Texila International Conference for Medical Students

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Enriching the Caribbean Medical Education through Research

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The Prevalence of Chronic Musculoskeletal Pain and Associated Occupational Risk Factors at uMhlathuze Local Municipality Community Service Department

Article by Siyabonga Caleb Mathenjwa
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

**Background:** Chronic musculoskeletal pain is a global problem with various occupational activities being associated with reports of chronic pain.

**Aim:** The aim of the study is to identify the prevalence of chronic musculoskeletal pain and the associated occupational risk factors among the uMhlathuze Municipal employees (uMhlathuze Local Municipality is an administrative area in the King Cetshwayo District Municipality of KwaZulu-Natal in South Africa. The municipality is named after the Mhlatuze River).

**Method:** A cross-sectional survey of a sample of employees from the Community Service department of the municipality will be conducted. A detailed interview questionnaire based on the standard Nordic ergonomic questionnaire will be used. It will focus on the prevalence of chronic musculoskeletal pain, individual, physical, psychosocial factors, and symptoms in the previous year. Descriptive, bivariate and multivariable logistic regression analysis will be conducted using STATA 13 (Most of its users work in research, especially in the fields of economics, sociology, political science, biomedicine and epidemiology).

**Conclusion:** The prevalence and factors associated with chronic musculoskeletal pain in this study population will be reported.

**Keywords:** Musculoskeletal pain; Occupational risk factors; Municipal employees.
Is being a Vegetarian Useful for a Child’s Health: A Review

Article by Amelia A. Grey
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Objective: The aim of this review is to access both the negatives and positive of vegetarianism as it relates to children and also if it poses significant harm to their health.

Introduction: Vegetarianism is a practice that has increased in recent years and has been known for its numerous benefits such as reducing the body mass index (obesity), lowering the rate of diabetes and cancer which has been observed in several studies. Vegetarianism refers to the exclusion of meat, fish, seafood, and possibly other animal products such as dairy and eggs. A vegetarian diet may be adopted for various reasons that can include: ecological, economical, religious, ethical and health considerations. Due to these or other personal reasons, parents may impart such lifestyles on their children.

According to the Academy of Nutrition and Dietetics’ influential position statement on vegetarianism, meat and seafood can be replaced with milk, soy/legumes, and eggs without any negative effects in children. The United States Department of Agriculture endorses a similar view. However, this point has been questioned due to direct and indirect evidence that vegetarianism may be associated with serious risks for brain and body development in fetuses and children. Regular supplementation with iron, zinc, and B12 are recorded for not mitigating all of these risks. Therefore, it cannot be said decisively that vegetarianism is safe for children.

Keywords: Vegetarianism, Children, Health, Lifestyle, Supplement, Ecological, Economical, Religious, Ethical.
Review of Pediatric End of Life Care (EOLC) - Palliative Care

Article by Olowofeso Abisola Mercy
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Abstract

Background: Pediatric EOLC describes the support and medical care given during the time (hours, days, months, years) surrounding the eventual death of a child from a terminal condition that advanced, became progressive, and then incurable. Pediatric palliative care is a holistic family-centered approach, with the child and family enwrapped in the center of a circle of professionals (multidisciplinary group of caregivers) addressing spiritual, physical, social, psychological, and physical needs in an attempt to prevent and relieve suffering.

Objectives: Understanding the concept (evolution and problems associated) of pediatric EOLC - palliative care, including the needs of patients and their families.

Methods: Meta-summary analysis of studies conducted will report the needs, concerns of patients receiving these care - parents, and siblings; the health care provider's perspective (Dead Donor Rule). The action of the health care system in improving EOLC services, implementation of structures - TNEEL modules and ELNEC for health care providers - PICU staff is reviewed.

Results: Findings will highlight the domains pertaining to family-centered palliative care - involvement of child and family in decision making, sibling’s needs, care planning, relief of pain and associated symptom, cultural needs, faith, care continuity, support during grief and bereavement.

Conclusion: Death and dying affects the whole family, early identification and recognition of EOLC choices influence the quality of life an individual experiences during the dying process as palliative care is not concerned about death but about life until death, the results of this research will emphasize factors to be taken into consideration in the creation of high-quality pediatric EOLC services.

Keywords: Pediatric, palliative care, end of life care (EOLC), chronic diseases, communication, family centered, advanced care planning, terminal illness.

- TNEEL - The Toolkit for Nurturing Excellence at End-of-Life Transition.
- ELNEC - End-of-Life Nursing Education Consortium.
- PICU - Pediatric Intensive care Unit.
Consumption of Alcohol and Bringing Awareness

Article by Kadali Jyotshna Phani and K. Mansoor Khan
MD Students, College of Medicine, Texila American University, Guyana, South America

Abstract

Background: Alcohol consumption is widespread among preteens and teens. A recent survey from the “Substance Abuse and Mental Health Service’s National Household Survey on Drug Use and Health” reported that about 28% of young people between the ages of 12 and 20 aid that they had a drink in the last month, more than 18% of the young people in that age group said that they were binge drinkers (i.e. they had five or more drinks in one sitting) and 6% said that they were heavy drinkers.

Alcohol consumption is associated with a wide range of adverse health and social consequences, both acute (e.g. traffic deaths, other injuries) and chronic (e.g. alcohol dependence, liver damage, stroke, cancer of mouth and esophagus). Alcohol problems, both those of individuals and those that affect society at large, continue to impose staggering social and economic burdens. In addition to negatively affecting health, a wide range of social ills including domestic violence, child abuse, fires and other crimes against individuals such as rape, robbery and assault have been linked to alcohol misuse.

Methodology: According to the survey that we have conducted the main aspects where, the average intake of alcohol and their social behavior when they have consumed alcohol and bringing awareness among the people about the adverse effects of alcohol consumption.

Result: According to the survey that we have conducted on college students. 70% of people are under the age group above 18, majority of the students started consuming alcohol out of curiosity i.e., 55% and few tried out of peer pressure. Whereas 85% of students say that they didn’t face any social and family problems i.e., social problems such as getting violent or aggressive after consuming alcohol or causing any disturbance to the public. 30% of students say that they started consuming alcohol due to depression whereas 70% disagree with this answer. 20% of students say that they drink for more than 5 hours whereas 30% say that they drink for an hour whereas the remaining say they don’t consume alcohol. 85% of students say that they can keep a control on their drink i.e., they are able to stop drinking when they want. Majority of the students say that they consume alcohol on weekends.

Conclusion: The conclusion of the survey that we conducted on the college students. Finally we end in saying that alcohol consumption beyond a limit can destroy your social life and personal life. Anything beyond limit disturbs your life style at certain point of time you regret about your addiction to alcohol. Even the peer pressure also leads to this situation. Our main thesis was to bring awareness among the students about alcohol consumption; we have got the positive feedback from the students by the surveys we have conducted. Finally I conclude by saying “Every form of addiction is bad, no matter whether the narcotic be a, cool or morphine”

“Herb is the healing of nation, alcohol is the destruction”.

Keywords: Alcohol consumption; Addiction; Substance Abuse.
He High Risk of Ectopic Pregnancy after Performing Several Induced Abortions

Article by Parvina Singh
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Context and Aims: The term “abortion” means the spontaneous or induced termination of pregnancy before fetal viability. When an abortion is performed multiple times, certain complications develop. The aim of this study was to analyses the statistics, if ectopic pregnancy is more likely caused by performing several induced abortions.

Subjects and Methods: Ectopic pregnancy and induced abortion have a relationship which was found by analyzing data from a case controlled study in Italy. The cases were 30 women with a diagnosis of ectopic pregnancy confirmed by laparotomy. The second was a random sample of 30 women that gave birth to healthy babies at comparable age. A total of 22/30 cases reported two or more previous induced abortion.

Results: The risk of ectopic pregnancy was higher in women reporting induced abortions compared to non-induced abortion.

Conclusion: Women performing induced abortion have a higher risk of ectopic pregnancy hence women must be advised not to perform self-induced abortions multiple times if they are planning to be pregnant in the future as there is a 90% chance of having ectopic pregnancy and many complications.

Keywords: Abortion; Ectopic pregnancy; laparotomy.
The Effect of Cholesterol Medication, Yoga and Simultaneous Usage of Cholesterol Medication and Practicing Yoga on Lowering Elevated Cholesterol Levels in Women Ages 40-60

Article by Renita Ramrattan
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Research Hypothesis: A combination of cholesterol medication as well as regular yoga practice is more effective on lowering elevated cholesterol levels than usage of medication and yoga practice independent of each other in women ages 40-60.

The objective of the research is to determine if cholesterol medication, yoga, or a combination of the two yielded more results in lowering high cholesterol levels in women ages 40-60. With levels of cholesterol reaching higher and higher in the 20th century due to changes in lifestyle, increase in traveling of people within the age range, among others, the research will serve as informative as to the effects of overall change in lifestyle, including the recent ‘trends’ within the western world with of exploring the benefits of yoga, on cholesterol levels. Today, research has proven that women and men in this age range have had an increase in heart related hospital visits as well as heart related deaths within the 20th century.

Methodology: A sample size of approximately 20 women between the ages of 40-60 will be used in order to collect the data. The sample includes women who regularly practice yoga for a minimum of 3 years, however all of which do not take cholesterol medication. The method which will be used to collect the quantitative data is a questionnaire as well as collection of records of lab test results from cholesterol tests within the last year; documents and data will be collected with permission of individuals in sample.

The contents of the questionnaire will target, but not limited to, collecting data on changes in diet, increase in traveling, cholesterol levels with supported documents if available, history of duration of yoga practice, and medications used and duration.

The 20th Century had been labelled as the age of liberation, where increase in travel and adventure can be found not only in young adults but has now extended grossly to the above 40 population. Traveling has introduced a new lifestyle which consuming foods rich in fats, leading to increase in serum LDL levels, has become part of experiencing new cultures. The consumption of foods resulting in elevated LDL serum levels has outweighed foods and beverages, such as milk in coffee and cheese, both rich in calcium, taken only during breakfast or “wine tasting”, which can increase serum HDL levels.

The health conscious percent of the over 40 population, will gravitate toward consuming more fish, rich in omega-3-fatty acids, which will not contribute to elevated LDL serum levels however will assist in increasing HDL levels. This is counteracted by the increase in consumption of alcohol true to the region of traveling, included as an experience of new cultures; More than 1 alcoholic drink for women can contribute to elevated cholesterol serum levels.

Included in experiencing new cultures, has brought the ancient practice of yoga from the eastern country of India. Now found to be deeply rooted in many routines in women over 40, yoga has been speculated to assist in lowering elevated cholesterol levels by means of poses which are meant to target the release of hormones that assist in regulating cholesterol.

Expected Results: Upon completion of data collection and analysis, it is anticipated that the results would reflect in favor of the research hypothesis.

Keywords: LDL, HDL, Cholesterol, Hypertension, Serum Cholesterol.
Aquagenic Urticaria: A Report of Two Cases

Article by Akhila Shivani Ilankumarsambath and Swathianbaransan
MD Students, College of Medicine, Texila American University, Guyana, South America

Abstract

**Background:** Aquagenic urticaria: A type of physical urticaria in which the skin itches and burns following contact with water of any type including one’s own sweat or tears at any temperature (hot is worse than cold), for any length of time. While aquagenic urticaria is not a classic histamine-induced allergic reaction, antihistamine may help manage the symptoms. Aquagenic urticaria was first described in 1964 by Shelly and Rawnsley.

