ABSTRACT

A two-phase of experiment were carried out, for 90 days to evaluate the performance, blood indices and reproductive efficiency of rabbits fed graded levels of ginger *Zingiber officinale* rhizome meal. Forty-eight pubertal New Zealand White (NZW) rabbits of about 7-9 months that comprised of 24 bucks and 24 does were used. The bucks and does were divided into 4 treatment groups represented as T2, T3, and T4 and randomly assigned to the four treatment diets in a completely randomized block design. Each of the treatment groups consisted of 6 rabbits replicated 3 times with 2 rabbits per replicate. The level of inclusion of the test diets were 0.00%, 5.00%, 10.00% and 15.00% respectively. T1 that does not have test ingredient served as the control. The rabbits were fed twice daily, in the morning and evening. Water was given *ad libitum* to the animals. After 30 days of the feeding trial the does were subsequently mated to one of the bucks of the same treatment group. Semen characteristics of the buck were determined during the breeding season. Performance characteristics were measured. More so, blood samples were collected for haematological and serum biochemical indices, carcass and organ weights were also measured. The result on the performance study revealed that there were significant differences (P<0.05) among the treatment groups in average weight gain and feed conversion ratio. On the haematology there were significant (P<0.05) differences among treatment groups in haemoglobin, packed cell volume, mean corpuscular volume and white blood cell neutrophils, lymphocytes and monocytes in haematology and white blood cell differentials respectively. Also the results of biochemical and electrolyte, indices showed significant differences (P<0.05) among the treatment groups in urea, creatinine, alanine transaminase, aspartate transaminase, total protein, glucose and potassium, bicarbonate and calcium respectively. Result of semen characteristics showed that only live sperm and sperm motility showed significant differences (P<0.05) among the treatment groups. On the carcass and organ weights, results showed significant differences (P<0.05) in live weight, dressed weight, head, heart, liver, ribs, lungs, forelimbs, breastbone, fur and kidney. On the hormones, result showed significant differences (P<0.05) among the treatment groups in testosterone and follicle stimulating hormone, progesterone and estradiol of the buck and doe respectively. On the result of reproductive performances,
only litter size at birth showed significant differences (P<0.05) among the treatment groups, also T₄ had the best litter size at birth, litter size at weaning and litter weight at birth. This performance could be attributed to effect of nutrition. On the influence of sex on the haematology, WBC differentials, serum biochemical parameters, and electrolyte indices results showed that haemoglobin, PCV, RBC, and MCV and monocytes, eosinophils, basophils and urea, creatinine ALT, total protein, globulin and glucose and sodium, potassium, chloride and bicarbonate respectively showed significant differences (P<0.05). The results of sex on carcass and organ weight also revealed significant differences (P<0.05) between the sexes on all the parameter measured except in ribs, pelt, and kidney. The result also revealed that the does had better carcass and organ weight than the bucks.
ABSTRACT

A 90-day trial using seventy two sexually matured male and female rabbits comprising thirty six bucks and thirty six does aged between 7-8 months and of New Zealand white breed, was conducted to evaluate the effect of Clomiphene citrate (Clomid®) on the haematology, serum biochemistry, hormonal profile, semen characteristics, ovarian and testicular morphometry and the reproductive performance of the females. The experiment was a randomized complete block design (RCBD) with sex as block. The bucks and the does were divided into four treatment groups identified as T₁ (control) administered with 0.00mg of Clomid®, T₂ administered with 12.50mg of Clomid®, T₃ administered with 25.00mg of Clomid® and T₄ administered with 37.50mg of Clomid®. Each treatment group was further sub-divided into three replicates group of three mature male and three mature female rabbits. Clomiphene citrate was administered by dissolving the Clomid® tablets in water and the rabbits were drenched individually for four consecutive days. Freshly cut forage consisting of Panicum maximum, Pennisetumpurpureum and Centrostchmapubesceus was fed to the rabbits as basal diet and 750g of Top Grower Mash per day for all the rabbits was used as supplement. The animals were fed three times daily. Water was given ad libitum to the animals. The results showed that the Packed cell volume (PCV), Red blood cell (RBC), Mean corpuscular volume (MCV), Mean corpuscular haemoglobin (MCH) and white blood cell (WBC) did not indicate any significant differences (P>0.05) among the treatment groups. The haemoglobin (Hb) and Mean corpuscular haemoglobin concentration (MCHC) values were not similar (P<0.05) among the treatment groups. The mean calcium, phosphorus, sodium, potassium, chloride and bicarbonates concentrations differed significantly (P<0.05) among the treatment groups. The enzymes, alkaline phosphatase (ALP) and aspartate transaminase (AST) values showed significant differences among the treatment groups while the values of alanine transaminase (ALT) were similar (P>0.05) among T₁, T₃, and T₄ but they differed significantly (P<0.05) from T₂. The testosterone and the interstitial cell stimulating hormone (ICSH) concentrations of the plasma differed significantly (P<0.05) among the Clomiphene treated groups of the bucks as well as the control group. The follicle stimulating hormone (FSLI) luteinizing hormone (LH), 17estradiol and progesterone concentrations of the does also differed significantly (P<0.05) among the treatment groups. The semen colour, creamy-milky was similar in all treatment groups. Semen volume, sperm concentration and live sperm cells values differed significantly (P<0.05) among the treatment groups. Higher values were obtained in T₂ group. On the other hand, the percentage dead sperm cells and libido levels were significantly higher (P<0.05) in the control groups than those in the Clomiphene citrate treated groups. Results obtained from the male and female reproductive organ weight showed that as the levels of the Clomiphene citrate increased, the reproductive organ weight values decreased among, the Clomiphene citrate treated groups and the values obtained showed that there were variations among the treatment groups. The values of pre-partum weight, partum weight, litter weight at birth and litter weight at weaning obtained from the does in all the treatment groups were higher than those obtained from the control group. However, gestation length (days) was shorter among the treatment groups compared to that of the control group. The litter size at birth and at weaning, as well as the survival rate percentage
showed significant differences (P<0.05) among the treatment group with T₂ having the highest score. There were significant differences (P<0.05) on sex in haematological parameters, serum biochemistry, serum enzymes, serum mineral contents and hormonal profile. The female rabbits most often recorded higher values than the males.
ABSTRACT

The prevalence and various potential risk factors for Sexually Transmitted Infections (STIs) and some Tropical Diseases (TDs) were investigated among patients attending designated healthcare facilities in Akwa Ibom State, Nigeria from May, 2014 - April, 2015 (12 Calendar months). Blood, cervical/endocervical and urethral swabs, sputum, urine and stool specimens were collected aseptically in keeping with best microbiological laboratory standards, from between one thousand three hundred and thirty to nine thousand seven hundred and sixty six (1,330 - 9,766) participants depending on the particular investigation. Participants were investigated for various aetiologic agents of STIs including Human immunodeficiency virus /Acquired Immunodeficiency Syndrome (HIV/AIDS), Syphilis (Treponemapallidum), Hepatitis B virus (HBsAg), Chlamydia (Chlamydia trachomatis), gonorrhoea (Neisseria gonorrhoeae), candidiasis (Candida albicans) and Trichomoniasis (Trichomonasvaginalis). Agents of some Tropical Diseases (TDs) included the Intestinal parasites, Mycobacterium tuberculosis, Lymphatic filariasis (Wuchereria bancrofti) and malaria parasitaemia. The HIV/AIDS prevalence rate among patients investigated was 13.6%. HIV/AIDS prevalence according to specific locations investigated showed that Mbo location (GHMBO) had the highest prevalence of 22.0% while Oron location (IQHRN) had 19.0% and the least prevalence of 2.8% was observed at NtoEdino (GHNTO) location. There was a co-infection prevalence of 41.1% between HIV and Tuberculosis infections. Syphilis had a general prevalence rate of 2.4%, and prevalence according to specific locations examined showed that NtoEdino location (GHNTO) had the highest rate of 5.6%. This was followed by Eastern Obolo (GHEAST) - 5.4% while Itu location (MSHTTU) showed least prevalence - 0.0%. Co-infection of syphilis among patients living with HIV was 17.7%. A general prevalence of 10.3% was recorded for Hepatitis B virus infection while the prevalence according to the specific locations investigated showed that Oron location (IQHRN) had the highest prevalence of 14.0%. This was followed by UrueOffong/Uruko location (GHU/O) - 13.4% while the least - 0.0% was recorded at IkotAbia location (GHKTA). Co-infection prevalence between HIV and Hepatitis B virus infections was 75.4%. Neisseria gonorrhoeae infection had a general prevalence of 1.8% while Chlamydia trachomatis had an overall prevalence of 24.0%. Co-infection prevalence of Neisseria gonorrhoeae and Chlamydia trachomatis was 1.2%. Candida albicans showed a general prevalence of 24.8% while prevalence according to specific locations investigated showed highest prevalence at Oron location (IQHRN) - 26.8%, followed by Abak (MHABK) - 26.6% and least at Itu (MSHTTU) and Uniuyo (HCUNY) - 16.7%. Symptom-
related prevalence for candidiasis in females was 28.5%. Singles had a prevalence of 29.5% and married participations had a prevalence of 14.7%. There was significant difference among pregnant women - 54.4% and non-pregnant women - 21.9% in the distribution of candidiasis in females. Trichomoniasis had a general prevalence of 24.2% while malaria parasitaemia had a general prevalence of 70.6%, with more males (81.3%) than females (61.3%) infected with malaria parasitaemia. Malaria parasitaemia was more prevalent among rural dwellers (97.0%) than urban/semi-urban dwellers (51.4%). Lymphatic filariasis (*Wuchereria bancrofti*) had a general prevalence of 5.6%. Generally, the prevalence rates of most of the infections were inversely associated with increase in age. Age, marital status, socioeconomic-status, gender and dwelling environment were shown as demographic risk factors to the acquisition and distribution of STIs and TDs in the study area. Co-infection of STIs was a significant risk factor for the acquisition of other STIs and the upsurge of infectivity and increased acquisition and distribution of *HIV/AIDS* and *Tuberculosis* infections. Sexually Transmitted Infections and Tropical Diseases pose a serious health burden globally, especially in the developing countries, which can lead to serious health complications in men, pregnant women and non-pregnant women and even in unborn children. In conclusion, there is evidence in this study to establish that Akwa Ibom State has a significant level of endemicity of sexually transmitted infections as well as agents of tropical diseases. Prevention and control of STIs should be an integral component of sexual and reproductive health services in order to move the state and Nigeria along with the rest of the developing countries in the attainment of the Millennium Development Goals. Sexual and reproductive health, and improved environmental hygiene standards are, therefore, recommended to be included in secondary school curriculum to create a greater awareness against STIs and TDs.
ABSTRACT

