) and not wanting to take the medication due to associated side effects (44.8%). Additionally, many patients fail to measure their blood glucose levels and felt that their attending physicians failed to provide proper information about the anti-diabetic drugs they were prescribing (73.8%).

Conclusion

Patients' adherence to taking their medication at the Eric Williams Medical Sciences Complex and San Fernando General Hospital, in Trinidad, is greatly impacted by patients forgetting to take their medication and measure their blood glucose levels and not being provided with proper information by their doctors.