**Objective:** To provide a ‘case-study review’ on the article Aquagenic Urticaria associated with water allergy a rare disease.

**Method:** Started a research on rare diseases and focused on an interesting disease called aquagenic urticaria on ‘a case-review study’.

**Result:** Aquagenic urticaria is more common in women than in men and appears during puberty or several years later. Pinpoint sized wheals affecting the shoulder, arms, trunk, abdomen, and back; within 10 minutes of contact with water. Each episode lasted for 20-40 minutes and spontaneously resolved. In both the cases, the physical examination revealed no other abnormalities.

**Conclusion:** The exact underlying causes of Aquagenic urticaria are poorly understood. Some theories say an interaction between water and a substance like chlorine found in the water in or on the skin generates a toxic material which leads to development of hives. The allergy-like symptoms are due to release of histamine.

**Keywords:** Aquagenic urticaria, hives, histamine.
Oral Hygiene within Diabetic Patients: A Retrospective Meta - Analysis

Article by Karishma Rajesh Makwana
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

**Background:** Good oral health is important for everyone, but it becomes even more vital if you are diabetic. Studies have found that there is direct linking between diabetes and a person’s oral health status. Diabetes mellitus is epidemic which affects large population around the world and is directly related to the oral health status of the patients. The greatest increase in prevalence is expected to occur in developing countries, due the trend of lifestyle changes and finance difficulties. Diabetes can lead to changes in the oral cavity giving rise to issues such as gum-related problems like gingival hyperplasia and periodontitis (pyorrhea). Other diabetes-related oral conditions include dental decay, candidacies, glossodynia (burning mouth syndrome), bad breath and xerostomia (dry mouth).

**Methods:** A control case study was done among a group (aged 30-79) of 100 (female=75 and male=25) diabetic patients and control of 100 (males=80 and female=20) non -diabetic patients were monitored for 6 months in Arusha and Tanzania to know the pervasiveness of dental diseases such periodontal diseases, dental caries, and treatment required in a group diabetic patients and to create awareness about the oral manifestations of diabetes and the importance of periodical dental checkup for diabetics. Chi square test was done for statical analysis.

**Results:** In the present study it has been observed the there is a strong correlation between the diabetes and dental caries and it was observed that, most of the diabetic patents are suffering with various dental diseases.

**Conclusion:** Present study has proven the relationship between diabetes and various dental problems. However, features studies are required to unravel the mechanism involved in above phenomenon.

**Keywords:** Periodontal diseases, Diabetes Melitus, Oral Hygiene, Dental Prophylaxis, Gingival Hyperplasia.
Abstract

**Background:** Visual perception is an ability to interpret and interact with the surrounding environment. The fundamental concept underlying, how we perceive the objects in accordance to their spatial orientation was explained by Ungerleider and Mishkin in the hypothetical “dorsal” stream pathway. Previous studies have failed to provide any indication on structural connectivity for this pathway. During the process of tractography, identifying hypothetical “Dorsal” stream fibers for objects spatial orientation, we the “Team NeurON” found an interesting connection between the “Visual cortex (Brodmann Areas 18 and 19) with Superior Parietal Lobule (Brodmann Area 7)”. 

**Objectives:** Aimed to identify the neural structural connectivity between “Visual cortex with Superior Parietal Lobule” and correlates its functional importance, using “Diffusion Imaging fiber Tractography”.

**Methods:** The observational analysis, used ten healthy adults, ultra-high b-value, diffusion MRI Datasets from an Open access platform. The datasets, ranging from both sex, between 20–59 years, with mean age of 31.1 years.

**Results:** The fibers were traced, and confirmed its extension from “Visual cortex (Brodman’s Areas 18 and 19) with Superior Parietal Lobule (Brodman’s Area 7)”, involves in accurate hand grasping motor movements, towards visually perceived object.

**Conclusion:** This new observations, through an insight knowledge to understand the structural existence and functional correlations between “Visual cortex with Superior Parietal Lobule” to targeting the grasping hand movements towards the visually perceived object, called visuo-motor coordination pathway in visual perception.

**Keywords:** Visual cortex; tractography; spatial orientation.
Cataract in Patients with Diabetes Mellitus—Incidence Rates in the UK and Risk Factors

Article by Seneva Lanique Moses
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Context and aims: To analyze the diagnosis or extraction of cataracts in patients with or without diabetes focusing on other comorbid conditions, antidiabetic drug use, and diabetes duration.

Method: The study population comprised newly diagnosed diabetes patients more than 40 years old from the UK-based Clinical Practice Research Datalink (CPRD) between the years 2000-2015, and a random sample of the general population matched for age, sex, general practice, and year of diabetes diagnosis. We assessed cataract incidence rates (IRs) and performed a nested case-control analysis in the diabetic cohort to assess potential risk factors for a cataract.

Results: Cataract is a condition where the eye's naturally clear lens becomes cloudy, or opaque and light doesn't pass through the lens as it should and isn't properly reflected onto the retina (the light-sensitive tissue lining the back of the eye). As a result, vision becomes cloudy, distorted or blurry. Usually, cataracts are associated with age-related changes in the eye, though other factors, such as medication, surgery, disease play a role in cataract development, sun exposure and also diabetes leads to early cataract formation in younger people as well. Persons with diabetes mellitus have been found to be at increased risk of developing cataracts when compared with nondiabetic persons. There were 56,510 diabetes patients included in the study. IRs of cataract was 20.4 (95% CI 19.8–20.9) per 1000 person-years in patients with diabetes and 10.8 (95% CI 10.5–11.2) per 1000 in the general population. IRs increased considerably around the age of 80 years and with a concomitant diagnosis of macular edema. The incidence rate ratio (IRR) was highest in patients of the age group of 45–54 years. In the nested case-control study, we identified 5800 patients with cataract. Risk of cataract increased with increasing diabetes duration (adj. OR 5.14, 95% CI 4.19–6.30 diabetes for more than years vs. diabetes less than 2 years).

Conclusions: According to our study, diabetes is associated with an approximately two-fold increased detection rate of cataract. The risk of cataract associated with diabetes is highest at younger ages. Patients with diabetic macular edema are at an increased risk for cataract as well as patients with long-standing diabetes.

Keywords: Cataracts, Diabetes Mellitus.
How does a Poor Sleeping Quality/Pattern Influence Daily Performance during Instructional Periods among MED 04 Students at Texila American University?

Article by Veninsia Edwards

MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Introduction: Sleep, by definition is the natural periodic suspension of consciousness during which the powers of the body are restored. This physiological process is essential for life. Many medical students however, due to the hectic schedule surrounding medical school are sleep deprived and exhausted. Exhaustion coupled with demands to excel academically can in turn lead to generated stress level among perspective physicians. Such phenomenon can adversely affect the cognitive skills of student within the classroom during instructional periods and ultimately impede academic life. It is due to these factors that many urge students to develop good sleeping and nutritional habits. But sleep in itself is in short supply for young aspiring physicians especially in their formative years when they are required to undertake and perform well at examination followed by prolong stint at the hospitals. This study therefore seeks to investigate and highlight the deleterious effects of sleep deprivation on medical students’ performance in the class room and subsequently academic life performance.

Aims and objective: The aims of this study are to investigate the sleeping pattern of medical students at the Texila American University and conclude how observed sleeping habits can:

1. Impact students’ performance in class room during instructional periods
2. Overtime, how does it influence their academic performance?

Material and methodology: Sleep patterns among Med 4 students at the Texila American University, Guyana campus will be surveyed by utilization of the Pittsburg sleep Quality Index Questionnaire which is a standardized tool used to measure the pattern and quality of sleep followed by a second attachment personally structured to inquire how sleep alters performance in class and academic life. Study would be conducted during the period of May 2018 amongst an average of 20-25 students. Students will be required to asses and answer questions provided honestly so an accurate experimental conclusion can be drawn. Data will then be analyzed and findings postulated.

Keywords: sleep deprivation; academic performance; sleeping Quality.
Spirituality among Medical Students in Texila American University

Article by Kumar Aaron Roopnarine
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Objectives: To determine whether introducing spiritual awareness in early BSMD students increases their sensitivity towards patients spirituality, thereby administering better treatment options and diagnosis.

To determine if spirituality has any major impact on medical students coping with stress.

Methodology: The research methodology will be carried out in the form of a questionnaire. The questionnaire will be conducted amongst medical students in Texila American University and will remain confidential. The questionnaire will be given randomly to reduce bias and the data from this research will be analyzed and used to answer the researcher’s objectives.

Results: The researcher is confident that this research will aid him in understanding spirituality and its impact on students. The researcher expects unbiased information from his questionnaire and a vast array of opinions from various students based on their understanding of spirituality and whether or not they believe it serves a purpose.

Conclusion: The researcher concludes that having an introduction to spiritual awareness in the early BSMD will further benefit students in handling cases involving patients with spirituality. Spirituality has also provided a means of coping with stress among some medical students.

Keywords: spiritual awareness; stress; BSMD students.
Guillain–Barre Syndrome Associated with Zika Virus Infection: A Case Report Review from Guyana

Article by Ashley Dudhnath
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Abstract

Background: Zika virus (ZIKV) is a mosquito-borne flavivirus with a significant public health impact highlighted epidemic disease. Guillain-Barré syndrome is a rare but serious autoimmune disorder in which the immune system attacks healthy nerve cells in your peripheral nervous system. It can eventually cause paralysis. The cause of this condition is unknown, but it’s typically triggered by an infectious illness. Guillain–Barre Syndrome Associated with Zika Virus Infection was identified and first documented by Ryan G. Fabrizius, in United States.

Objective: To provide a “Case Study-Review” on the article, Guillain–Barre Syndrome Associated with Zika Virus Infection in a Traveler Returning from Guyana to reinforce the awareness of GBS with Zika virus.

Method: Several topics of interest were researched and a suitable one was selected being “Guillain–Barre Syndrome Associated with Zika Virus Infection in a Traveler Returning from Guyana”, as a Case report review study.

Result: Authors stated that, a 44-year-old male presented to urgent care with several symptoms after he had travelled to an urban area in Guyana to visit his family. The article explained that on the first day of seeking medical attention the neurological examination was normal until later presentation of having little to no reflex in the lower extremities. An electromyography confirmed this with consistent demyelinating disease where after a diagnosis of GBS was made. The article also gives the diagnostic information about the patient’s serum and CSF with positive sign for ZIKV IgM, further confirming the diagnosis of ZIKV-associated GBS.

Conclusion: This case highlighted the diagnostic challenges posed by Zika Virus and underscores the need for clinician awareness of the potential for neurological complications such as GBS with ZIKV infection.

Keywords: Zika Virus, Guillain-Barre syndrome, demyelinating disease, ZIKV IgM.
A Rare Case Report of Ocular Trichuriasis in a 6 Year Old Child

Article by Mahathi S.K
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Abstract

Introduction: A rare case report of Trichurus trichuria (The human whipworm) in the eye of a 6 year old girl presented at Dr. Bhat’s Eye-Skin Laser Centre in Chennai India. The human whipworm generally causes trichuriasis where in it affects the large intestine. The child was presented with diminished vision in both the eyes along with rhinitis.