The effects of landfill waste disposal system on some aspects of the environment (soil, leachate, surface and groundwater) were investigated using changes in microbial populations and physicochemical properties as parameters. Two landfills (abandoned and active) within the same climatic region of Nigeria (Akwa Ibom State) were assessed using conventional methods in line with distance from the landfill and seasonal influence while controls were taken at 5000m away but within the same area. Total heterotrophic bacterial counts of (aerobic and anaerobic) were significantly higher at 0m of the abandoned landfill compared to 50m, 100m and control surface water samples while the values of other microbial groups analyzed were not significantly different in surface water samples. The microbial groups involved were total coliforms, total phosphate solubilizing bacterial, total actinomycetes, total fungal and total nitrate reducing bacterial counts. At the active landfill, microbial counts were significantly different at each sampling point as counts decreased from 0m through 50m to 100m away. DO, COD, TSS, TDS and microbial metabolizable nutrients (N03, C03 and S04) were significantly higher in the active landfill surface water samples but decreasing in the same order of 0m, 50m and 100m away. Other physicochemical properties were not significant. All the metals determined had their highest concentrations at the abandoned landfill sites with values being non-significantly different with regards to distance. The reverse was the case in the active landfill site. These metals include Zn, Ni, Cu, Cr, Pb, Cd, and Mg. Values of Ca, Na, and K were also in the same direction. Similar observations in the groundwater samples but with very significantly lower values except in the case of microbial counts where aerobic organisms were virtually absent. In the leachate analysis, high metallic ions concentrations were observed with low microbial counts too. Distance also influenced both the microbial counts and metallic ion concentrations especially in the active landfill site. The other physicochemical parameters analyzed also showed higher values in the leachate than both surface and groundwater samples. Observations in soil microbial counts followed the same pattern as in surface water samples with counts decreasing away from the landfill especially in the active landfill but remained fairly the same at the abandoned landfill site. The study showed significant seasonal influence as there were gradual differences in the values of parameters measured during the rainy/wet season while the landfill effect was more concentrated within the 0m and 50m distances during the dry season periods indicating the spread of the landfill effect during rainy/wet season. Only THBC (aerobic) showed significantly high values during the dry season in the top soil. Conclusively, landfill impacted negatively on soil, leachate, surface and groundwater qualities with seasons and distance playing significant roles too. This means that domestic water supply should not be sourced close to such waste disposal systems.
ABSTRACT
This study assessed the antibacterial potentials of Allium sativum, Allium cepa and Garcinia kola seed extracts and their interactions with some antibiotics against multidrug resistant isolates from patients in Ebonyi state, Nigeria using standard procedures. A total of 1505 specimens obtained from patients suspected to have bacterial infections were analyzed for the presence of Staphylococcus aureus, Salmonella typhi and Pseudomonas aeruginosa. Out of this number, 215 (29.74 %) S. aureus, 98 (12.53 %) S. typhi and 56 (33.94 %) P. aeruginosa were isolated. There were no significant differences (p > 0.05) observed in the number of wound swabs that yielded S. aureus, and the number of stool and blood specimens that yielded S. typhi. The antibiotic susceptibility patterns showed that S. aureus isolates from Mater Misericordia hospital, Afikpo had the highest resistance to cloxacin, 61.95 %; cefuroxime and augmentin had 60.18 % each whereas ceftazidime had 57.52 % resistance. S. typhi isolates from Mater Misericordia hospital, Afikpo had the highest resistance to ceftazidime and augmentin with 91.07 % each followed by cefuroxime and cefixime with 80.36 % each. P. aeruginosa isolates from Federal Teaching hospital, Abakaliki showed the least sensitivity to nitrofurantion 100 %, augmentin, 93.33 % and cefixime 80.00 %. A total of 76 (35.35 %) of S. aureus were multidrug resistant. Exactly 37 (37.76 %) of S. typhi were multidrug resistant whereas 32 (57.14 %) of P. aeruginosa was found to be multidrug resistant. The inhibition zone of the crude methanol, acetone and aqueous extract of G. kola, A. sativum and A. cepa ranged from 0.00 ± 0.00 mm to 20 ± 0.50 mm. Generally, inhibition zone diameter of all the plants extracts against the bacterial isolates increased with increase in concentration of the extracts. The effect produced by the extracts was significantly (p < 0.05) lower than that of the standard antibiotic (ciprofloxacin) used as positive control. The effect of combining methanol extract of garlic (MEG), methanol extract of onion.
The post operational impact of ceramic wastes on some environmental components (soil, water- stream and borehole) were assessed using changes in microbial populations and physicochemical properties as parameters. Using conventional methods two ceramic wastes, dumpsites (IkotEbom - Station A and Ikot Ekpenyong - Station B) within the same climatic region of AkwaIbom State in Nigeria were investigated in line with distance from the dumpsites and seasonal influence while controls were taken at 5500m away but within the same area. The ceramic wastes studies revealed its composition to be Lime stone, CaCo3 (75%), Clay (AL₂Cf - FeoCb), Sand (SiO₃) and Ferric Oxide. The microbial groups involved were total heterotrophic bacteria counts (THBC), total fungi count (TFC), total Actinomycetes counts, (TAC), Phosphate solubilizing bacteria counts (PSBC) and total nitrifying bacteria counts (TNBC). Highest total heterotrophic bacteria counts $8.6 \pm 0.01 \times 10^7$ cfu/g and $7.1 \pm 0.02 \times 10^7$ cfu/g were observed at control and least counts of $3.3 \pm 6.1 \times 10^4$ cfu/g and $2.6 \pm 0.2 \times 10^4$ cfu/g at the edge of the ceramic wastes dump sites in wet and dry seasons respectively. THBC were significantly higher at Om of Station A compared 50m - 100m away. Microbial metabolizing microbial nutrients N0₃, CO3 and SO₄, TSS, TDS, DO and COD were significantly different in stream water samples but decreasing in the same trend at 0m, 10m, 50m and 100m away. The heavy metal concentrations were higher at Station A with values being non-significantly different with regards to distance. In Station B, the trend was the reverse. The heavy metals include Fe, Co, Zn, Ni, Co, Cr, K, Pb, Na and Cd. Some of the metals - Na, K and Ca also follow the same trend. Microbial counts and heavy metals concentration were also influenced by distance especially in Station A. The study showed higher values in physicochemical parameters in ceramic wastes samples than both stream and borehole water samples. The study also revealed significant seasonal influence as there were gradual differences in values of parameters measured during the wet season while the ceramic effects was more concentrated within 0m, 10m and 50m distances during the dry season periods indicating the diffusion phenomenon of the effect of ceramic wastes during the wet season. However, only THBC showed high values during the dry season in the surface soil. In conclusion, ceramic wastes impacted negatively on soil, stream and borehole water qualities with season and distance playing significant roles too. Therefore, domestic water supply should not be sourced close to ceramic waste dumpsites.
Lactic acid bacteria (LAB) consortia were isolated from fermenting maize and sorghum and characterized using phenotypic and genotypic methods. These were used to ferment processed flours of maize, sorghum, soybean and bambara groundnut. The effect of LAB consortium fermentation on proximate, vitamins and mineral composition, antinutritional factors, enzyme activity as well as in-vitro starch/protein digestibilities at 12 h intervals were determined and compared with natural fermentation and the unfermented sample. Standard molecular methods were employed for DNA extraction and Polymerase Chain Reaction (PCR) amplification of 16S rRNA gene using bacteria primer pair, 27F (5' agagtttgatcctgctcag) and 1541R (aag gag gtgatccagccgca) and LAB specific primer pair, BSF-8 (AGAGTTTGATCCTTGGCTGCTAG) and BSR-534 (ATTACCGGGCTGCTGGC). The PCR products were sequenced by Sanger method and compared with sequences deposited in the database of National Centre of Biotechnology Information (NCBI). The LAB identified were combined as follows; Lactobacillus plantarum NCFSI + Lactobacillus rhamnosus GG, ATCC 53/03 + Lactobacillus nantensis LP33 + Lactobacillus fermentum CIP 102980 + Lactobacillus reuteri DSM 20016 and Pediococcus acidilactic DSM 20284 + Lactobacillus fermentum CIP 102980 + Lactobacillus brevis ATCC14869 + Lactobacillus nantensis LP33 + Lactobacillus plantarum NCFSI to obtain consortium from maize and consortium from sorghum respectively. The result shows significant (p<0.05) increase in the moisture, ash and protein contents as fermentation time increases in the range of 9.66±0.10 to 11.18±0.04%, 1.42±0.04 to 3.14±0.04% and from 9.44±0.87 to 12.97±0.07% respectively. The lipid, fibre and carbohydrate contents decreased from 19.78±0.02 to 3.08±0.02%, 4.38±0.07 to 0.54±0.04% and from 70.82±1.11 to 19.30±0.26% respectively. Vitamin A, E, K, C, B1, B2 and B3 increased significantly (p<0.05) with fermentation and ranged from 0.00 to 10.72±0.18 mg/100g, 0.00 to 2.78±0.11 mg/100g, 0.06±0.03 to 6.82±0.02 mg/100g, 0.00 to 14.81±0.80 mg/100g, 0.27±0.07 to 2.72±0.05 mg/100g, 0.18±0.03 to 2.90±0.10 mg/100g and 1.26±0.16 mg/100g respectively. Fermentation caused significant (p<0.05) increase in calcium, phosphorus, sodium, iron and potassium content which ranged from 2.69±0.16 to 18.77±0.66 mg/100g, 55.10±0.95 to 724.10±0.10 mg/100g, 2.03±0.03 to 27.14±0.10 mg/100g, 0.58±0.03 to 20.89±0.03 mg/100g and from 73.60±0.56 to 1798.30±0.16 mg/100g respectively. The pH decreased with increase in the total titratable acidity which ranged from 6.46±0.02 to 3.44±0.03 and from 0.62±0.01 to 2.48±0.02 respectively. The bulk density, swelling capacity and water holding capacity decreased while the oil holding capacity and emulsion capacity increased. Tannins, phytate, polyphenol and trypsin inhibitor activity decreased from 43.64±0.04 to 0.08±0.00%,
296.10±0.15 to 12.86±0.06 mg/100g, 584.46±0.14 to 83.23±0.09 mg/100g and from 52.08±0.12 to 0.99±0.04 mg/100g respectively. There were significant (p<0.05) increases in the amylase, protease and lipase activity ranging from 0.06±0.01 to 4.16±0.01 U/g, 2.22±0.01 to 47.66±0.01 U/g and from 0.52±0.01 to 6.92±0.01 U/g respectively. The result showed a significant (p<0.05) increase in the *in-vitro* starch and protein digestibility ranging from 10.68±1.28 to 79.46±1.23%, and from 61.28±0.96 to 93.56±2.16% respectively. The microbial count ranged from 3.8×10⁸ to 9.1×10⁹ CFU/g (total count), 3.42×10⁶ to 8.66×10⁸ CFU/g (LAB count), 0.00 to 8.6×10² CFU/g (coliform count) and from 0.00 to 3.72×10³ CFU/g (fungal count). The organisms isolated from the fermented sample include *L. fermentum, L. plantatum, L. nantensis, L. reuteri, L. rhamnosus, L. brevis, L. lactis, L. bulgaricus, P. acidilactici, Leuconosoc species, Saccharomyces cerevisiae, Candida utilis and Rhizopusspecies*. This study has shown the effectiveness of LAB-consortium fermentation in improving the nutritional quality, decreasing antinutritional factors as well as increasing the *in-vitro* starch/protein digestibility of maize, sorghum, soybean and bambara groundnut flours more than the natural fermentation.
DEPARTMENT OF BIOCHEMISTRY