Slit lamp examination showed inactive white colored floaters behind the lens. Fundus imaging initially showed intermediate uveitis.

Methods: The patient case report was collected from Dr. Bhat’s Eye-Skin Laser Centre in Chennai India. The lab reports, fundus imaging and the Doctor’s (Dr. S. K Krishna Raj Bhat) review report was collected with the patient’s guardians’ consent.

Results: After series of investigations the problem was identified as parasitic infection and was treated with Albendazole for a period of 6 months.

Conclusion: Based on the case it has been concluded that parasitic infections can cause very severe problems in the body if untreated or partially treated.

Keywords: Trichurus trichuria, ocular parasitosis, Albendazole.
Improvement in Stress Maintenance with Meditation among Medical Students

Article by Ann Maria Joy
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Introduction: Emerging studies on the management and resolution of stress is still bringing more attention to our day today life. Even though here we are categorising the group as medical students for the successful outcome and for the relevant practice further helpful in the current world. The light of this study brings back the traditional way of meditation through the Zazen way of the buddhist meditation. Its both an art of practice joined with the calm and peace zen presented to the subjects involved in study. To the fact a relaxed mind can make more fruitful outputs as well a balanced and stabled mental status. For this Experimental study I have chosen 10 students from my current medical college; TEXILA AMERICAN UNIVERSITY. Here this study made more relevant with excellent results which helped the students also focus more and improve their academic performance at the end of the experiment. Thus this stress maintenance concept by meditation experimental research indeed paves a great way for the solution of the stress related consequences that generally conflicting among medical students.

Aims and objectives: The aim of this study is to prove the fact that “meditation will help medical students in the management of stress”.

Materials and methodology: Presented by PROSPECTIVE COHORT STUDY typed Research. More accuracy powered by necessary procedures as well proper measures.

In making the experimental research procedure, selected 10 students from MD-4 Class of Texila American university.

The randomly selected individuals then put for first screening with a survey of HADS (Hospital Anxiety and Depression Scale) before the beginning of meditation.

Then the experiment group started the medication practice (as zazen meditation) from the date 15/03/2018 morning 5.30 am to 6.30 am. Also in evening 6 pm to 7 pm. Likewise two hours a day till 15/05/2018 as a span of 3 months.

Recorded the responses at the end of 3rd month with again another survey of HADS as after meditation to compare and arrive at the best appreciated results of this experimental study.

Results: The 10 subjects chosen done two times survey of HADS; before and after the zazen meditation.

Where before meditation and after meditation anxiety compared, we got the p value, p = <0.001 with extremely high significant and t test result of 6.225 with 18 degrees of freedom. Adding to then, we checked and tabulated for depression before and after meditation which showed as p value, p = <0.001 again extremely significant with a t test value of 7.411 with 18 degree of freedom. THEREBY the p values and paired t test done been shown as extremely significance of zazen meditations in stress maintenance with anxiety and depression lowered among the medical students.

Conclusion: There is a significant effect with the practice of zazen meditation among medical students in stress maintenance. Results of improvement help to understand the fact that in the hectic life of the modern world, meditation has a great impact in balancing our mind by lowering the anxiety and depression.

Keywords: Zen meditation, anxiety, depression.
Abstract

**Objective:** Is to create an awareness and find out the cause of progression of obesity in upcoming young generation and middle aged people.

**Method:** A set of specific questions relevant to clinical practice were formulated, a systematic literature search was performed, and relevant articles were abstracted and graded.

**Result:** According to the survey, most of the people suffering from obesity are on the age of growing, we call them as teenagers. Some percentage of middle aged people also suffers from obesity. The result have shown that the main reason for obesity is lack of healthy lifestyle and environmental factors affecting lives. But most common factors found in the survey were: lack of physical activities, stress load and improper or junky food. Studies have shown that obese people are mostly diabetic and lethargic. Lack of sleep is also a very big factor. Mostly obese people have slow metabolism and that causes the sluggish and lazy behavior in an individual.

**Conclusion:** According to the survey performed and the study relevant articles it was found out that mostly teenagers and middle aged group people suffer from obesity. **Remember it is your body and you have to take care of it.**

**Keywords:** lack of physical exercise, stress load, lack of healthy diet, lack of sleep, diabetes, smoking, eating junk, less awareness.
Correlation of the Time and Temperature Effects upon Blood Gas Analysis in Diabetic Patients

Article by Marlon Anthony Govindu Alfred
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Abstract

Studies have shown that varying time and temperatures may have an adverse effect on Arterial Blood Gas (ABG) samples but fail to address the extent of the effect of these pre-analytical factors. (CDC, 2001).

Diabetic ketoacidosis (DKA) is one of the most prevalent metabolic disturbance of type 1 diabetes mellitus. DKA is identified in approximately 35% to 40% of children and teenagers at the time of diagnosis of type 1 diabetes mellitus (White, 2000). A blood gas analysis can be used to assist in diagnosing DKA. An increased anion gap is a predictor of the presence of metabolic acidosis, and the related degree of acidosis can be estimated by the size of the anion gap.

Globally, research have shown that the storage of anaerobic blood samples at room temperature (25°C) is acceptable when measurements are done within the first 20 minutes but is often undesirable in many laboratories due to significant elevation in the PO$_2$, and thus a chilled specimen is preferred (approximately 0-4 °C). (Barker, 2008).

Ma et al (2003) have questioned the validity of those results produced, particularly with regard to accurately detect and predict clinical manifestation and thus influence the drugs selected to cure the patients’ ailment mainly those of a diabetic status. According to Barker (2008) the validity of some work has shown that environmental standardization may generate spurious findings that either cannot be confirmed or can be confirmed only in samples maintained in specific highly controlled environments. An analogous issue arises in subclinical trials conducted in academic settings; the same benefits that are identified in randomized controlled trials are not always achieved in the real world of day-to-day clinical practice.

Keywords: Diabetic ketoacidosis, metabolic acidosis, anion gap.
Is our Nose dialect with our Eyes?
(An unrevealed Olfactory-Saccadic Pathway)

Article by Harshita Chatterjee, Geethanjali Vinodh, Nitya Akarsha Surya Venkatghanta
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Background: Our “Team NeurON” made an attempt on tracing the existence of neural structural connectivity between the “Piriform and Entorhinal Cortex (Brodmann Areas 27, 28 and 34) with Motor cortex (Brodmann Areas 4 and 6)”, called Olfactory-Motor pathway. We stumbled across some new structural connections from “Piriform and Entorhinal Cortex with Frontal Eye Field (FEF) (Brodmann Areas 8), which failed to be mentioned by various workers on their previous findings. This new finding, encouraged us to further pursue on this connection and identify its functional correlations.

Objectives: Aimed to identify the existence of neural structural connectivity between “Piriform and Entorhinal Cortex to Frontal Eye Field (FEF),” and correlates with its functional importance, using “Diffusion Imaging fiber Tractography”.

Methods: The observational analysis, used ten healthy adults, ultra-high b-value, diffusion MRI Datasets from an Open access platform. The datasets, ranging from both sex, between 20–59 years, with mean age of 31.1 years. The analysis process includes, data processing and fiber tractography using software tools.

Results: The fibers were traced, and confirmed its structural extension from “Piriform and Entorhinal Cortex to Frontal Eye Field (FEF), which involves in control the movements of neck and eyeball gaze, towards the spatial orientation of olfactory stimulus.

Conclusion: This new observation, provide insight to understand the structural existence and functional correlations between “Piriform and Entorhinal Cortex to Frontal Eye Field (FEF), making possible the results in generation of neck and eyeball gaze movements towards the spatial orientation of olfactory stimulus.

Keywords: Tractography, Piriform Cortex, Entorhinal cortex, Saccadic eye movements, olfactory pathways, Frontal Eye Field.
Causal agents of Pneumonia

Article by Krishna Kumar
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Abstract

Pneumonia is an illness, usually caused by infection, in which the lungs become inflamed and congested, reducing oxygen exchange and leading to cough and breathlessness. It affects individuals of all ages but occurs most frequently in children and the elderly. Among children, pneumonia is the most common cause of death worldwide. Historically, in developed countries, deaths from pneumonia have been reduced by improvements in living conditions, air quality, and nutrition. In the developing world today, many deaths from pneumonia are also preventable by immunization or access to simple, effective treatments. However, as we highlight here, there are critical gaps in our understanding of the epidemiology, etiology, and pathophysiology of pneumonia that, if filled, could accelerate the control of pneumonia and reduce early childhood mortality.

Every year 1.9 million children under 5 years of age die from pneumonia. It can be caused by bacterial, viral, or parasitic infection as well as by noninfectious agents. Most severe cases of pneumonia are caused by bacteria, of which the most important are Streptococcus pneumonia (pneumococcus) and Haemophilus influenzae, pneumonia killed 47 of every 1,000 children before the age of 5 years On average, 2%–3% of children each year have pneumonia severe enough to require hospitalization, and many of these disease episodes are potentially fatal. For every 1,000 children born, about 100–150 episodes of severe pneumonia arise during the first 5 years of life, most during the first 2 years. Approximately 21% of child deaths are due to pneumonia and many developing countries have mortality rates of 60–100 per 1,000 children under 5 years of age this suggests that of every 1,000 children born alive, 12–20 die from pneumonia before their fifth birthdays.

Keywords: Inflammation, congestion, breathlessness, immunization, Streptococcus pneumonia (pneumococcus) and haemophilus influenzas.
Assessment of Knowledge and Practice of Hand Hygiene among Preclinical Students of Texila American University

Article by Deladem Fiawoyife
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Abstract

Objective: The aim is to assess the knowledge and most importantly the steps and practice of hand hygiene among the pre-clinical medical student of Texila American University. It is important because good hand hygiene practice breaks the chain of many pathogens such as Staphylococcus aureus among others thus help prevent iatrogenic and nosocomial infections. The rate of these infections are on the increase every day.

Methods: A universal questionnaire from world health organization was used to assess the knowledge and practice and a self-structured question used to assess the steps in hand hygiene.

Results: 50 student from p1 to md4 participated and 25% from md3. 86% of our participant were females and mostly from south America and falls within the age of 20yrs, medical student of which 73.3% admit they had no formal training in hand hygiene. 66.7% had knowledge about the route through which iatrogenic infections are transmitted and 40% nosocomial infection. Infection preventive measures before and after procedures, 93.3% agreed to hand washing instead of alcohol hand rub. On things to avoid that will increase the likelihood infections such as putting on jewellery, damaged skin, artificial nails and regular hand cream use 93.3% agreed they can colonies the hands with harmful germs. Regarding the practice there was a very low response in the steps of hand hygiene, only 20% of the respondent were able to list the correct steps of hand washing.

Conclusion: based on this study it is evident that there is a fair knowledge on hand hygiene but the response to the practice was low. Again most participant of this research didn’t undergo any formal hand hygiene Programme therefore it should be organize more often to improve the knowledge and practice among future clinicians to prevent hospital acquired infections.

Keywords: iatrogenic infection, nosocomial infection, hand hygiene.
Patent Ductus Caroticus: Embryological Significance

Article by Kavyaa Subbanagounder Duraisamy, Kamali Nandhakumar
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Abstract

Introduction: Ductus Caroticus, the embryonic dorsal aorta between points of junction with the third and fourth branchial arch arteries normally disappears in early embryonic life and forms a thin strand of tissue without lumen, called a “ligamentum caroticum”. Persistence of Ductus caroticus, May leads to abnormal connections between the major vessels, like internal carotid artery, supplies neck and brain region. As per report the congenital internal carotid artery anomalies ranges from 4-66%.

Objective: To provide a review on article patent ductus caroticus an unusual variant. Where the patent ductus caroticus anomalous arteries are treated as clinical significant anomalies in aortic arches.

Method: Researched on several topic and found an interesting topic related to internal carotid artery anomalies which is from its embryonic state [Ganesh Elumalai et al., 2016]. When the patient with insufficiency of internal carotid artery leads to patent ductus caroticus. Though it is more prevalent, there are only few articles based on patent ductus caroticus.

Result: The Ductus caroticus may continue as a wide-open vessel, at the point of junction between the third and fourth branchial or aortic arch derivatives. As a result, the left internal carotid artery rises directly from the arch of the aorta, and the right internal carotid from the right subclavian. Suspicion occurs with patent ductus caroticus anomalous arteries, leads to unexpected severe neurological difficulties due to the Internal-carotid artery (ICA) insufficiencies.

Conclusion: It is well known that the suspicion occurs with patent ductus caroticus anomalous arteries, leads to sudden severe neurological complications due to the varied range of cerebral hypoplasia due to aneurysms, it may cause fatal. The patent ductus caroticus anomalous arteries are treated as “Clinical significant anomalies” in the aortic arches. This case may provide useful information in the various fields of Anaesthesia, Head & Neck and Thoracic surgeries, Emergency and Critical care units.

Keywords: Ductus caroticus, ligamentum caroticum, arteria muscular is cervicis, internal carotid artery.
Anatomical Variation of Pulmonary Venous Drainage and its Clinical Significance

Article by Haritha Mahalingham and Mounikabindu Bhatluru
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Background: Pulmonary veins anomaly consist of partial and total anomalous pulmonary venous connections. These are partial and total forms of pulmonary venous drainage into the systemic venous system. Partial Anomalous Pulmonary Venous connection account for 0.5% of the congenital cardiac defects and are commonly associated with atrial septal defects. Total Anomalous Pulmonary Venous connection accounts for 1-2% of all congenital cardiac malformations. Total anomalous pulmonary venous return (TAPVR) is a relatively uncommon congenital heart lesion which usually results in death during the first year of life.

Objective: To review the articles to evaluate the anomalous pulmonary veins, its abnormal drainage pattern and emphasize on its clinical importance.

Methods: Various related articles from different indexed journals were chosen from google scholar, and pubmed. Those articles were reviewed thoroughly and analysed.

Result: After reviewing most of the article we found that, when one or both of the left pulmonary veins drain into the systemic venous system, they usually do so by way of a left superior vena cava or directly into the coronary sinus. Anomalous veins from the right lung often occur without associated anomalous veins from the left lung, but the reverse is unusual and left sided anomalous pulmonary vein generally occur with complete transposition of all the pulmonary veins and an atrial septal defect.

Conclusion: Improvements on surgical techniques as well as preoperative and postoperative management account for the reduction in mortality. This review helps surgeons to avoid postoperative complications like arrhythmias and obstruction of the superior vena cava or pulmonary veins.

Keywords: Anomalous pulmonary vein drainage, congenital cardiac defect, atrial septal defects.
Prevalence of Gastroesophageal Reflux among Medical Students in Guyana

Article by Krystal P. Cardis
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Introduction: The medical sciences are believed to be one of the most tedious, high stress fields of study. For one, it takes relatively more time in years to complete the MBBS/MD degree than it would take for a first degree in a social science course and even more time when one decides to specialize in certain areas such as surgery. It necessitates heavy class hours as well as extensive self-study. In addition to this, medical students, specifically those away from home have to take care of their own needs such as home care, self-care, and meal preparations and define their own means of stress relief. Medical students tend to develop poor eating habits, recreational drug use and alcoholism. These factors in conjunction with the ‘school stress’, are major contributors. The aim of this research is to evaluate the prevalence of gastroesophageal reflux in a Guyanese medical school to brainstorm possible means of improvement.

Method: Surveys are to be completed by faculty and students of the university as well as a review of literature concerning the topic will be done. Once the data is fully compiled, the researcher should be able to brainstorm policies of change and outline routes for policy instigation.

Discussion: Gastric reflux is the up flow of stomach contents through the esophagus and is usually associated with either excess acid production in the stomach or decreased pressure of the usually tonic-lower esophageal sphincter. Chronic reflux is called Gastroesophageal Reflux Disease. Common symptoms include heart burn, lump in throat sensation, “sour burp” and a sweat taste at the back of the throat. Causes vary from congenitally weak LES to laying down during or after a meal and so on.

Keywords: Gastroesophageal reflux, sour burp, lower esophageal sphincter.
Culture Shock amongst Foreign Nationals Studying at a Local University in Guyana has impacted their Mental Health in a Negative Way

Article by Dwayne Rishon Wills
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Abstract

Introduction: The world is quickly becoming a global village thanks to advancement in technology. As much as similarities might exist within cultures across continent the differences when experiences on the ground by a foreigner could be frustrating. Important life skills such as communication, among others, is very important in navigating across cultures.

Anthropologist Kalervo Oberg first used the term ‘culture shock’ in a short descriptive article based on his personal observations of expatriates Americans (Oberg 1960). Culture shock was linked by him as an occupational disease of people who have been transported abroad. Some people make a good recovery and rapidly adjust to the new environment; in others the condition can become chronic and debilitating. To adjust to a new culture one must be able to understand, interpret and translate so as to navigate smoothly. Often time’s behavior practices differ, body language and approaches that are already defined culturally and assigned by gender may be evident. There are four known stages of culture shock;

Aim: To evaluate the impact of culture shock and mental health among foreign Nationals in TAU.

Objectives:
- To identify the challenges and difficulties faces by foreign students and workers.
- To evaluate their mental health status.
- To understand their coping mechanism.
- To identify the effects of culture shock on their mental health.

Honeymoon phase: this is the arrival into the new culture, it usually last for a few days to weeks. There’s a fascination upon exposure to the new culture, there’s a peak of interest among what exist and there is to offer.

Crisis phase: there’s an enhancement of the negative perception, by the foreigner, of the new culture. The difficulty in maneuvering the new culture becomes evident by the foreigner these include communication and daily activities. These contribute to hostility, stress and anxiety. The consequences of this all is alienation and withdrawal by the foreigner. This period is dependent on one’s ability to integrate into the host culture.

Recovery phase: here the visitor begins to learn how to function, they begin to assimilate appropriate ways on how to behave and interact. Culture perceptions of the host country is altered.

Adjustment phase: individual begins to accept what the new culture has to offer and begins to embrace it. There are six aspects of culture shock that that has been identified (Taft 1977):

The researcher would like to measure this phenomenon using standard approach already outlined by our predecessor. The idea is to understand the risk factors that predisposes one to such occurrences and its impact on their mental health and understanding their coping mechanisms.

Keywords: culture shock, Culture perceptions, foreign Nationals.
Prevalence of Recreational Drug Use among Medical Students in Texila American University

Article by Brennan Williams

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Abstract

Recreational Drug use is the use of psychoactive drugs to induce an altered state of consciousness for pleasure, by modifying the perceptions, feelings and emotions of the user. This can be achieved by using various opioids and stimulants such as marijuana, alcohol consumption, ecstasy, cigarettes etc. These are particularly used to help in alleviating stress, pain, emotional turmoil or just for the sheer pleasure of getting the euphoria like feeling that is attained by usage of these substances. Medical schools seem to have prevalence in simulating a high stress environment especially for students in the program with the high workload and pressure to study all the related topics and manage assignments all within the courses duration. According to a research article entitle “Systemic Review of Depression, Anxiety, and other Academic Medicine by Dyrbe, Liselotte N. MD; Thomas Matthew R. MD; Shanafelt, Talt D. MD” it says that “current educational process may have an inadvertent negative effect on students mental health, with high frequency of depression, anxiety, and stress among medical students.” It also states that “Medical School is a time of significant psychological distress for physicians-in-training.” This is where the recreational drugs play a role in alleviating that stress and act as a coping mechanism for students. The main question proposed by this research is “What is the prevalence of recreational drug use in Texila American University?” It will also answer other questions such as “Why they are taking these substances?”, “If they started using these drugs after they attended the institution?” and “If the workload that they are experiencing have anything to contribute to their new habit.” This research will be answered by means of surveys distributed to students from PM1-MD4 due to easy accessibility and gathering of the data. The results will be displayed in statistical charts and graphs to answer these questions.

Keywords: Psychoactive drugs; euphoria; psychological distress.
Effectiveness of Resources and Method of Teaching

Article by Timica Anthony
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Abstract

Introduction: According to the oxford dictionary ‘to teach’ is to give information on a particular subject to a pupil or student. Teaching is sharing of knowledge and experience which is organized within a discipline and the provision of a stimulus to the psychological and intellectual growth of an individual. In order for this to be possible, appropriate and effective method of teaching along with resources should be readily available to promote a positive outcome among learners.

Method: Twenty [20] students from a school were questioned about teaching strategies in the classroom. They were asked to identify whether watching video and audio along with being lectured to and group discussion is effective.

Results: The data received were students appreciated being lectured to along with group discussion than watching video and audio. Among the methods of teaching self-directed learning 16%, watching video and audio 20%. 6% appreciated none of the techniques whereas 58% agreed that being lectured to is the most effective method. Students find power point presentation effective than board writing.

Conclusion: It is stated that effective teaching strategy, indicates the quality of the teaching that is reflected by the achievement of the learners. It can be concluded that student have a positive perception of the effectiveness of being lectured to in the classroom than self-centered learning. This is due to students having poor self-control which require teacher supervision for productive outcome.

Keywords: self-directed learning; teaching methods; positive perception.
“See” Here “Through Ears”

Article by Osama Yaqoob Arain, Rozminabanu Daud Patel, Nitya Akarsha Surya Venkatghanta
MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

**Background:** We know that, “Ear”- is a sensory organ, helps in transmission of auditory stimulus for perception, refers to the brain’s ability of interpreting and creating impression of sounds. During the process of tractography, on identifying the fibres in “Ventral” stream pathways for auditory perception, we the “TEAM NeurON” found an interesting connection between “Auditory cortex (Brodmann Areas 41 and 42) with Frontal Eye Field (Brodmann Area 8)”.

**Objectives:** Aimed to identify the neural structural connectivity between “Auditory cortex with Frontal Eye Field” and correlate its functional importance, using “Diffusion Imaging fiber Tractography”.

**Methods:** The observational analysis, used ten healthy adults, ultra-high b-value, diffusion MRI Datasets from an Open access platform. The datasets, ranging from both sexes, between 20–59 years, with mean age of 31.1 years. The analysis process includes, data processing and fiber tractography using software tools.