Name: Adindu Eze Azubuike
Mat. No: 11/PG/Ph.D/BCM/96/20704
Supervisors: Prof. Elekwa
Prof. A.I. Ukoha
Thesis Title: Phytochemical Screening and Anti-Hypertensive Properties of Aqueous Extracts of Leaf, Stem Bark and Root of Hura crepitans (L) On Wister Albino Rats.

ABSTRACT

The quantitative phytochemical screening using gas chromatography-flame ionization detector (GC-FID) and the antihypertensive properties of the aqueous extracts of stem bark, leaf and root of Hura crepitans on Wistar albino rats were evaluated. The GC-FID quantitative phytochemical analysis of the various parts (stem bark, leaf, root) of Hura crepitans showed total amounts of Phenolic compounds (383.809; 301.438; 387.551), Flavonoids (292.2249; 279.9585; 303.3209), Hydrocinnamic acids (85.844; 81.266; 88.508), Alkaloids (379.461; 362.696; 398.82), Terpene (88.8975; 64.3221; 98.2341), Saponins (126.489; 121.903; 130.005), Carotenoid (171.356; 181.836; 167.226), Sterols (6.50989; 2.31689; 8.05969), Lignans (61.5989; 58.5829; 63.4149) and Allicins (1.97593; 0.16107; 0.94962) respectively. LD_{50} investigation showed non-toxicity of the various aqueous plants extracts at 5000mg/kg hence the safe dose. All the animals treated with the different plant parts gained significant (P<0.05) weight within the experimental period with their weights ranging between 118.2± 6.24 to 138.00± 3.63 when compared with the hypertensive untreated animals with weight of 102.10± 5.40. All post treatment animals' pulse rates had significant (P<0.05) decrease with values within the range of 225.60± 11.30 to 237.80± 3.63, when compared with untreated hypertensive animals with pulse rate of 276.80± 6.22. In all post treatment animals, there was significant (P<0.05) decrease in both ALT and AST activities with values varying from 24.40± 1.03 to 30.80± 2.35 (ALT) and 81.40± 5.05 to 118.80± 5.25 (AST) when compared with untreated hypertensive animals with ALT values 50.60± 6.94 (ALT) and 129.20± 11.12 (AST). Lactate Dehydrogenase activity (LDHA) showed significant (P<0.05) decrease in all the treated animals with values ranging from 103.60± 6.99 to 114.40± 0.33 when compared with the untreated hypertensive animals with value 120.20± 1.50. In the animal group treated with aqueous leaf
extract of *Hura crepitans*, there was significant (P<0.05) increase in CPA (48.80+30.31) when compared with untreated hypertensive animals (20.10+1.21). In all other treated groups, there was decrease in CPA but this decrease was not significant (P<0.05). Levels of Triglycerides (TG), Total Cholesterol (Chol.), High Density Lipoprotein (HDL), Low Density Lipoprotein-Cholesterol (LDLC) and Very Low Density Lipoprotein-Cholesterol (VLDLC) were analysed. At the post treatment stage, there was significant decrease in cholesterol levels in group treated with Propanolol, aqueous extracts of leaf and root while levels of TG and HDL decreased significantly (P<0.05) in all the treated groups. The levels of LDLC decreased significantly (P<0.05) in the untreated hypertensive animals when compared with the normal control group, while it increased significantly (P<0.05) in the groups treated with aqueous leaf, bark and root extracts. The level of VLDLC decreased significantly (P<0.05) in all the treated groups with values ranging from 15.24 when compared with untreated hypertensive animals with value 30.48. VLDLC increased significantly (P<0.05) in the untreated hypertensive animals with value 30.48 when compared with normal control group with value 21.48. These results show that the aqueous extracts of the different parts of Huracrepitans have antihypertensive potentials.
ABSTRACT

This study investigated the impact of conflict management on organizational performance, a study of selected public and private sector organizations in South East Nigeria, with a view of coming out with ways of improving their performance and productivity. In organizations, conflict is regarded as the presence of discord that occurs when goals, interests or values of different individuals or groups are incompatible and frustrate each other attempting to achieve objectives. There are different views surrounding the origin of conflict in organizations and institutions. From the dawn of creation, mankind has been presented with conflict. Conflicts appear to be inevitable; once there is human interaction, conflict seems to fester. This thesis seeks to describe the concept of conflict management and conflict in organization. This study employs survey research design and used questionnaire to collect data from 377 managers and non managers in private sectors and 393 from public sectors in selected organizations in South East Nigeria. Correlation coefficient, Spearman rank correlation, paired test statistics and Regression analysis were used in analyzing the hypothesis. The research revealed that limited resources are the major cause of conflict and that conflict has both negative and positive effects on organizations, but when managed properly, the positive effects can be used to encourage organizational innovativeness and build cooperation among the employees. Result from the data analysis indicated that positive relationships exist between conflict and performance in the public sector while negative association exists in private sector suggesting that conflict has reduced effect on the performance of the sector. The research therefore recommends among others: the organization should embark on training and retraining of its employees; conflict preclusion structures should be put in place to address issues that can produce conflict before it breaks open; management should formulate strategies to resolve conflict, and strict implementation of collective agreements and regular review of personnel policies.
DEPARTMENT OF MARKETING

Name: Obeta Charles Eze

Mat. No: 05/PG/Ph.D/MKT/5146

Supervisors: Prof. Ogwo E. Ogwo  
Dr. A.E. Ndu Oko

Thesis Title: A Study on the Applicability of Social Marketing Paradigm in the Fight against Corruption in Nigeria

ABSTRACT

This study focuses on the applicability of the social marketing paradigm in the fight against corruption in Nigeria. To explore this, the study set out a major objective of determining how the use of media publicities, seminars, workshops and trainings could serve as strong social marketing tools in raising the knowledge, awareness or information level of Nigerians on the harmful effects of corruption as well as the benefits of a corrupt-free Nigeria. Additionally, the objective is to find out whether such increased knowledge, awareness or information level of Nigerians could lead to drop in corruption and also to find out if the application of compensations, rewards, awards, penalties and sanctions as social marketing tools could equally cause a decline in corrupt practices among the people. A descriptive survey design was applied to a sample size of 645 respondents drawn from the federal and state ministries of Works and Education as well as the National and state Houses of Assembly from one state in each of the six-geo-political zones plus FCT which formed the study population. The face and Content validity as well as the Cronbach Alpha Coefficient methods were used for testing the validity and reliability of the questionnaire instrument while the Linear Regression Analysis was used, to test the hypotheses. Results of the study show that use of publicities, seminars, workshops and trainings are strong social marketing instruments for raising the consciousness or awareness and information or knowledge level of Nigerians on both the harmful effects of corruption and the benefits of a corrupt-free country which ultimately enhance the level of transparency, accountability, and ethical value orientation in Nigerians but without a very significant drop in the incidences of corruption in the country. Similarly, the use of compensations, rewards, and awards are found to be stronger social marketing strategies against corrupt tendencies than the use of penalties and sanctions. Based on the result, it was recommended among others, that the war against corruption in Nigeria by the anti-graft institutions integrate the use of publicities, seminars, workshops and trainings as social marketing campaigns to regularly expose the harmful effects of corruption as well as the benefits of a corrupt-free nation to Nigerians which will lead to a more significant drop in corruption. Furthermore, establishing a National Social Marketing Centre as well as Institute of Social Marketing Research in six Universities (one in each geopolitical Zone) were equally recommended in the study.
DEPARTMENT OF BANKING AND FINANCE

Name: Uruakpa Peter Chinyere
Mat. No: 07/PG/Ph.D/89/7105
Supervisors: Prof. H.O. Isu  
DR. O.M. Ogbulu


ABSTRACT

The study examined capital market development and economic growth across Africa from 1993 - 2013. Nine countries judgmentally) drawn from East, West, North and South Africa were case studied. The study employed Time series secondary data sourced from World Bank and Association of Stock Exchanges of Africa. Statistical tool such as regression analysis. Augmented Dickey fuller and granger causality test were applied. Analysis was aided by E-view electronic software. Results of the pooled data analysis showed that GDP has positive and significant relationship with market capitalization but insignificantly related to turnover ratio. It was also found that GDP has negative and insignificant relationship with number of listed companies and value of transactions. The ADF result showed that all the variables were integrated in order one. The granger causality test indicates that there is no granger causality relationship between market capitalization and GDP, there is no granger causality relationship between number of listed companies and GDP, there is unidirectional causality relationship between turnover ratio and GDP and there is no causality relationship between value of transactions and GDP. The study recommends amongst other things that African countries should formulate policies to strengthen the stock market to enhance its contributions to the growth of her economy.
ABSTRACT