**Results:** The fibers were traced, and confirmed its extension from “Auditory cortex to Frontal Eye Field (FEF), especially to the “Area 8B” (PEEF – Premotor Ear Eye Field). The area FEF (PEEF), involves in control the eyeball gaze movements and helps to discriminate the source of auditory stimulus.

**Conclusion:** These new observations, through an insight knowledge to understand the structural existence and functional correlations between “Auditory cortex with Frontal Eye Field (FEF), to targeting the source of sound stimulus, and making the possible results in generation of eyeball saccades.

**Keywords:** Tractography, Frontal Eye field, Saccadic eye movements, auditory pathways, Premotor Ear Eye Field.
Effects of Menstrual Cycle on Blood Pressure (BP)

Article by Moganelwa Sharline Mampa

MD Student, College of Medicine, Texila American University, Guyana, South America

Abstract

Introduction: Blood pressure (BP) is not constant throughout the day, on different days in a month and on different times of a cyclical event like menstrual cycle. Variation in BP during different phases of menstrual cycle can also be attributed to the effect of female sex hormones on cardiovascular function. The menstrual cycle is divided into several phases. The first day of the menstrual cycle begins with menstruation. Next, the follicular phase occurs. Ovulation then happens before the final phase, which is called the luteal phase. During the menstrual cycle, blood pressure may vary slightly. These variations in blood pressure are usually not significant.

According to a study posted on the National Institute of Health website, blood pressure is highest right at the beginning of menstruation. However, toward the end of the cycle, blood pressure numbers drop lower. Blood pressure was higher during the follicular phase than during the luteal phase. Some small studies have indicated that a woman's blood pressure may rise slightly during ovulation. Hormones released during this time may be to blame for the increases. The luteal phase is the time period following ovulation. During this time, blood pressure may be slightly higher than normal according to some studies.

Hormones are possibly the cause for blood pressure variations during the menstrual cycle. Specifically, progesterone may cause blood pressure to rise slightly. However, changes in blood pressure during the normal menstrual cycle are not well documented, and previous studies have given conflicting results.

Aims and objectives: The objective of this research is to find out if there is any changes in blood pressure during the menstrual cycle changes, and if yes, what’s the correlation or factors leading to the changes. A conduction of this research will provide more information on the speculations and note down every change in BP during the regular menstrual cycles of 26-34 days of the participants.

Material and methods: The study will involve 30 normotensive female students, all with regular menstrual cycles lasting 26-34 days. Ages ranging from 18-26 years and body mass index (BMI) ranges from 19.4 to 32.0 kg/m² (mean 23.6 kg/m²). All students will be of the same school and same hours of attending classes. A stethoscope and sphygmomanometer will be used to measure the reading of the blood pressures of the individuals taking part in the research.

Keywords: Blood pressure; menstrual cycle; progesterone.
Awareness of Warning Signs of Acute Coronary Syndrome among the Patients and Residents in Georgetown, Guyana

Article by Harshita Catherine, Nneoma Osakwe, Kiruba Dharshini and Husnah Aman
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Abstract

Background: Acute Coronary Syndrome represents the most common cause of morbidity and mortality globally. Guyana has the first rank in mortality for cardiovascular diseases with 18.90% total deaths, which are due to late detection. Several risk factors contribute directly to the burden of this disease. Early identification and management of acute coronary syndrome is the basis to decrease the mortality in Guyana. Thus, the present Qualitative study is designed to analyze the knowledge about risk factors and warning signs of acute coronary syndrome.

Method: A survey was conducted in two groups, a set of 9 patients with ACS admitted in cardiac unit seen in GPHC and other with 8 residents of Guyana were enrolled in a descriptive research. Each patient and resident was given a survey form which consists of warning signs such as chest discomfort and risk factors comprising of their lifestyle.

Result: Highest rate of patients experienced chest discomfort and dyspnea i.e.80% and 70%. Only half of them have experienced with vomiting and dizziness and a very low rate of 30% have experience with other symptoms such as fever, neck/jaw pain and indigestion.

Residents have a highest knowledge on chest discomfort and dyspnea i.e.86% and 71% respectively. Sudden dizziness was considered by 49% residents and very low rate of 28% of residents considered vomiting, chronic headache and neck/jaw pain as a warning sign of ACS.

Conclusion: The residents of Guyana have average rate of awareness on the warning signs of ACS. We need to conduct awareness campaign and prophylactic programmes to educate the residents of Guyana and hence can prevent the severity of ACS.

Keywords: Acute Coronary Syndrome; warning signs of ACS; GPHC.
Jet Lag

Article by Alexandrina De Freitas
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Abstract

Objective: Travelers face very commonly jet lag but sometimes are not aware of the pathophysiological changes happening. The aim of this paper is to bring awareness of this condition.

Jet lag occurs when an individual travel across several time zones and as a result have trouble adjusting to their new schedule. After traveling long distances by air, your circadian rhythms may still be aligned with the previous time zone. When it is daytime in a new time zone your body may want to sleep, or when you are supposed to be asleep, it would want to be awake.

Jet lag is a temporary condition and may begin after you have travelled across two time zones. The severity is dependent on how many time zones you have crossed and the direction of travel. Flying east is usually more difficult of an adjustment when compared to travelling west. It is roughly estimated that your body clock takes approximately one day per time zone to be fully adjusted.

It may be found difficult to function as you normally would, if you are under jet lag. A feeling of awake and alertness would be lacking if you have to work, socialize or go exploring. Anyone can suffer from jet lag regardless of age, adults however, are likely to have more severe jet lag causing them to have a longer recovery period, than that of children. Some individuals are able to adjust more quickly than others to the rapid shifts in time zones. Persons that are accustomed to jet lag, such as pilots, flight attendants and frequent travelers, may have a less of an effect on them.

Jet lag can be worsened by, sleep loss due to travelling, stress, spending a prolonged time sitting in an uncomfortable position (such as an airplane), alcohol or caffeine use, the air pressure or poor quality of air.

Jet lag is a circadian rhythm sleep disorder. The circadian rhythms are the body’s internal clock that signals when you should feel sleepy or alert. It operates on a 24-hours schedule basis. The body uses sunlight to determine the amount of melatonin (sleep inducing hormone) it should produce. Melatonin production is seen high during the evening and very low during the day. As a result, a person is more alert during the daytime and sleepy at night. Travelling across multiple time zones disturbs an individual’s circadian rhythms.

Keywords: travelling, stress; Jet lag; motion sickness.
A Review- Keratoconus and its Current Perspectives

Article by Jemina West
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Abstract

Objective: To analyze and summarize the ocular condition named keratoconus while investigating the effectiveness of the therapeutic advances associated with this condition.

Context and Methods: A progressive bulging or protrusion of the cornea which results in thinning linked with decreased visual acuity combined with irregular astigmatism is defined as keratoconus. Broadly classified into three categories namely mild, moderate and severe, this condition has transcendent therapeutic advancements. First observed in the 19th century, it is a bilateral condition that may occur asymmetric at first and also presents itself in teens or young adults in both genders and progresses until the third or fourth decade of one’s life when the cornea becomes stable.

Current therapeutic advancements include keratometry, spectacle use, soft toric contact lenses, rigid gas permeable contact lenses, piggy back and hybrid lenses. Collagen cross linking, keratoplasty, intracorneal ring segments, ferrara rings, toric implantable collamer lens, intra ocular lens and photorefractive keratectomy are also done and may be done individually or in combination. The type of treatment performed would be based on the severity of keratoconus in the patient.

Results: Cross linking is currently the most successful advancement for keratoconus where it has halted the progression of keratoconus in a number of patients and also improved their visual acuity thus regressing keratoconus in roughly 69% of patients. 12% of patients with moderate to severe keratoconus required keratoplasty over an eight year period. Also, in deep anterior lamellar keratoplasty (DALK), 80% of patients obtained visual acuity of 20/40 or greater.

Conclusion: Scientists are actively working for a cure for this condition and the recent advancements produced very encouraging results. Treatment depends on how soon the diagnosis of keratoconus is made, the urgent and active treatment of the condition along with one’s financial status to facilitate the treatments since in most countries patients have to pay for the treatment unless they have health insurance.

Keywords Keratoconus, keratoplasty; keratometry.
Visual Circuit for Facial Recognition: Neural Structural Connectivity Analysis for Prosopagnosia

Article by Pavithra Ramesh and Sandhya Sivakumar
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Abstract

Background: Prosopagnosia, also called face blindness, is a cognitive disorder of face perception in which the ability to recognize familiar faces, including one's own face (self-recognition), is impaired, while other aspects of visual processing (e.g., object discrimination) and intellectual functioning (e.g., decision making) remain intact. The term prosopagnosia comes from the Greek word for “face” and “lack of knowledge”. The term originally referred to a condition following acute brain damage (acquired prosopagnosia), but a congenital or developmental form of the disorder also exists, which may affect up to 2.5% of the United States population.

Objective: To aware the society about prosopagnosia, depending upon the degree of impairment, the inability to recognize faces previously known, while still remaining the ability to correctly identifying other objects from the surroundings. This dysfunction can affect face recognition of family members or even their own face and voice. Prosopagnosia is not related to memory dysfunction, memory loss, impaired vision, or learning disabilities. This review explains the clinical neuropsychological studies that have indicated the recognition of a person’s identity and recognition of facial expression are processed by different cortical and subcortical areas of the brain. The fusiform gyrus, especially the right fusiform gyrus, plays an important role in the recognition of identity. The superior temporal sulcus, amygdala, and medial frontal cortex play important role in faccial expression recognition. Both fascial expression recognition and facial-recognition are highly intellectual processes that involve several region of the brain.

Method: We searched from various articles related to prosopagnosia on google scholar and PubMed and consumed the information in our objective.

Result: Prosopagnosia is a cognitive disorder of face perception in which the ability to recognize familiar faces, including one's own face (self-recognition), is impaired, while other aspects of visual processing (e.g., object discrimination) and intellectual functioning (e.g., decision making) remain intact.

Conclusion: In this article, we are concluding that, the prosopagnosia is a rare neurological disorder found in human. However, the condition has a much greater impact on daily functioning. Some people avoid social interaction, experience problems with interpersonal relationships or damage to their career and even report episodes of depression. In extreme case, people with prosopagnosia develop social anxiety disorder, characterized by fear and avoidance of social situations that may cause embarrassment.

Keywords: Cognitive disorder, Face blindness, depression, anxiety disorder, social disability.
Cardiovascular Disease Risk Factors after Early-Onset Preeclampsia, Late-Onset Preeclampsia, and Pregnancy-Induced Hypertension

Article by Sharmella Persaud
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Abstract

Preeclampsia is a pregnancy complication characterized by high blood pressure and signs of damage to another organ system, most often the liver and kidneys. Preeclampsia usually begins after 20 weeks of pregnancy in women whose blood pressure had been normal. Even a slight rise in blood pressure may be a sign of preeclampsia. Studies have shown an increased lifetime risk of cardiovascular disease (CVD) in women who experienced a hypertensive disorder in pregnancy. This risk is related to the severity of the pregnancy-related hypertensive disease and gestational age at onset. Previous researchers have evaluated postpartum differences in CVD risk factors in 3 subgroups of patients with a history of hypertensive pregnancy. The aim of this research is to determine the cardiovascular disease risk factors after early-onset of preeclampsia, Late-Onset Preeclampsia, and Pregnancy-Induced Hypertension.

The postpartum differences in CVD risk factors were evaluated in 3 subgroups of patients with a history of hypertensive pregnancy. The prevalence of common CVD risk factors postpartum among 448 women with previous early-onset preeclampsia, 76 women with previous late-onset preeclampsia, and 224 women with previous pregnancy-induced hypertension was found. Women with previous early-onset preeclampsia were compared with women with late-onset preeclampsia and pregnancy-induced hypertension and had significantly higher fasting blood glucose (5.29 versus 4.80 and 4.83 mmol/L), insulin (9.12 versus 6.31 and 6.7 uIU/L), triglycerides (1.32 versus 1.02 and 0.97 mmol/L), and total cholesterol (5.14 versus 4.73 and 4.73 mmol/L). Almost half of the early-onset preeclampsia women had developed hypertension, as opposed to 39% and 25% of women in the pregnancy-induced hypertension and late-onset preeclampsia groups, respectively. The data shows the differences in the prevalence of common modifiable CVD risk factors postpartum and suggest that prevention strategies should be stratified according to severity and gestational age of onset for the hypertensive disorders of pregnancy.

Keywords Preeclampsia, postpartum; gestational age.
The Effect of Study-Time Length on Student Performance in Texila American University

Article by Ebenezer Asare Satyi
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Abstract

Introduction: In every school system, academic performance is the main concern to students as well as the teachers. Several studies have shown that factors such as motivation and study time have impacted on students’ success (Cote & Levine, 2000, Singth, Granville & Dika, 2002).

Since grade is a principal factor of such learning, if a learner earns high grades it is thought that he/she has learned well while low grades indicate poor learning outcome. However, many have also found out that several factors contribute to the grades. No particular factor can be taken in isolation as predicting grades. It has been the control of so many factors such as gender, IQ, study habits, study time, age, year of study, level of parent’s educational attainment, social status, birth order, etc. In fact, almost all the environmental, personal and natural factors above exert influence on academic performance. The determinants of academic performance are a regular topic in public policy debates on higher education.

One largely disturbed issue concerns the impact of the most important factors in the educational production, student’s effort and study time on academic success. Many studies have been carried out on study time behavior and students’ accomplishment. The recent ones include that of Logumakin (2001), Kumar (2002) and Gbore (2006). They all agreed that study time attitude affects strong relationship with academic performance of students while other researchers like Owolabi (1996) and Adeyemo (2005) concluded that students’ academic excellence was the outcome of a combination of the study time behaviour and other factors in any course of study. Adeyemo (2005) specifically opined that study time attitude is an exercise that goes beyond merely reading for pleasure.

Study time problems that have to do with student’s engagement in home work, assignments, reading and note taking, study period procedure, students’ concentration in examination and teachers’ consultancy services necessitated this study. This study seek to explores the extent, to which study time behaviour could solve the achievement lingering problems in academic performance of students in Texila American University.

Aims and objectives: The objective of the study is to determine the difference in the academic success of long study time behaviour of Texila American University students and their short study time counterparts.

Materials and methodology: A survey approach is adopted to determine students’ study time behaviour and their academic achievement of social studies students in the Texila American University. The study area for this research is Texila American University, Guyana campus. The campus hosts the Colleges of Medicine and Nursing. The population of the study will be made up of all students of MD 1 - MD 4 of Texila American University. A structured questionnaire called “Length of study-time behaviour and academic achievement of Texila American University students Inventory” will be used in collecting data for this study and personal interviews will also be conducted. The instrument will have a 4-point Likert rating of Agree (A), Strongly Agree (SA), Disagree (D) and Strongly Disagree (SD).

Keywords: study time; academic performance; educational attainment.
Stress and Burnout Effects among Health Care Professionals

Article by Ryan Rebeiro
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Abstract

Introduction: In today’s world, Stress refers to a mental or emotional state, where a person encounters tension due to adverse conditions while Burnout is a condition; which results from prolonged exposure to stress. It leads to the exhaustion of mental or emotional strength. Health care professionals are expose to both of these factors on a daily basis especially since their working environment (Hospitals) are constantly changing and becoming more demanding. According to the World Health Organization (WHO), “a healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of all workers and the sustainability of workplace.” However, despite WHO’s aim to promote and foster healthy work environments, approximately 2 million work-related deaths occurred in 2000. Recent studies focusing on the health care sector have shown that health care professionals are exposed to a variety of severe occupational stressors, such as time pressure, low social support at work, a high workload, uncertainty concerning patient treatment, and predisposition to emotional responses due to exposure to suffering and dying patients. In this sense, health care workers are at a high risk of experiencing severe distress, burnout, and both mental and physical illness. In turn, this could affect hospital outcomes, such as the quality of care provided by such institutions. Burnout another important factor that is consider to have a psychological syndrome of chronic exhaustion, cynicism, inefficacy, and is experienced as a prolonged response to chronic stressors in the workplace. In addition, Burnout in a workplace has been associated with a multiplicity of health problems, such as hypertension, gastrointestinal disorders, and sleeplessness. It has also been associated with performance related issues, demonstrating its direct impact on workplace effectiveness. With both of these factors into consideration the purpose of this study is to develop and understand a conceptual model of the impact of stress and burnout effects among health care professionals in their work environment.

Aims and objectives: To understand the effects of stress and burnout effects among health care professionals. To determine the direct effects of stress and burnout among health care professionals. Identify the knowledge that health care professionals have about stress and burnout effects.

Methods: Participants and data collection: A cross-sectional survey will be conducted. The study participants will be selected from local Hospitals. A total of 25 hospital workers (nurses and other clinical professionals) voluntarily will complete a self-administered paper questionnaire. Ethical permission: Formal approval from the local hospital committee would be seek. Measurements: The exhaustion and cynicism subscales of the Maslach Burnout Inventory-General Survey will be use to measure burnout. Participants will use a seven-point Likert scale, ranging from 0 (never) to 6 (every day), to rate the extent to which they experience exhaustion and cynicism at work (e.g., “I feel burned out from my work”)

Keywords: stress and burnout effects; chronic exhaustion; cynicism; inefficacy.
Comparison of Flipped Model to Traditional Classroom learning in a Medical college

Article by Shubham Jain
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Abstract

Introduction: Recent advances in technology and in ideology have unlocked entirely new directions for education research. The flipped classroom is increasing momentum across different educational institutions. This approach has been cited in health professional programs such as nursing, dentistry, medicine, and pharmacy. Studies in these fields focus on student perception and satisfaction [1]. In medical education system, the flipped classroom required evidence for knowledge and skill acquisition compared to traditional methods even though students liked the flipped method. In these healthcare programs, it is paramount for students to transcend the material itself and use it to problem-solve, reason, and apply concepts and skills into practice. Using the flipped model in these education systems is unknown and it is unclear if this is effective for all topics within the healthcare field. This research describes our effort to understand if the flipped model can be used during these clinical practices to impart new material in medical education [2].

Aim and objective: To correlate the learning experience of students in traditional classroom and flipped classroom system.

METHODS: We have developed a questionnaire to see teachers approach, student’s interest, student confidence, assessment for self-care knowledge, responded to questions, in-depth knowledge of the subject, a variety of instructional methods, group discussions, student presentations, resources and administration feedback and assessment, discussion, to compare flipped and traditional classroom system[3]. The questionnaire also contain feedback on Blackboard and library resources, in-class Activities, communication The information is collected from the students who are studying in flipped classroom and already studied in traditional classroom before[4]. We run a t-test with the results of this questionnaire.

Result: After evaluating the feedback of students we have given a score out of 60. Than we compared the results of both the questionnaire through t-test.

We found all students have different opinion but the end result is so close it is difficult to say which teaching technique is preferred by students, tough the result of traditional classroom is somewhat higher.

Conclusion: In our research, though the result of traditional classroom is slightly higher but we couldn’t actually signify that which teaching technique is better, it may be because our sample size is small. So if we do this research on large scale with bigger sample size we can have a better result.

All students have different opinions it can be because everyone is not adapted to flipped classroom. We suggest that in order to ensure progress, future research on the flipped classroom should employ controlled studies that objectively examine student performance throughout a semester, with both traditional and concept-inventory style problems

Keywords: flipped classroom; instructional methods; group discussions.
A Review of the Anti-diabetic Effects of Mormordica Charantia (Bitter Melon)

Article by Taijwantie Basdeo
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Abstract

Diabetes mellitus (DM) is among one of the most common and rapidly increasing human diseases that is currently affecting more than 200 million people worldwide. This disease is characterized by hyperglycemia and arises from defects in insulin secretion, insulin action, or both. Insulin is a major metabolism regulating hormone secreted by β-cells of the islets of Langerhans of the pancreas that helps in the control of blood glucose levels. Diabetes mellitus has led to serious morbidity and mortality worldwide, therefore there is an increasing need for effective, economical and accessible natural anti-diabetic agents of treatment. One such natural anti-diabetic agent is Momordica charantia (M. charantia) or bitter melon, a member of the Cucurbitaceae family that is a commonly consumed vegetable known by various names, such as balsam pear, bitter gourd, carilla and karela found in various tropical and subtropical regions of the world. Several studies have acknowledged the anti-diabetic effects of M. charantia which has been known to be used in traditional treatment of diabetes mellitus among indigenous populations of Asia, South America, India and East Africa. This review seeks to highlight some of the anti-diabetic benefits of bitter melon use. Some preliminary clinical studies have shown that bitter melon improves glucose tolerance and reduces blood glucose levels in patients with type-II diabetes. Several mechanistic studies have also shown that bitter melon causes hypoglycemia, stimulates peripheral skeletal muscle glucose utilization, inhibits intestinal glucose uptake, suppresses key gluconeogenic enzymes, and preserves pancreatic β cells and insulin secretory function.

Keywords: Diabetes mellitus; Langerhans cells; Momordica charantia.
Effect of Insomnia on Health

Article by Abbas Abdulmumin Zakaria Okanga
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Abstract

Introduction: Insomnia is a prevalent sleep compliant that has been associated with reduced health-related quality of life (HR-QOL), impairing important aspects of daytime functioning.

Methods: Data derived from an epidemiological study identified the association between insomnia and HR-QOL. Subjects were assigned to the insomnia group (diagnosed with insomnia as it was experienced at least a few times a month) and the non-insomnia group (no insomnia or sleep symptoms). HR-QOL was assessed using the short form 36 (SF-36) (mental and physical scores). Others were randomly mailed questionnaires in a healthcare system. The questionnaire was a form of the health status questionnaire with well-validated medical outcomes using the same short form 36 (SF-36) health survey, a 3-question depression screen, a sleep questionnaire, demographic variables, questions about medical encounters and prescription and over-the-counter (OTC) drug use.

Result: Individuals with insomnia and assigned to the insomnia group were reported with lower HR-QOL scores and increased healthcare resource use compared with individuals with no insomnia and assigned to the non-insomnia group. The negative association of insomnia remained significant on all HR-QOL scores and OTC drug use.