The main thrust of this study is to find out the relationship between dividend, policy and market value of firms quoted on the Nigerian Stock Exchange (NSE). The study used panel data constructed from the financial statements of firms listed on the NSE for a period of 10 years, from 2002-2011. These financial statements were obtained from the NSEfactbook. The Ordinary Least Square (OLS) statistical technique under the computer package E-View 7.0 was used for the data analysis. From the results of the study, cash dividend and investment policy have a negative but significant relationship with the market value of firms quoted on the NSE, while stock dividend and earnings were found to have a positive and significant relationship with market value of firms quoted on the NSE. Generally, the result is in tandem with the dividend relevant hypothesis, that dividend policy has an effect on market value of firms. Based on these results, some recommendations were made prominent amongst which was that companies operating in Nigeria should see dividend policy as a strategy towards increasing their market value and jettison the dividend irrelevant hypothesis.
ABSTRACT

This thesis reviewed bank capitalization, monetary policy and the performance of deposit money banks in Nigeria. It aimed at finding out the link between growth rate of bank capital proxied by shareholders’ fund (SHF) and its relationship with growth rate of bank profitability, growth rate of total loans and advances, asset growth and total deposit liabilities. To carry out the study, data were collected from CBN Statistical Bulletin and Statement of Accounts, NDIC financial report and capital market data bank from 1980-2013. The data were analyzed using OLS multiple regression, unit root tests, co-integration, error correction mechanism (ECM) and Granger causality tests. The results indicate that growth rate of shareholders fund (GSHF), foreign exchange rate (FXR), interest rate spread (IRS) and growth rate of market capitalization (GMCP) have significant impact on growth rate of profit before tax (GPBT). Growth rate of total loans and advances (GTLA) of Deposit Money Banks has significant relationship with growth rate of shareholders’ fund (GSHF), foreign exchange rate (FXR), Monetary Policy Rate (MPR) and growth rate of market capitalization (GMCP). Growth rate of Total Assets of Deposit Money Banks has significant relationship with foreign exchange rate (FXR), Monetary Policy Rate (MPR), growth rate of shareholders’ fund (GSHF) and growth rate of market capitalization (GMCP). In addition, findings indicate that growth rate of Total Deposit Liabilities (GTDL) has no significant relationship with Foreign Exchange Rate (FXR), Monetary Policy Rate (MPR), growth rate of Shareholders’ Fund (GSHF) and growth rate of market capitalization (GMCP). The co-integration test reveals that there exists a long-run relationship among the variables under consideration. The granger causality test analysis indicates that growth rate of shareholders fund has no granger causality with banks profitability, total loans and advances, growth rate of banks assets and growth rate of total deposit liabilities respectively. From all indications, the study concludes that bank capitalization has had varying effects on bank performance in Nigeria. The study recommends amongst others that banks should seek more avenue to raise capital rather than rely heavily on customers’ deposits.
This thesis analyzed the impact of the Nigerian financial markets on its economic growth for the period 1981 to 2013. It also investigated the causal relationship between financial market development and economic growth of Nigeria. The independent variables employed in this study are the ratio of market capitalization to GDP, the ratio of value of money market instruments to GDP and stock market turnover ratio, while the dependent variable is the growth rate of gross domestic product. The data used in this study were extracted from the publications of well-established public institutions in Nigeria such as the Central Bank of Nigeria (CBN), Nigerian Stock Exchange (NSE) as well as National Bureau of Statistics (NBS). The Ordinary Least Square (OLS) Multiple Regression, Augmented Dickey-Fuller (ADF) Unit Root Test, Johansen Co-integration Analysis, Over-parameterized and Parsimonious Error Correction Model (ECM) and pairwise Granger Causality Tests were employed to establish the true relationship between financial market development variables and economic growth in Nigeria. The findings revealed the existence of a significant long-run relationship between financial market variables and economic growth from 1981 to 2013. There is a positive and significant long-run relationship between stock market turnover ratio and economic growth. There is also a positive and significant long-run relationship between market capitalization ratio and economic growth, while value of money market instrument ratio exhibited a negative and insignificant relationship with economic growth. The Granger Causality Test indicated no causality relationship or influence between the MCPR, RVMI, TOR and GDPG. It is recommended that emphasis should be placed on promoting the macro-economic and institutional environment that facilitates financial intermediation in general. Also, the regulatory authorities should be more proactive in their surveillance role in order to curb sharp practices and corruption among market participants which undermine financial market integrity and erode investor’s confidence.
ABSTRACT

The study investigated the effects of two teaching methods (process and product methods) on the writing skills among Secondary School Students in Abia State. The study answered four research questions and tested four hypotheses. The design of the study was a quasi-experimental which adopted pre-test and post-test methods that involved the possible causes and effects of treatments. The study employed a 3x2 factorial design. The population of the study comprised ten thousand and ninety-one (10, 091) Senior Secondary 3 English Language Students in Abia State. A multistage sampling technique was used to select the schools, the classes and the number of subjects. A sample of 300 SS3 students was used. The instruments for data collection were lesson notes based on WASSCE (MAY/JUNE 2014) English language Essay and Comprehension passages for students. The research questions were answered using descriptive statistics of mean and standard deviation, while the hypotheses were tested at 0.05 level of significance using analysis of covariance (ANCOVA) with SPSS version 20. The findings indicate that although process and product methods of teaching improved the writing skills of students, only the process method recorded significant improvement. The process method significantly improved the writing skill of students’ ability to generate ideas for topics, organizational patterns and students’ syntactic competences in writing. Gender had no significant influence on the effect of the teaching methods in improving the writing skills of subjects. The process method of teaching writing skill should be adopted as necessary components of the teachers’
intervention packages for improving students’ poor writing skills in secondary schools. That poor writing skill diagnoses by teachers and counselors using WASSCE English Language examination questions should feature in the placement exercise of secondary school students. A compulsory annual workshop should be organized for English language trainers who will in turn train, other English language teachers in the state on this laudable method (process method).
ABSTRACT

The study was designed to compare the effectiveness of teachers’ instructional scaffolding (ITS) and task prompts (TP) with lecture method (LM) in the achievement of senior secondary school students’ English language reading comprehension in Abia state. The effects of these instructional strategies were investigated as they related to students’ gender, age and prior knowledge of English language. It was a quasi-experimental design which adopted pre-test, post-test, non-randomized style and lasted for 6 weeks. The population was made up of 2,279 SS 11 students that registered for 2014/2015 academic year in the 14 co-educational public schools in Isuikwuato Local Government Area of Ohafia education zone. Ninety (90) SS II students drawn from 3 schools randomly selected from the 14 schools constituted the sample. Live research questions were posed, while seven null hypotheses tested at 0.05 level of significance further guided the study. A researcher-made instrument - English language Achievement Test (ELAT) and an adaptation of three English language reading comprehension assessment tools - the cloze, retelling and negotiating meaning (CRN) were used for the study. The (ELAT - CRN) was made up of two parts. Part ‘A’ listed the demographic data of the subjects while Part ‘B’ was made up of the cloze test, retelling test and the negotiating test. The instrument for data analysis included 50 multiple choice questions. A reliability co-efficient using Pearson’s Product Moment Correlation Co-efficient to obtain r = 0.91 was established. At the end of treatment, the data for pre-test and post-test scores were collated and analyzed using mean, mean deviation and standard deviation for the research questions while the null hypotheses were also analyzed using analysis of variance (ANOVA) and t-test statistics. SPSS version 20 was used to analyze research questions 3, 4, 5 and all the hypotheses, while Cohen’s d eta squared was used to determine the effect size. The results, among others, showed that TIS and TP were more effective instructional strategies than (LM) in improving English language reading comprehension. Based on the findings, teachers are encouraged to adopt a thematic integrative approach, (that is combining the salient features of TIS and TP) since both methods could complement each other if effectively used. The educational implications of the study, limitations of the study and suggestions for further research were proffered.
ABSTRACT

This study investigated the effects of picture reading approach and inquiry method on upper basic students' achievement in English Language in Imo State, Nigeria. The design is a quasi-experimental design, using a pre-test, post-test and control groups. A 3 x 2 factorial design was utilized in this experimental study. There are three groups in the study, out of which two were subjected to treatment (picture reading approach and inquiry methods) while the control group was excluded from the treatment. The lecture method was used for the control group. The independent variables are picture reading approach and inquiry methods, the dependent variable is students' academic achievement and moderator variable is gender. Six research questions were addressed, while six hypotheses were formulated and tested at 0.05 level of significance. The study was carried out using a total of 120 upper basic two (OS II) students out of 27,680 upper basic two (JS II) students in the 137 public upper basic secondary schools in Imo State. The instrument for the study was a 50-item multiple choice on comprehension passages and vocabulary building (CPAVB) test. The control group was taught using lecture method, while the experimental groups were taught using picture reading and inquiry method approaches. The CPAVB was validated by five experts and the reliability coefficient, using test-retest was found to be 0.71. Data were analyzed using mean, standard deviation, analysis of variance and analysis of co-variance. The findings revealed that students taught with picture reading approach and inquiry method performed significantly better in achievement test in English Language than those taught with lecture method of the same English Language lessons. The male students taught with picture reading approach and inquiry method performed equally well as female students' taught with the same method. There was no significant difference between male and female students in their academic achievement. Based on the findings and the educational implications, it was recommended amongst others that seminars and workshops be regularly organized for English Language teachers to sensitize them on the use of the picture reading approach and inquiry method in teaching English Language.
Name: Nwokocha Mary K.C.

Mat. No: 12/PG/Ph.D/CS/00/35627

Supervisors: Prof. U.O. Igbokwe
Dr. J.E. Oteh

Thesis Title: Cognitive Styles and Instructional Strategies in Improving Reading Skills of Primary School Pupils in Abia State.

ABSTRACT

This study titled “Cognitive Styles and Instructional Strategies in Improving Reading Skills of Primary Schools Pupils in Abia State” was carried out to examine the effects of two cognitive styles (field-dependent/independent) and three instructional strategies; questioning, planned repetition and lecture method. The purpose of the study was to determine the effects of these cognitive styles and instructional strategies and more specifically to investigate the effectiveness of the three instructional strategies, whether field-dependent/independent cognitive style influence school achievement. The study also investigated which of the three instructional strategies is more effective on pupils’ achievement in English reading skills. Three research questions were answered and five hypotheses tested at 0.05 level of significance. The design of the study is experimental which adopted pretest post-test method. A total sample of (90) ninety primary four pupils from two selected co-educational primary schools in Abia State was used. The Groups Embedded Figure Test (GEFT) was administered to select the sample. The researcher made instrument titled: English Studies Reading Achievement Test (ES RAT) was validated and the reliability established through single administration of the instrument to 30 pupils in Okigwe urban primary school which was not included among the study area. The reliability coefficient was found, using Cronbach alpha statistic and the result was found to be 0.96, which is adequate and reliable for the study. The researcher administered the instruments to the pupils with the help of their class teachers. The results were collated and analyzed. The three research questions were analyzed using frequency count, percentage, mean and bar charts, while the five hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 level of significance. The findings revealed that planned repetition and questioning instructional strategies were effective in improving the English reading skills achievement of the field-dependent group at post-test. The study also showed that the lecture method of instruction was more effective in improving the English reading skills of the field-independent group at post-test. The researcher among others, recommended that teachers should be provided with adequate training to enable them identify pupils and their intellectual level and be able to use appropriate learning strategies and classify them in their correct groupings.
ABSTRACT

The study evaluated the implementation of Post Basic Education Biology curriculum in the South East States of Nigeria. The study answered six research questions and tested five hypotheses. The design of the study was a survey carried out ex-post-facto. The population of the study comprised 1544 biology teachers and 62,653 biology students in the South East States of Nigeria. The stratified random sampling technique was employed. The sample comprised 380 schools, 69 teachers and 3800 students. The instruments for data collection were developed by the researcher. The instruments are Biology Curriculum implementation Questionnaire (BCIQ), the Biology Teachers & Instructional Materials Availability Checklist (BTIMAC), and the Biology Teaching Methods Observation Schedule (BTMOS). The data collected were analysed using percentage, mean and standard deviation for the research questions, while the hypotheses were tested at 0.05 level of significance using independent t-test analysis with SPSS version 20. Findings indicate that a higher percentage of the teachers teaching biology in the South-East post basic schools are qualified. There are, however, some teachers that teach biology that are not qualified. Based on these findings, it was recommended, among others, that the Government should embark on the use of seminars and workshops to equip the teachers with the knowledge of correct and proper application of available instructional materials and accurate use of approved methods in the implementation of the post basic education biology curriculum.
DEPARTMENT OF EDUCATION MANAGEMENT

Name: NjionyeIheomaOwoh
Mat. No: 0/PG/Ph.D/MGT/PL 4235
Supervisors: Prof. Osita Nwosu
Dr. L.K. Nwokocha


ABSTRACT

This study investigated the administrative competencies in relation to the occupational task areas of secondary school principals in south-eastern states of Nigeria. Six research questions and four null hypotheses were addressed. It adopted survey research design. Data were collected from 1,410 teachers and 640 secondary school principals selected by stratified random sampling technique across the five South-Eastern states of Abia, Anambra, Ebonyi, Enugu and Imo, respectively. Two researcher-developed instruments titled - Principals’ Personal Data Form (PPDF) and Principals’ Competence Teacher Questionnaire (PCTQ) were used for data collection. Mean and z-test statistics were used to analyse data. Results indicated that principals displayed high competence in school community relationship management. However, principals were moderately competent in student personnel administration, staff personnel administration and management of instructional programme. Principals displayed low competence in physical and financial resources management. No significant difference was established in the level of administrative competencies based on age. However, significant difference was established between principals with professional qualification in educational administration and those without professional qualification in educational administration. Significant difference was established in the level of administrative competence of experienced and less-experienced principals. Based on the findings, it was recommended, among others, that preference should be given to teachers with professional qualification in educational administration to head schools. State governments should organise regular orientation courses for newly-appointed principals to enable them acquire needed management skills. Principals should regularly upgrade their administrative competencies through trainings and capacity development opportunities, particularly in information technology. Researches on secondary school principals’ competencies should continue until there is observable goal achievement of teachers and students’ performance.
DEPARTMENT OF EDUCATION ADMINISTRATION AND PLANNING

Name: Ugwu Cecilia Nnennaya
Mat. No: 13/PG/Ph.D/EAP/5667
Supervisors: Prof. P.O. Okunamiri
Dr. L.K. Nwokocha
Thesis Title: Principal-Teacher Role Conflicts in the Administration of Secondary Schools in Abia and Imo States.

ABSTRACT

This investigation on Principal-Teacher Role Conflicts in the Administration of Secondary Schools in Abia and Imo States looked at the five factor areas of disagreement between principals and teachers. These include student personnel administration, curriculum and instruction, administration of physical facilities, school community relationship and classroom administration of public secondary schools in Abia and Imo States. Related literatures were reviewed under the subheadings: conceptual background, theoretical framework, empirical studies and summary of literature. The design of the study adopted was survey method carried out ex-post-facto. The sampling technique was stratified random sampling techniques where 30% of principals and teachers from the local government areas were selected to give 140 principals and 2750 teachers in both Abia and Imo States. Six research questions were posed and answered while five hypotheses were formulated and tested at 0.05 level of significance. The researcher developed own instrument which was validated and the reliability coefficient established as 0.84. The data analysis was done using mean, standard deviation and bar chart to answer the research questions while the hypotheses were tested using z-statistic at 0.05 level of significance. Results of the study showed that principals and teachers agreed that all the five mentioned areas constituted role conflicts between principals and teachers for three academic sessions of 2012, 2013 and 2014 in the administration of public secondary schools. However, the teachers pointed out that curriculum and instruction is the prevalent area of conflict with principals while principals were of the opinion that classroom administration is the most complex area of disagreement with the teachers. Based on the findings, the educational implications of the study were highlighted and some of the recommendations include that the Governments of Abia and Imo States should regularly empower the Education Board to organize workshops, seminars and conferences for both principals and teachers to especially educate them on the issues, problems and trends in secondary school administration. Limitations of the study were pointed out and suggestions for further studies were proffered.
Name: Chukwu Chukwuemeka Joseph
Mat. No: 11/PG/Ph.D/EAP/02/46851
Supervisors: Prof. S.O. Igwe
Dr. (Mrs) R.N.O.Ogbonna
Thesis Title: Personnel Policy Implementation and Teacher Retention Among Secondary Schools in South Eastern States of Nigeria

ABSTRACT

The study examined Personnel Policy Implementation and Teacher Retention Among Secondary Schools in South-Eastern States of Nigeria. A descriptive survey research design was employed for the study which was carried out "ex-post-facto". Seven (7) research questions and six (6) null hypotheses were addressed. A sample of two thousand six hundred (2,600) teachers in one hundred and thirteen (113) schools from a population of twenty five thousand nine hundred and seventy six (25,976) teachers in one thousand nine hundred and eight (1,908) were drawn from secondary schools in Abia, Anambra, Ebonyi, Enugu and Imo States of Nigeria through stratified random sampling, using a multistage cluster sampling technique which divided South-Eastern States of Nigeria into twenty one (21) Education zones. Data were collected using a thirty five (35) item-questionnaire titled "Personnel Policy Implementation Teacher Retention Questionnaire (PPITRQ)". Data collected were analyzed using frequency distribution, mean scores, standard deviation and pooled mean for the seven (7) research questions and Z-test statistic were used to test the six (6) null hypotheses at 0.05 level of significance. The study revealed that, personnel policy implementation of promotion, payment of salaries, pension, gratuity, training and development, fringe benefits and maternity leave enhanced teacher performance on the job and retention positively. The result further indicated that there was a significant difference in the mean ratings of male and female teachers regarding promotion and payment of salaries, while there was no significant difference in the mean ratings of male and female teachers regarding pension, gratuity, training and development and fringe benefits. The educational implications of the study were highlighted. The recommendations were made based on the findings and as follows: that efforts should be made by both federal and state governments as major stakeholders in secondary school education to implement policy of promotion, payment of salaries, pension, gratuity, training and development, fringe benefits and maternity leave effectively as well as improve their working conditions as a way of retaining and motivating these teachers like their counterparts in other government service. The limitations of the study and suggestions for further studies were highlighted.
ABSTRACT

The study was a comparative study of examination malpractice of secondary school students in Abia and Imo States, Nigeria. Specifically, the study sought to ascertain the causes of examination malpractice. Eight research questions were posed and answered. Related literature which provided insight on relevant research studies were reviewed. The design of the study correlational carried out ex-post-facto. The sample of the study was made up of four hundred and ninety five (495) respondents that is, all the duty principals in Abia and Imo States. Abia has two hundred and seventeen (217) while Imo has two hundred and seventy eight (278). The instrument for data collection was a researcher's made questionnaire titled "Attitude to Examination Malpractice Questionnaire" (AEMQ). The instrument was validated and the reliability coefficient found to be 0.85 which was suitable for the study. The instrument was administered to the respondents personally with the help of research assistants. The data collected were analyzed using mean, pooled mean, and standard deviation to answer the research questions at 0.05 level of significance. The findings of the study include: Abia and Imo school principals were of different views on the causes of examination malpractice, the attitudes of parents, teachers, PTA examination bodies and all education stakeholders towards examination malpractice were that of support, aiding and abetting because others are doing so. Recommendations made include Government should pay teachers their due salaries and remunerations so that they will not have any reason to get involved in this act. This is because fighting this menace through teachers’ angle may make a significant impact. Conclusions were drawn, educational implications of the study were highlighted, limitations and suggestions for further studies were proffered.
Name: Uduma Catherine Nkem
Mat. No: 13/Ph.D/EAP/92/5269
Supervisors: Prof. Magnus Anuna
Prof. S.O. Igwe
Thesis Title: Community Involvement in the Management and Organization of Public Secondary Schools in South East States, Nigeria.