Conclusion: Insomnia is significantly associated with reduced health-related quality of life.

Keywords: Insomnia; health-related quality of life; over-the counter.
Effects of Caffeine on Alzheimer’s disease: A Retrospective Meta-Analysis

Article by Ashwant Mohabir
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Abstract

The present study was designed to find out the effect of Caffeine on Alzheimer’s disease.

Background: Alzheimer’s disease is an irreversible, progressive brain disorder that slowly destroys memory and thinking skills and, eventually, the ability to carry out the simplest tasks. Caffeine is a natural stimulant most commonly found in tea, coffee and cacao plants. It works by stimulating the brain and central nervous system, helping you to stay alert and preventing the onset of tiredness.

Method: The present study is a retrospective meta-analysis was conducted to prove the putative protective effects of caffeine against dementia/AD are of great interest. We have collected findings from few longitudinal epidemiological studies about caffeine/coffee and dementia/AD/cognitive function and compiled all these study results and presented.

Results: The findings of the previous studies are somewhat inconsistent and most of the studies support coffee’s favorable effects against cognitive decline, dementia or AD. In the CSHA studies, they have been a decreased of over 31% in Alzheimers Patients over 65 years. Moderate coffee drinkers had a 62-64% decrease when compared to low coffee consumers. Further, most of the studies have shown that, coffee drinking both at midlife and later in life have shown to be related with a decreased risk of Cognitive impairment/Alzheimer’s Disease. In recent studies, performed on mice, it has been shown that Caffeine and A2 alpha receptors prevent amyloid-Beta induced cognitive deficits. Interestingly in the same study it was shown that Caffeine reverses cognitive impairment and decrease amyloid-beta levels in the brain of Alzheimer’s disease mice. Owing to its Neurologic advantages, it was also proved that Caffeine have many benefits in the cardiovascular System in a moderate consumption.

Conclusion: It appears that moderate caffeine consumption may decrease the risk of Cognitive Impairment/Alzheimer’s disease. Hence, the coffee consumption globally might show decrease the development or delay of onset of Alzheimer’s disease.

Keywords: Alzheimer’s disease; caffeine; Cognitive impairment.
Some of the Traditional Medicines Used By the Guyanese People and Their Benefits

Article by Yogita Ganeshram
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Abstract

Traditional Medicine remains to be a widely used concept in modern day Guyana despite the availability of nearby hospitals and other good health care facilities. While the vast area that is traditional medicine has been explored quite significantly in mostly Eastern countries including India, Korea and China, there has been little to no research done to shed light on the usage and system of common traditional medicine that is used in Guyana. This research is derived from published scientific articles and data collected via survey from various Guyanese people, living in various parts of Guyana and it provides an insight on some of the traditional medicines used by the guyanese people and what are their benefits.

Keywords: traditional medicine, Guyanese people, good health care facilities.
How Neurolinguistic Programming Can Undo Limiting Beliefs

Article by Sayanth Raj; Niharika Anand
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Abstract

Neurolinguistic Programming consists of many techniques that can alter behaviour (unfavourable), the state of mind and for general self-development. In medical colleges especially, students face a lot of stress and pressure in terms of handling their academics and personal life. They themselves start believing that they can’t cope up. This compromises their performance. “Undoing Limiting Beliefs” is one of the techniques used in NLP to help the subject overcome their own limitations.

Undoing Limiting Belief works on the principle that our subconscious can be influenced to change some of our “beliefs”. This principle can be demonstrated by the Suggestion technique, through which we can see immediately the changes occurring due the influence of the mind. Undoing Limiting Belief consists of a small exercise that can be done by the participant/volunteer, chosen at random. This study will then take into account the immediate results of the exercise by giving the participants a simple questionnaire in which the participant/volunteer will rate the intensity or extent of their limiting belief before and after performing the exercise.

This study aims to create an awareness about NLP techniques among the students and to explain how it works on our minds, in terms of neurological connections. It also aims to make the audience understand how they can use simple exercises to help them achieve their goals by empowering their mind to eliminating their own limitations.

In conclusion, the study aims to show the efficacy of NLP in training ourselves by taking the example of Undoing Limiting Beliefs. We expect to see changes in the way the participant/volunteer rates their limiting belief. By this, the study aspires to show the efficacy of NLP and to teach the students to use this technique to improve the quality of their life.

Keywords: Neurolinguistic, Neurolinguistic Programming (NLP), mind, undoing limiting beliefs.
Statin Use and Risk of Developing Diabetes

Article by Narda Persaud
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Abstract

Statin, 3-hydroxy-methylglutaryl coenzyme A reductase inhibitors are widely used in the primary and secondary prevention of cardiovascular diseases to lower serum cholesterol levels.

In recent years, several randomized, controlled trials (RCTs) and observational studies have reported increased risk for onset type 2 diabetes mellitus with statin treatment, particularly with use of high-intensity statins that reduce low-density lipoprotein cholesterol (LDL-C).

Objective: To investigate the relationship between statin therapy and the risk of developing type 2 diabetes.

Research design and methods: Articles were identified through a database search and by consulting reference lists of review articles that were located. Relevant data were coded by previous studies. After which, the researcher summarized the data from randomized, controlled trials and observational studies for statin-associated Type 2 diabetes risks versus the use of statin therapy established benefits for CV risk reduction.

Results: During the follow up, the increase in incidence of Type 2 Diabetes in those with major risk is approximately 25% for statin use, compared to placebo. However, in those with major T2D risk factors, the number of CV disease events prevented for each excess case of T2D is close to or greater than one, indicating that the risk-benefit ratio still strongly favors use of statin therapy.

Conclusion: It was observed that there are significantly higher rates of diabetes with statin therapy. Therefore, the effect of statins increases diabetes risk appears to extend to populations at high risk for diabetes.

Keywords: 3-hydroxy-methylglutaryl coenzyme; statin therapy; Serum cholesterol levels.
Preventing Unsafe Abortion

Article by Anjana Chowdary Elapolu
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Abstract

Introduction: worldwide, 25 million unsafe abortions (45% of all abortions) occurred every year between 2010 and 2014, according to a new study by World Health Organization (WHO) and the Guttmacher institute. The majority of unsafe abortions, or 97%, occurred in developing countries in Africa, Asia and Latin America. Unsafe abortion poses a serious threat to the health of millions of women during their reproductive lives. Unsafe abortion is a major cause of maternal mortality and morbidity.

Abortion is legal accepted in Guyana under the Medical Termination of Pregnancy act of 1996. According to the New York based centre for Reproductive Rights, Guyana and French Guiana are the only countries in South America where the abortion procedure is legal without any restrictions.

An increasing case of abortions are seen among the unmarried adolescents, particularly in urban areas. The adolescents are at risk of sexually transmitted Infections, lower socioeconomic status which inhibits their growth of carrier, personal and social life.

Method: Ten articles of preventing unsafe abortion and its consequences from Science direct, WHO journal and Guttmacher institute website were used for this review study.

Conclusion: The review explains about the impacts of unsafe abortion among health, personal and social aspects. The preventive measures for unsafe abortions, countries must make supportive policies and financial commitments to provide comprehensive sexuality education; a wide range of contraceptive methods, including emergency contraception; accurate family planning counselling; and access to safe, legal abortion.

Keywords: Unsafe abortions; sexually transmitted Infections; contraception.
To Determine the Impact of Breakfast on Academic Performance of College Student

Article by Toni Ann Effs
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Abstract

Introduction: Breakfast has earned the title as the most important meal of the day. Diet has a pervasive and profound impact on human health. Breakfast consumption is associated with positive outcomes for diet quality, micronutrient intake, and weight status and lifestyle factor. Moreover, recent studies have demonstrated that breakfast enhances intellectual capacity, concentration, attention and academic performance. This study will emphasized the consumption of breakfast on academic performance of college student.

Method: The population studied was students of the Texila American University, both male and female. The study was a quantitative sample of 120 correspondent, in which student in their late adolescence to early adulthood was randomly selected from each class ranging from pre-clinical to clinical (MD1 to MD8) in order to extract data. The relation between breakfast consumption (per week) and academic performance using a multivariate analysis which includes gender, age, height, weight, body mass index, school performance rating and frequency of physical activity was assessed.

Results: During study’s findings showed percentage mean for both female in their late adolescence and early adulthood for achieving average or high academic performance according to breakfast frequency per week, one day a week, μ=70; twice per week, μ=65; 3 days per week, μ=75; 4 days per week, μ=75; 5 days per week, μ=76; 6 days per week, μ=80; and every day, μ=89, compared to no breakfast per week. For male in late adolescents and early adulthood, the percentage mean for achieving average or higher academic performance according to the breakfast frequency were once per week, μ=65; twice per week, μ=60; 3 days per week, μ=65; 4 days per week, μ=70; 5 days per week, μ=75; 6 days per week, μ=80; and every day, μ=92, compared to no breakfast.

Conclusion: The findings of the current studies showed that there is a positive correlation between breakfast consumption and academic performance. Breakfast consumption improves student performance, student who consume breakfast regularly had a higher academic performance. Contrary to, student who frequent skip breakfast showed a lower academic performance.

Keywords: Breakfast; academic performance; body mass index.
Olfactory-Visual Saccadic Pathways smell in a Whiff – See at a Glance

Article by Geethanjali vinodhanand, Harshita chatterjee, Nityaakarshasuryavenkatghanta
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Abstract

Introduction: The olfactory-visual saccadic pathway involves the piriform cortex which has an extensive connection with the other parts of the olfactory network and receives the inputs directly or indirectly from the olfactory bulb without the information being relayed through the thalamus. Activation of the piriform cortex is generally seen in all olfactory tasks, and it appears to be the region of representation of the “olfactory object”. It sends the information to other regions of the brain with the help of the dorsal and ventral (entorhinal cortex)-(interior to the rhinal sulcus) located at the medial temporal lobe, which wide spreadly functions as a network of memory and navigation, there by which navigates the information to the frontal lobe - to be more specific to the (frontal eye field region of the brain )allowing to provide us with rich information about our environment which influences our visual attention, simultaneous movement of both eyes between two or more phases of fixation in the same direction. The aim of this study is to facilitate structural connectivity between the areas of olfactory -visual saccadic pathway

Result: To demonstrate that a structural connectivity exists between the areas of the brain associated with olfactory -visual saccadic pathway: The possible areas involved are area number (27) piriform cortex, area number (28) ventral entorhinal cortex, area number (34) dorsal entorhinal cortex and area number (8) frontal eye field.

Conclusion: In conclusion: If a structural connectivity exists between these structures, the information or perception of the smell reaching to area number (8) confirms that olfaction plays an important role in the control of visual attention and eye movements.

Keywords: Piriform cortex; piriform cortex; visual attention.
Effects of Intoxicants on the Mental Health of Young Adults: A Case Study of Nigeria

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Abstract

Introduction: Mental health covers a very broad spectrum. It includes emotional, physiological and social wellbeing that affects how we act, think and feel, which in turn determines the choices we make and how we relate to others. The mental strength of young adults (age range of early teens to early twenties) is quite unbalanced due to many factors bordering on physiological and environmental factors and as such are more predisposed to the use and subsequent addiction to intoxicants. This is why young adults are the subjects of interest in this study.