ABSTRACT

This study investigated community involvement in the management and organization of public secondary schools in South East States, Nigeria. Seven research questions were posed, with seven null hypotheses formulated and tested at 0.05 level of significance. This study was a descriptive survey which adopted an ex-post-facto design. The population of the study comprised all the One thousand five hundred (1500) principals in the South-East States of Nigeria. The researcher used a multi-stage stratified random sampling technique of 25% to arrive at a sample of 376 principals. The instrument for data collection consisted of the researcher’s developed questionnaire known as Community Involvement in Management Questionnaire (CIMQ). This formed part one. Part two of the instrument was on the Organization of Public Secondary schools Questionnaire (OPSSQ). Data collected were analyzed using mean and pooled mean to answer the research questions, while Chi-square statistic was used to test the null hypotheses at 0.05 level of significance. Findings revealed that communities had very frequently been involved in funding and organization of public secondary schools in the South-East States, Nigeria; and they sometime provide teaching and learning materials and organization of public secondary schools. Also, there had been a very frequent community involvement in building and maintenance of facilities, decision making, and in discipline of public secondary schools in South- East States, Nigeria. Based on the findings the educational implications of the study were highlighted, one of it being that since the communities had frequently been involved in funding, building and maintaining facilities and in decision making, this indicates real educational improvement. Some of the recommendations include that public secondary schools in South-East States, Nigeria should be provided with adequate learning materials and buildings as it is unconducive to study under dilapidated buildings; principals should make it a point to emphasize the importance of teaching materials, as this will make them to be active ensuring its provision; and government to strengthen policy on PTA participation in schools, as PTA is a strong hold through which communities partner with schools. Limitations of the study were pointed out and suggestions for further studies were made.
ABSTRACT

The study examined the Impact of Principals’ Administrative Qualities on Teacher Effectiveness in Secondary Schools in Abia and Imo States of Nigeria. Six research questions and six null hypotheses were formulated using Ex-post facto design. 150 principals were purposively selected. A stratified random sampling was used to draw 3076 from 10, 253 teachers from Abia and Imo States. The researcher developed an instrument for data collection titled “The Impact of Principals’ Administrative qualities on Teacher Effectiveness Questionnaire (IPAQTEQ)” to assess the extent the Principals’ Administrative competence can enhance Teachers’ Performance. The instrument has two parts; Part A is on the personal information while Part B is on the questionnaire proper. Part B was developed into four point Likert scale of very high extent (VHE), High extent (HE), Low extent (LE) and Very low extent (VLE). The responses were weighted 4, 3, 2, 1 respectively. The overall instrument were fifty five items. The research questions were answered using frequency, pooled mean and standard deviation while the six null hypotheses were tested using Z-test statistics at 0.05 level of significance. The findings indicate that all the principals’ administrative qualities enhance teacher effectiveness to some extent. Result showed that principals’ Administrative Quality as a Motivator, problem solver, effective listener, provider of support, visionary leader enhance teacher effectiveness because the environment, good salary, professional growth, responsibility, the work itself and good human relations by principals in a descending order are the dominant factors that determine teacher effectiveness as well as job satisfaction. The implications of the findings include that principals should acquire appropriate leadership skills which will promote the spirit of team work and that which will enhance the realization of the stated educational objectives. Principals should be visionary leaders because as organizational innovators, agents of change and strategic planners, they will achieve positive effects on their teachers thereby improving academic outputs of the students. It was recommended that that state Education Management Board should ensure that principals who possess the appropriate qualities are engaged in our public schools. Seminars and workshops should be organized for principals annually on especially human resources management so that principals can acquire knowledge on human relations principles to boost their efficiency and effectiveness. Also teachers who are close to being principals should be given leadership training so as to meet up with the task when they become principals. Limitations and suggestions for further studies were made.
NAME: Nwamuo Regina Ijeoma  
MAT. NO: 13/PG/Ph.D/EAP/93/6034  
SUPERVISORS: Prof. P.O. Okunami  
Dr. B.E. Afianmagbon  
THESIS TITLE: Resource Situation and Teachers Instructional Effectiveness in Secondary Schools in Abia and Ebonyi States, Nigeria.

ABSTRACT
The study explored the relationship between resource situation and teachers instructional effectiveness in secondary schools in Abia and Ebonyi States, Nigeria. The study is a correlational study, carried out using ex-post-facto design six research questions were posed while five null hypotheses were formulated to guide the study. The population of the study was three thousand nine hundred and eight (3,908) duty principals and teachers in Abia and Ebonyi States Secondary Schools. A sample size of one thousand two hundred and sixty (1,260) respondents was selected for the study. This was arrived at using justified random sampling technique. Data were collected from one thousand hundred and sixty (1,260) duty principals and teachers using a questionnaire titled resource situation and teachers’ instructional effectiveness questionnaire (RSTIEQ). Frequency distribution and mean ratings were used to answer the research questions while the hypotheses were tested using linear expression analysis statistic. Results of the study revealed that the quality of fliers, number of teachers, fund allocation, laboratory, infrastructural facilities capacity building opportunity provided to secondary schools are inadequate, (the result further revealed that there is a significant relationship between number of teachers, fund allocation, provision of laboratory, provision of infrastructural facilities, provision of capacity building opportunity and teacher’s instructional effectiveness. Based on the findings, it was recommended that government should provide quality teachers, adequate number of teachers, adequate fund, laboratory, infrastructural facilities, and capacity building opportunity to secondary schools. The recommendation was made following the general concern of the threats of ineffective instructional delivery in secondary schools. Limitations of the study were outlined while suggestions for further research were proffered.
Name: Ole Charles Onwubiko

Mat. No: 11/PG/Ph.D/PSY/05/5653

Supervisors: Prof. R.O. Nnachi
Dr. O.V. Opara

Thesis Title: Parental Characteristics as Correlates of Adolescent Deviant Behaviours among Roman Catholic Church Members in South Eastern States of Nigeria.

ABSTRACT

The study was carried out in South Eastern Nigeria to investigate parental characteristics as correlates of adolescent deviant behaviour among Nigerian Roman Catholic Members. Six research questions and hypotheses were formulated to guide the researcher. Survey design was used for the study. The population of the study included all the Catholic parents in South Eastern Nigeria and their adolescent children in secondary school. Respondents were selected from three Catholic Dioceses in the Geo-Political Zone. The sample size for each group of respondents was 150, giving a total of 300 respondents for the two groups. Two sets of structured questionnaire were used to elicit responses, one for each group of respondents. Parental Characteristics Questionnaire (PCQ) elicited responses from parents while Adolescents Deviance Questionnaire (ADQ) elicited from the adolescent children. Both descriptive statistical tools such as percentages, frequency counts, means and the Likert’s five point scale as well as inferential statistical tools like t-test, anova, multiple regression and correlation were used to analyse the data collected for the study. Result of the analyses shows that significant relationship exists between socioeconomic status of parents and the rate of involvement of adolescent children in deviant acts. The socio-economic variables that were significant related with involvement of adolescent children in deviant acts are age (-0.141), family size (0.738), income (1.889), and church membership status (-2.661). The R² value shows that 63% of adolescent deviance is contributed by parents’ socioeconomic status. Also t-test for a difference in the rate of involvement of adolescent boys and girls in various deviant acts shows that at 0.1% level of significance there is a difference in the rate of involvement of adolescent boys and girls in deviant acts such as fighting (4.391), sexual abuse (5.439), cultism (4.662) and smoking/alcoholism (6.560). The anova test for a difference in the rate of involvement of adolescent from the three sampled dioceses shows that significant difference (P<0.05) exist in the rate of involvement of adolescents in the different dioceses in deviant acts. Deviance is higher in Umuahia than Qkigwe and much lower at Awgu. Also the correlation analyses show that there is a strong relationship between the life style of parents and adolescent deviance (0.783), parenting style and adolescent deviance (-0.552) and parenting Characteristics and the rate of involvement of adolescents in deviant acts (5.61). It was concluded that there is strong correlation between the socio-economic status of Roman Catholic parents in South Eastern Nigeria as well as their life and the rate of involvement of their adolescent children in deviant behaviours. Among others, it was
recommended that priests and pastors should be trained as counselors in their churches and should incorporate parental characteristics and deviance in their teachings. Also seminars and workshops should be organised for parents to enable them understand the impact of their life style as well as parenting style on the attitude of their adolescent children.

Name: Onuoha Patience Ude
Mat. No: 08/PG/Ph.D/EAP/93/1717
Supervisors: Prof. OsitaNwosu
Prof. M.C. Anuna


ABSTRACT

The study examined the Impact of Principals’ Administrative Qualities on Teacher Effectiveness in Secondary Schools in Abia and Imo States of Nigeria. Six research questions and six null hypotheses were formulated using Ex-post facto design. 150 principals were purposively selected. A stratified random sampling was used to draw 3076 from 10, 253 teachers from Abia and Imo States. The researcher developed an instrument for data collection titled “The Impact of Principals’ Administrative qualities on Teacher Effectiveness Questionnaire (IPAQTEQ)” to assess the extent the Principals’ Administrative competence can enhance Teachers’ Performance. The instrument has two parts; Part A is on the personal information while Part B is on the questionnaire proper. Part B was developed into four point Likert scale of very high extent (VHE), High extent (HE), Low extent (LE) and Very low extent (VLE). The responses were weighted 4, 3, 2, 1 respectively. The overall instruments were fifty-five items. The research questions were answered using frequency, pooled mean and standard deviation while the six null hypotheses were tested using Z-test statistics at 0.05 level of significance. The findings indicate that all the principals’ administrative qualities enhance teacher effectiveness to some extent. Result showed that principals’ Administrative Quality as a Motivator, problem solver, effective listener, provider of support, visionary leader enhance teacher effectiveness because the environment, good salary, professional growth, responsibility, the work itself and good human relations by principals in a descending order are the dominant factors that determine teacher effectiveness as well as job satisfaction. The implications of the findings include that principals should acquire appropriate leadership skills which will promote the spirit of team work and that which will enhance the realization of the stated educational
objectives. Principals should be visionary leaders because as organizational innovators, agents of change and strategic planners, they will achieve positive effects on their teachers thereby improve academic outputs of the students. It was recommended that that state Education Management Board should ensure that principals who possess the appropriate qualities are engaged in our public schools. Seminars and workshops should be organized for principals annually on especially human resources management so that principals can acquire knowledge on human relations principles to boost their efficiency and effectiveness. Also teachers who are close to being principals should be given leadership training so as to meet up with the task when they become principals. Limitations and suggestions for further studies were made.
Name: KaluAbarikwuObialo
Mat. No: 04/PG/Ph.D/URP/90/8360
Supervisors: Prof. E.I.C. Agwu
Dr. A.U. Egbu

Thesis Title: Development: A New Model for Low Income Housing Allocation in South East Nigeria

ABSTRACT

The study developed a new model for low income housing allocation in South East States of Nigeria using quantitative research design in data collection. To achieve this, eight low income housing estates (LIHEs) were selected from 23 LIHEs in South East Nigeria through deliberate sampling method and 2000 questionnaires were administered to the LIHEs residents, landlords and officials of the housing corporation of the South East Nigeria. 1752 questionnaires representing 87.5% were retrieved. The retrieved questionnaires were analysed by using tables and percentage distribution which gave detailed information on frequencies and percentages on the eight LIHEs from the four studied states- Abia, Ebonyi, Enugu and Imo. Result of findings indicated that there is a wide gap between the quantity of low income houses built and the number of low income housing applicants, signifying a big shortfall of 2648 of low income houses needed to match low income housing applicants. 71% of the low income housing residents were not low income in South East Nigeria indicating a failure on existing allocating model. In addition, the study showed that it is hard for the low income to secure allocation of low income house in the study area. To improve on the shortfalls of low income housing, low income housing quantity prediction model and low income housing allocation model (LIHAM) for allocation of low income housing were proposed among other things. The work also recommended the low income price index (LIPI) eligibility and reduction of low income plot size to 50m² to enable more houses to be built and discourage low income houses sell off by successful applicants.
ABSTRACT

The general purpose of the study is to determine how library public relations relate to utilization of information resources in university libraries in Abia and Imo States of Nigeria. The survey research design was used for the study. The research constructed five research questions which were analysed based on mean value differentials while the five hypotheses were tested through the chi-square statistical formula at 0.05 level of significance. The research adopted both the proportionate/stratified and simple random sampling techniques to investigate a sample of 394 registered users from Abia State University, Uturu; Michael Okpara University of Agriculture, Umudike; Federal University of Technology Owerri and Imo State University, Owerri. Self constructed and validated questionnaire with a reliability coefficient of 0.89% was used to collect data for the study. Findings show that there is a significant relationship between library exhibitions and utilization of information resources in university libraries in Abia and Imo states \((x^2_{\text{cal}} = 244.2 \geq x^2_{\text{tab}} = 21.03)\), oral publicity and utilization of information resources \((x^2_{\text{cal}} = 115.7 \geq x^2_{\text{tab}} = 21.03)\), library publications and utilization of library resources \((x_{\text{cal}} = 272.3 > x^2_{\text{tab}} = 21.03)\), current awareness services and utilization of library resources \((x^2_{\text{cal}} = 394.3 \geq x^2_{\text{tab}} = 21.03)\) and notice boards and utilization of information resources \((x^2_{\text{cal}} = 472.1 \geq x^2_{\text{tab}} = 21.03)\). The study recommends that standard notice boards, bulletin boards and bill boards should be placed at vantage points throughout the universities so that the user communities are duly notified about the information resources and services of the library. Again, university libraries should complement their print resources with electronic resources in order to enhance the information resources available for utilization. The study concluded that library public relations is indispensable in the utilization of information resources in the university libraries and should be sustained.
Name: Nkechi Nwannekezie
Mat. No: 10/PG/Ph.D/LIS/06/6030
Supervisors: Prof. A.O. Unagha
Prof. Udo Nwokocha
Thesis Title: Library Environment as Determinant of Lectures: Utilization of University Libraries in Ebonyi and Enugu States.

ABSTRACT

The work examines Library Environment as a determinant of Lecturers' Utilization of University Libraries in Ebonyi and Enugu States of Nigeria. The survey research design was used for the study with questionnaire as instrument of data collection. Six research questions and five hypotheses were framed for the study. The hypotheses were tested using the chi-square statistical tool and the research questions were analyzed using frequency distribution and relative importance index or weighted mean. The population of the study is 2476 respondents consisting of all the lecturers in the universities studied. They include 965 lecturers from Ebonyi State University Abakiliki, 75 lecturers from Federal University, Ndufu Alike (FUNAI), Ikwo, 384 lecturers from Enugu State University of Science and Technology and 1052 lecturers from University of Nigeria, Nsukka. The sample size of the study is 354 derived by using Yamane formula. Close-ended questionnaire was administered on 354 lecturers of the four universities in the states of Enugu and Ebonyi. The overall returned rate for questionnaires correctly filled and returned stood at 287 representing 81.07%. The reliability of the instrument was 0.84(84%). The result of findings shows that the rate of utilization of university library resources among lecturers is low. The result shows that noise contributes negatively to lecturers’ low utilization and the absence of adequate lighting system negatively affects lecturers’ utilization. Again, hot temperature discourages university lecturers from utilizing library resources, while low temperature enhances usage. The result shows that availability of adequate cross ventilation and airy environment encourages lecturers’ utilization. Finally, the presence and adequacy of library facilities like suitable reading tables and chairs, adequate space for easy movement, good seating arrangements and compatibility of reading chairs and tables enhance utilization. The study recommends that government should spend more money in providing and improving library environmental variables in order to encourage lecturers’ utilization which will boast academic productivity and hence national development.
DEPARTMENT OF LITERATURE

Name: Nwizu Chinwendu Anthonia
Mat. No: 92/PG/Ph.D/LIT/06/14910
Supervisors: Prof. NwachukwuAgbada
            Prof. AfamEbeogu
Thesis Title: The Power and Powerlessness in selected works of the Niger Delta

ABSTRACT

This study on “Power and Powerlessness in the Literature of the Niger Delta” examines the interplay of dominance and helplessness in the literature of the Niger Delta. It establishes the fact beyond the popular conceptions that the literature of the Niger delta stems out of the environment and incessant crises, contentions which the people have faced; it is also filled with the problems of power and powerlessness in diverse shades. The work therefore examines the twin concepts of power and powerlessness, which cut across the Niger Delta literature with particular interest in TanureOjaide's Delta Blues and Homesongs, IbiwariIkiriko's Oil Tears of the Delta,NnimmoBassey’s we thought it was Oil but it was blood, Doutrimiariaye R Kpakiama's Salute to Our Mangrove Giants and other Poems. It concentrates its examination on these plays: J.P Clark's All for Oil, Tess Onwueme What Mama Said, Ahmed Yerima's Hard Ground, Greg Mbajiojorgu's Wake Up Everyone, and EniJologhoUmuko’s The Scent of Crude. In the area of prose the study explores these novels: IsidoreOkpevho's Tides, TanureOjaide's The Activist, KaineAgary's Yellow Yellow, BinaNengi-Ilagha's Condolences and InnoEjike's Oil at My Backyard. The theoretical framework of the study is based on the postcolonial and eco-critical theories and approaches to literature. Chapter One introduces the whole thesis; it studies the general background of the work, shedding light on the meaning of “power”, “powerlessness” “Delta” and “Niger Delta Literature.” The review of relevant scholarship is the focus of Chapter Two: views of scholars on the key concepts and some of the primary texts are appraised. Structures of power and their influence are examined in Chapter Three in four broad topics namely: “The Environment as Powerful”, “Government as Powerful Entity”, “Multinational as Powerful in Niger Delta Literature”, and “Individuals as Powerful in Niger Delta Literature.” Chapter Four interrogates Powerlessness in the Selected Works under these two broad topics: “The Environment as Powerless” and “A Region in Minority”. However, the exploration of the themes of Power and Powerlessness for each of the subtitles undertakes a cross generic study. Furthermore, Chapter Five concentrates on aspects of style and technique of chosen writers which contribute in delineating their themes.
Of great interest to poetry volumes are the images and figures of speech used by the different poets. The technique of play-within-a-play, use of proverbs, use of songs, symbolic naming and symbolic titles are the major highlights explored in the plays. Style of writing together with figurative naming and characterization are explored in the selected novels, it also investigates motif in Niger Delta Literature. Finally, the Summary in Chapter Five recapitulates the locus of the whole thesis while the Conclusion, also part of five reaffirms that domination and incapacity are at the base of most events in Niger Delta as expressed in literary works.
Reader-response criticism is a poststructural critical theory which focuses on reading as an innovative activation of meaning in a literary text and captures the reader as a meaning-forming component—an independent agent of interpretation who, through his or her method of reading, reinforces truth in the text. This study investigates the possibility of the application of reader-response criticism as a textual strategy on Athol Fugard, John Kani and Winston Ntshona’s *SizweBanzi is Dead* (1973) and *The Island* (1973); Twefik Al-Hakim’s *Fate of a Cockroach* (1973) and *The Sultan’s Dilemma* (1973); NgugiwaThiong’o and MicereGithaeMugo’s *The Trial of DedanKimathi* (1976) and *I Will Marry When I Want* (1982) and AfamEbeogu’s *In The Light of Change* (1997) and *Madmajor* (1997). The thesis is compartmentalized into six chapters. The introductory chapter explores the meaning, the taxonomic classification and history of reader-response criticism, taking into cognizance the seven divides of the theory. It also demonstrates an understanding of the usefulness of the sign, the text, the author, the reader and semiotics, which are relevant terms in the scholarship of reader-response criticism. The second chapter is an evaluation of the relevant scholarship on the selected plays. The next chapter which is an explanation of indeterminacy and gaps, the definition of dehumanization and its survey in African literature combine to reinforce the application of reader-response criticism in the examination of the theme of brutalization in the eight plays. Relying on the identification of who a hero is and on its classification, drawing also from the meaning of tragedy and its trends, the fourth chapter applies reader-response approach in unlocking the image of the hero in the eight plays. The fifth chapter functions as the encapsulation of the entire thesis as well as the justification for our claims. The second phase of chapter five which is the conclusion updates our contention that reader-response criticism can be applied to African literature; that the subject matter of most African creative writings is a juxtaposition of literary creativity and pure historical facts; that true historical facts have a negative influence on most African literary texts, as such creative works are mostly an admixture or a juxtaposition of historical and creative writing; that rather than showcase heroes and heroines, many African literary texts embody miscreants, terrorists and lily-livered protagonists; that their African characters are devoid of the spirit of resistance consequent upon which they unconsciously join in bestializing and dehumanizing themselves without realizing it. In addition, our study shows that most critics, both African and foreign, do not pursue the signs in the texts they study, they rely on the meaning that is handed down to them by the author. Above all, the influence of the interpretative community on the reader, his or her
already acquired literary skills before confronting the text, his or her reliance on the pursuit of signs in the activation of meaning, the interactive nature of his or her engagement with the text, his or her ability to decipher gaps and indeterminacies in the text, coupled with his or her combination of intrinsic and extrinsic methods of reading, integrate to place him or her above the traditional critic whose reading is influenced by authorial fallacy.
DEPARTMENT OF FOREIGN LANGUAGES AND
TRANSLATION STUDIES