There are many factors that affect mental acuity, ranging from ‘quite’ serious (as anything that affects the mental health is considered serious no matter how trivial it may seem) to extremely serious. One and perhaps the most serious factor is the indiscriminate use of intoxicants. Intoxicants are substances, which when taken into the body produces a condition of diminished mental and accompanying diminished physical abilities; after all, the mind determines the state of the body. Intoxicants include pharmaceuticals like codeine, tramadol and other uncategorized classes like the gas emitted from sewage, concentrated ammonia from urine and so on.

Aims & objectives: The aim of this study is to show the adverse effects of intoxicants on the mental health of young adults, which contribute a very significant population percentage in Nigeria.

Subjects and methods: Yaba Psychiatric Hospital, a neuropsychiatric hospital in the western region of Nigeria attend to the mental health care of thousands of patients. About 61,091 cases were addressed in 2017 and there has been a 15% increase. Of this percentage, about 35% are young adults. Over 50% of this young adult population are admitted for drug related problems. The patients were evaluated and other factors that could have led to mental health problems were ruled out.

Results: The evaluation of the patients to rule out other possible causes proved that the cause of mental dysfunction is as a result of intoxicant use and this shows that intoxicants have an adverse effect on the mental health of young adults.

Conclusion: The use of drugs amongst young adults is at an alarming increase and is a serious cause for concern. The drastic effects cannot be over emphasized and as such should be treated with the seriousness it demands. A lot of young adults have been permanently damaged as a prolong use of most of these intoxicants cause irreversible damage most of the time. Thus it is import to tackle this issue and solve the problem of intoxication.

Keywords: Intoxicants, Young adults, mental health, Nigeria, Physiological and environmental factors.
Sleep: The Undervalued Necessity

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Abstract
Sleep plays a vital role in good health and well-being throughout our life. Getting enough quality sleep is obtained by going through the five sleep cycles (REM and Non-REM) which helps to protect your mental and physical health, quality of life, and safety. But, do we really value the time that we should allow our bodies to rest? The way you feel while you’re awake depends in part on what happens while you’re sleeping. During sleep, your body is working to support healthy brain function and maintain your physical health by a rejuvenation mechanism. This places emphasis on the hormone melatonin to regulate the circadian rhythm to prevent malfunctioning of the ANS (sympathetic and parasympathetic). In children and teens, sleep also helps support growth and development. The damage from sleep deficiency can occur in an instant (such as a car crash), or it can harm you over time in the case of chronic health problems like diabetes mellitus. Within this type of research design, 100 randomly sampled patients were surveyed. This reflected that over 85% of teenagers and adults had severe misconceptions about sleep. Another 75% of the sample are at a high risk for a sleeping disorder such as sleep apnea and narcolepsy, seen impacting on how well they think, react, and get along with others. These findings strengthens the off expressed hypothesis linking poor sleeping routine to the establishment of a less productive quality of life. In general, these results indicate that the effects of sleep deprivation may be underestimated in some narrative reviews, particularly those concerning its effects. Thus, this paper aims to examine in depth, how beneficial maintaining a good circadian cycle is and hence create a needed scope of awareness of identifying and reducing sleep disorders.

Keywords: Sleep cycle, Sleep disorder, Melatonin.
Analyzing the Prevalence and Awareness of Glaucoma in Linden, Guyana

Article by Shellon Andrea Massiah
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Abstract

Introduction: World Health Organization features glaucoma as the leading cause of irreversible blindness. Studies have proven persons undiagnosed and late diagnosed are related to glaucoma that is associated with visual disability. Lack of awareness and screening are the major reasons why persons are undiagnosed and late diagnosed. In a newspaper article published on March 11, 2018, Dr. Sugrism (Guyana’s Head Ophthalmologist) stated that the prevalence of glaucoma in Guyana has not been calculated however, Linden, Guyana has had an increased number of cases. Moreover, this research calculated the prevalence and analyzed the awareness of glaucoma in Linden, Guyana.

Methods: A prevalence survey was conducted to determine the number of glaucoma cases in Linden, Guyana over the past two years. Questionnaire based survey and interviews involving residents of Linden 30 years and over evaluated the awareness of glaucoma by investigating the percent of persons who have a basis understanding of glaucoma.

Results: Four hundred and three cases of glaucoma were calculated with female (68%) carrying a higher percentage compared to males (32%). The most common risk factors included genetics and persons ages 40 and over. Ninety-two percent of the cases reported were primary open angle glaucoma and the remaining eight percent was listed as angle closure glaucoma. Eighty-seven of the ninety-two percent cases of primary open angle were late diagnosed. As a result, forty percent have already achieved blindness even after undergoing surgery due to the optic nerve being severely damaged before the diagnosis. In analyzing the awareness, fifty-three percent of residents interviewed knows what is glaucoma but lacks the basis understanding of glaucoma. And even though there is free accessible eye care service in every community sixty percent have never done an eye examination. Many are mostly lead to eye care services when signs and symptoms are noticed hence, the late diagnosis of glaucoma.

Conclusion: Lack of awareness of Glaucoma in Linden, Guyana has led to an increase number of cases and blindness associated with glaucoma.

Keywords: Glaucoma; ophthalmologist; blindness.
Optic Ataxia and its correlations with “How” stream Visual Pathways

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Abstract

Introduction: Optic ataxia is a neurological condition with clinical manifestations resulting in disturbances of visually guided hand movements on reaching for a target object. Previous studies failed to provide substantial evidence for the structural pathway damaged by this condition. This study aims to identify the neural structural connections affected by optic ataxia while correlating its functional importance and clinical implications, using “Diffusion Imaging fiber Tractography”.

Methods: The observational analysis, used ten healthy adults, ultra-high b-value, diffusion MRI Datasets from an Open access platform. The datasets, ranging from both sex, between 20–59 years, with mean age of 31.1 years. The analysis process includes, data processing and fiber tractography using software tools.

Results: The fibers were traced, and identified for “Dorsal” stream pathways involved in visual objects spatial orientation. Fibers from this “Dorsal” stream pathways, extends between the “Visual cortex (Brodmann Areas 18 and 19) and Superior Parietal Lobule (Brodmann Area 7)”, demonstrating unconscious integration of visuospatial information. These neural structural connections, helps in targeting precise motor movements towards the visually perceived object.

Conclusion: The current observations offer knowledge to comprehend the structural existence and functional correlations for visuo-motor coordination pathway or “how” stream pathways in visual perception. Damage to this “how” stream fibers in the visual pathways manifest as Optic ataxia. This study provides a guideline for surgical practices to prevent damages to these areas during neurosurgical interventions.

Keywords: Optic ataxia; visuo-motor coordination; fiber tractography.
Accuracy of First-Trimester Ultrasound in Diagnosis of Tubal Ectopic Pregnancy in the Absence of an Obvious Extrauterine Embryo: Systematic Review and Meta-Analysis

Article by Denika Allen
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Abstract

Context and aim: To survey the accuracy of ultrasound in the diagnosis of a tubal ectopic pregnancy in the absence of an obvious extraterine embryo.

Subjects and Methods: This was a systematic review directed in accordance with the PRISMA statement and registered with PROSPERO. We examined MEDLINE, EMBASE and the Cochrane Library for applicable citations from database commencement to July 2014. Studies were selected in a two-stage process and their data extracted by two reviewers. Accuracy measures were calculated for each ultrasound sign, (empty uterus, pseudo sac, adnexal mass and free fluid in the pouch of Douglas) alone and in various combinations. Individual study estimates were plotted in summary receiver–operating characteristics curves and forest plots for examination of heterogeneity. The excellent of included revisions was judged.

Results: Thirty-one revisions including 5858 women were carefully chosen from 19 959 citations. Following meta-analysis, an empty uterus on ultrasound was found to forecast an ectopic pregnancy with a sensitivity of 81.1% (95% CI, 42.1–96.2%) and specificity of 79.5% (95% CI, 68.9–87.1%). The corresponding performance of the pseudo sac, adnexal mass and free fluid were: 5.5% (95% CI, 3.3–9.0%) and 94.2% (95% CI, 75.9–98.8%); 63.5% (95% CI, 48.5–76.3%) and 91.4% (95% CI, 83.6–95.7%); and 47.2% (95% CI, 33.2–61.7%) and 92.3% (95% CI, 85.6–96.0%), respectively.

Conclusion: Imagining of an empty uterus, adnexal mass, free fluid or a pseudo sac has poor sensitivity for the diagnosis of a tubal pregnancy when an obvious extrauterine embryo is absent, but it has decent specificity. We can therefore conclude that ultrasound is more useful: However, the findings were limited by the inadequate quality of some included studies and heterogeneity in the index test and reference standard.

Keywords: diagnostic accuracy, ectopic; pregnancy, systematic review, ultrasound.
The Effect of Using Garlic as an Antihypertensive Drug

Article by Evannie Edwards

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Abstract

The study was conducted in a bid to ascertain information on the effects of using garlic as an antihypertensive drug in patients with hypertension as opposed to using conventional medication.

It is pertinent to note how it is that garlic actually works to reduce blood pressure. The blood pressure reducing properties of garlic is due to a biologically active substance called allicin and garlic sulphides or S-methyl-1-cysteine sulfoxide.

Allicin not only relaxes the blood vessels but it also has an influence on the function of angiotensin I.

The hypotensive effect of garlic may also be due to its indirect ability to reduce cholesterol levels; reducing platelet aggregation and thrombosis.

Garlic activates the production of nitric oxide synthase and hydrogen sulphide which helps to relax blood vessels.

Studies using animal species have shown that garlic possesses properties that are capable of reducing blood pressure.

Due to interest in the topic, the researcher decided to conduct an investigation in order to ascertain more satisfying results.

The researcher gathered information from Ovid Medline, Cochrane Library and PubMed in order to identify randomized controlled trials that analyzed the effect of garlic on blood pressure.

Based on the information obtained, the result of this study proved that garlic has a greater effect on decreasing systolic blood pressure (by 3.75 mmHg) than in the diastolic blood pressure (1.59 mmHg).

It therefore stands to reason that hypertensive patients can be advised to use garlic as a supplementation to their medication, but not as a total substitute.

Keywords: Garlic; Allicin; hydrogen sulphide.
The Impact of Family Structure on the Health of children: Effects of Divorce and Negligence by Parents: A Retrospective Meta – Analysis

Article by Mahath S K
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Abstract

Background: The present study is a retrospective Meta – analysis of various research studies that focuses on the children under the age of 12 who have been affected in terms of health- based on their developmental, nutritional and overall (general) mental health due to impaired family structure. The present study also focuses on how the issues may be carried forward into their adulthood in terms of health.

Methods: The Research articles published in PUBMED, MEDLINE, SCOPUS and other coherent data published earlier was collected, compiled and represented in the present study

Results: Previous published research has shown that, children living with their married, biological parents consistently have better physical, emotional, and academic well-being.

Conclusion: Based on the present study, it has been concluded that, family relationship will have a definitive impact on the different aspects in their children’s life.

Keywords: retrospective Meta – analysis, parental negligence, health, biological parents.
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