Name: Mombe Michael Ngongeh
Mat. No: 09/PG/Ph.D/TS/6934
Supervisors: Prof. E.O. Anyaehie
Dr. J.K. Kanayo Okeke
Thesis Title: Les Defis de la Traduction du Theatre Africaine: Le casd’uneTraduction Integrale (Francais-Anglais) De Notre FilleNe Se Mariera Pas De GuillaumeOyoyoMbia

ABSTRACT

This thesis is a commented translation of Guillaume Oyono-Mbia's Notre fillene se mariera pas. This work, divided into six chapters, is premised on the fact that the translation of an African literary text, especially a play, poses enormous problems to the translator. In carrying out the translation proper, we adopted the source-text-based approach which Venuti (1995) refers to as foreignization. This approach required us to resort to direct translation techniques proposed by Vinay and Darbelnet (1958), Peter Newmark (1988), d'Almeida (1982), Mounin(1969), Larson (1984), transcription, as well as Guillaume Oyono-Mbia's translation strategies. The choice of these techniques are informed by our desire to make the translated version have the cultural characteristics of the source text. These strategies are combined with a glossary of cultural expressions, to enable the foreign or target text readers to understand the translated version. Chapter one contains a theoretical reflexion on the concept of translation. In chapter two, a general overview of African drama, .including the Cameroonian drama, its definition, its origin and the various types. Chapter three is focused on the. various opinions on the translation of drama in general and African drama in particular. Chapter four contains the French-English translation of Notre 'fillene se mariera pas. The problems encountered in the course of the translation are discussed in chapter five. Then, chapter six contains a critical examination of our translation, with a view to justifying the options we adopted and why they are considered as appropriate. The conclusion is mainly made up of our findings and recommendations.
ABSTRACT

To assess the possible hazards attendant to healthcare waste handlers, this Thesis on “Studies on Occupational Health Hazards of Healthcare Waste Handlers from selected hospitals in Abia and Imo states” were undertaken. In an attempt to assessing possible health hazards attendant to exposure to healthcare wastes, used cotton wool, pads, gowns, pampers, nasogastric tubes and hand gloves, collected from Abia State University Teaching Hospital, Federal Medical Center Umuahia, Federal Medical Center, Owerri, General Hospital, Okigwe and Umuguma Specialist Hospital, Owerri were quantified and analyzed microbiologically. For the evaluation of healthcare waste handlers’ knowledge
and their attitude to waste handling, structured questionnaires were administered during the course of sample collection. Data obtained from 1500 waste handlers and other related health workers evaluated for their knowledge and attitude for healthcare waste handling comprised 697 (46.5%) males and 803 (53.5%) females. The number indicating knowledge for what constituted healthcare waste was low 264 (17.6%). When knowledge of infection potentials of healthcare waste was evaluated among the respondents, hair, nail and skin infections appeared relatively very high 109 (72.7%), and when their overall knowledge for waste disposal methods were assessed, 593 (35.9%) indicated highest for open dumping. Those who had 100% knowledge about waste segregation and the treatment methods before waste disposal were also low 330 (22.1%). From the cross sectional survey study of waste generated per kg/center/day, of the 1057.7kg weighed, 344.5kg (32.5%) appeared highest from ABSUTFI while Umuguma Specialist Hospital had the least with 81.2kg (7.6%). Also the average generated infectious waste was highest in ABSUTH with 140.5kg (31.5%). The frequency of waste removal from the waste bins from each hospital was 100% for “whenever the container is filled” for Umuguma Specialist Hospital and 65% for ABSUTH; ABSUTH and FMC Umuahia had 10% and 5% frequency of waste removal twice per day respectively. Sorting the distribution and type of micro-organisms from healthcare waste analyzed, 8 different strains of micro-organisms consisting of 788 isolates were encountered; 386 (49.0%) Bacillus, 138 (17.5%) Staphylococcus spp, 46 (5.8%) E.coli, 68 (6.8%) Pseudomonas spp, 38 (4.8%) Proteus spp, 26 (3.3%) Klebsiella spp, 30 (3.8%) yeast and 50 (6.3%) moulds. On the average, General Hospital Okigwe had the highest microbial isolates of 201 (25.5%), followed by ABSUTH 179 (22.7%) and the least was Umuguma Specialist Hospital 104, (13.2%). When the population profile of bacteria from 1.00gm of items studied were evaluated. Bacillus spp with 357.9 + 8.9 mean, logio No. of CFU+SD was relatively higher than those other strains of bacteria and when individual healthcare waste was analyzed for bacterial count, cotton wool gave the highest load for Pseudomonas spp. (310±43.2) followed by sanitary pad for Bacillus spp 196.2 ± 15.2. These microbial isolates reported in this study have been associated with one form of disease or the other, and therefore may play important roles in diseases commonly encountered during the course of healthcare waste handling.
FACULTY OF BASIC MEDICAL SCIENCES

DEPARTMENT OF HUMAN PHYSIOLOGY

Name: Okhiai Chemu Ikhokho
Mat. No: 05/PG/Ph.D/HPY/5733
Supervisors: Prof. R.O. Nneli
Prof. A.O. Ajoke

Thesis Title: The Effect of Varying Protein Diet on Ca^{2+}Mg^{2+}ATPase Activity in the Erythrocyte Membrane in Dogs.

ABSTRACT

Current child malnutrition from the recent high cost of food in Nigeria makes Fish, Meat, Eggs, Chicken, Beans and other high protein food go beyond the reach of the common man. Ca^{2+} Mg^{2+}ATPase is an important enzyme in Ca^{2+} homeostasis. Its activity has been investigated in conditions like hypertension and sickle cell disease. There is paucity of information in the literature on the activity of Ca^{2+}Mg^{2+} ATPase in the erythrocyte membrane in dogs. The effect of varying protein diet on the activity of the Ca^{2+}Mg^{2+}ATPase in erythrocyte membrane was studied in the dogs. Twenty Mongrel puppies were divided into four groups. The first group of five animals were fed with 30.1% protein. The second group was fed with 26.5% protein. The third group was fed with 16.1% protein. The fourth group was fed with 0% protein. They were all fed for a period of six weeks. Their weights were closely monitored daily. Before the introduction of the diet the animals were bled and their blood homogram was analyzed after a period of feeding and the erythrocyte membranes were isolated from the four groups of high protein, medium protein, low protein, no protein using the standard procedures and their protein concentration were determined by the standard method. The activity of the Ca^{2+}Mg^{2+} ATPase in the erythrocyte membrane was determined in the presence and absence ofCa^{2+} Mg^{2+} ATPase. It was observed in this study that the activities ofCa^{2+} Mg^{2+} ATPase was highest in high protein group, with 2.7µmolepi/µg protein/mm and lowest in no protein diet. The stimulatory effect was found to be calcium and ATP dependent. Medium protein diet was 2.5 µmolcp/µg protein/mm, low protein diet 2.2.

Protein concentration of erythrocyte ghost membrane was 90% in high protein, medium protein 70%, low protein diet, 60%, no protein 40%.Activity of Ca^{2+},Mg^{2+} ATPase with and without ATP was high 2.5unit, medium protein 2.3unit, low protein 2.2unit, no protein diet 2.1 unit. The result of blood glucose in high protein, medium protein, low protein and no protein diet-fed dogs was significant (p<0.005). In the high protein diet gave 22.3 + 6.8, medium
ABSTRACT

It is not known whether club foot deformity in infants affects their reflexes and serum electrolytes. Therefore, this study compared some reflexes, serum electrolytes, inorganic phosphate and alkaline phosphatase of infants with club foot deformity with their control who had no deformity as normal foot infants. A total of 105 male and female infants with verbal consent obtained from their mothers were selected for the study. The infants were aged between one day to 28 weeks. The infants were grouped into three groups, namely: Group A (infants with normal foot), Group B (infants with unilateral (single) club foot) and Group C (Infants with bilateral club foot deformity). Each group comprised 35 infants. All the infants were further subdivided into groups D and E according to their birth Weight. Infants with birth weight 0.0 - 2.4kg were in group D, while those with birth weights between 2.5 - 5.0kg were in group E. Group D infants were regarded as low birth weight infants while those in group E were regarded as normal birth weight infants according to World Health Organization (WHO) classification. Three different reflexes namely; knee jerk, ankle jerk and plantar reflexes were elicited in each infant at the beginning of the study (initial reflex). The reflexes were repeated after 8weeks (final reflex). The presence, i.e, full or normal reflex (100%), slight or mild (50%) and no or absent (0%) reflex were noted for each of the infant in groups A, B, C, D and E. Serum electrolytes namely, calcium, sodium, potassium, magnesium, chloride and bicarbonate as well as Inorganic and alkaline phosphatase were measured by standard methods in all the groups. The results revealed significant differences in the reflexes obtained at the initial time of measurement and eight weeks after. It was found that reflexes of infants with normal foot (Group A) had significantly higher percentage response than those with clubfoot deformities (groups B and C) especially, the ankle jerk and plantar reflex (p<0.001). The results also showed that the infants with normal birth weight (2.5 - 5.0kg, or group E) had significantly greater percentage reflex response than those with low birth weight group (0.0 - 2.4 kg or group D) (p<0.001). Furthermore, the results of the analyses of serum calcium, potassium, sodium, magnesium, bicarbonate, chloride and alkaline phosphate revealed that their values were not significantly different in all the groups both at initial time the experiments were done and 8 weeks thereafter. The values of inorganic phosphate were significantly higher in infants with club foot deformity than in normal foot infants. In conclusion, clubfoot deformity in infants is accompanied by reduced knee jerk, ankle jerk and plantar reflexes as well as high level of serum inorganic phosphate. Higher birth weight in infants is accompanied by enhanced knee jerk, ankle jerk and plantar reflexes than lower birth weight in clubfoot deformity and both initial and final reflexes.