
Scientific Tracks & Sessions

November 22, 2018

Diabetes Congress 2018

Nutrition 2018



Joint Event
26th International Conference on
Diabetes and Endocrinology
&
16th International Conference on
Nutrition and Health
Nov 22-23, 2018 | Paris, France

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The assessment of eating disorders

Bridget Rivera

Purdue University Global, USA

Research illustrates that few professionals who work with clients struggling with eating disorders regularly used validated eating disorder instruments and many rely largely on clinical interactions (Anderson and Paulosky, 2004; Towne, DeYoung & Anderson, 2017). Given that eating disorders are a complex mental health issue, with potential high morbidity rates validated the use of assessment is warranted. Psychological assessment is an integral component of evidenced-based practice (APA Presidential Task Force on Evidenced Based Practice, 2006). This presentation will address the importance of assessing symptomatology of eating disorders as well as motivation for change and treatment. Tests and the assessment process in general will be reviewed with a discussion of the difference between interviews, self-report and performance-based tests. The Eating Disorder Examination (EDE) (Fairburn and Cooper, 1993) and the Eating Disorder Examination Questionnaire (EDEQ) (Fairburn & Beglin, 1994) will be discussed, as they are the most commonly used assessment methods for eating disorders (Towne, DeYoung & Anderson, 2017). In addition to using single methods to explore symptomatology, it is also imperative to understand a patient's psychological

functioning, personality organization and potential attachment style in order to accurately treatment plan. Michel (2002) presented the common challenges associated with assessment and treatment of eating disorders, these include: denial, lack of motivation for change and treatment resistance, and lack of insight. In addition, she recognized the importance of sociocultural and psychosocial variables that inform the etiology of the disorder and thus treatment for the patient. The psychological assessment process will be discussed with a focus on therapeutic assessment as an important method to ameliorate the challenges to the assessment and treatment of eating disorders.

Speaker Biography

Bridget Rivera is a licensed clinical psychologist and full-time faculty member for Purdue University Global. Her research interests are in the field of psychological assessment and diversity training. She was awarded the Martin Mayman award from the Society for Personality Assessment in 2010 for distinguished contribution to the literature. She has over 15 years of clinical experience, including a focus on working with clients struggling with body image and eating issues. In addition to her time teaching for Purdue University Global, she also has a small private practice where she enjoys seeing clients individually and conducting psychological assessment.

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Development of Diabetes Affective Message System (DAMS)

Mohamed Ariffin Bin Mohamed Kawaja Kamaludin
Nanyang Technological University, Singapore

Diabetes mellitus or diabetes is a major cause of death worldwide and ranks amongst cancer and cardiovascular diseases. Among the non-clinical intervention programs, scholarly articles suggest that emotion-based health messages can be a powerful driver to promote health preservation attitudes and behaviors. The objective of this research is to develop a set of stimuli known as the Diabetes Affective Message System (DAMS), which is relevant for emotion-related studies in the diabetes health context. The two emotions explored for this study is fear and enthusiasm. All the patients recruited for Phase 1 and Phase 2 of the study were diagnosed with type 2 diabetes and seek treatment in a large public hospital in Singapore. In Phase 1 of the research, eighty stimuli were curated. Four patients with diabetes and eight healthcare providers took part in two separate focus group discussions to determine the appropriateness of the stimuli curated in diabetes related studies. After

replacing the stimuli based on the patients and healthcare providers' inputs, four patients were recruited for a one-to-one interview regarding the appropriateness of the stimuli. In Phase 2, 100 patients were recruited and were asked to rank the stimuli according to three emotion metrics, namely valence, arousal and dominance. The metrics were derived from a standard known as Self-Assessment-Manikin (SAM). A better understanding of emotional-based messages for diabetes patients may have the potential to sway patients towards prudent behaviors in managing their condition.

Speaker Biography

Mohamed Ariffin Bin Mohamed Kawaja Kamaludin is currently a PhD student in Nanyang Technological University (NTU) in Singapore. His area of study is on emotion-based messages as a behavioral intervention for diabetes patient in Singapore. Prior to his PhD, he ran a startup which curates abstracts from the US Medical Library and categorize them based on researchers' profile using machine learning. He has 3 publications, a patent and a technology disclosure filed under NTU.

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Notes:

Grape juice consumption and/or exercise training increased brain-derived neurotrophic factor levels in healthy elderly women

Caroline Dani

Methodist University Center, Brazil

Brain-derived neurotrophic factor (BDNF) is the most widely distributed neurotrophic factor in the central nervous system (CNS), and performs many biological functions such as neural survival, differentiation, and plasticity, effecting in learning and memory abilities. The grape juice effect was observed firstly in rats, but there isn't studies with humans and the potential effect of exercise. This study aimed to verify the impact of grape juice consumption and/or exercise in the modulation of the plasma neurotrophic factor (BDNF) levels in healthy elderly women. We designed this study in two steps. Firstly, 19 healthy elderly women were randomly distributed in two groups: Grape Juice Group (GJG, n=9) and Grape Juice + Exercise Group (GJEG, n=10). The GJG was instructed to drunk daily the grape juice(400 ml) during 30 days, while the GJEG was submitted to a physical exercise intervention (twice a week, 60 min/session) and drunk the grape juice. Secondly, 20 women were randomized in two groups: GJ + Exercise Group (GJEG, n=10) and Placebo + Exercise Group (PEG, n=10). The consumption and exercise instructions were the same. The grape juice and the placebo were provided

by the same winery, they were packed in the same box, with the same information, blinding the study. The grape juice is a commercial product. The placebo provided the same sugar content than the grape juice but without polyphenols. Blood sampling were taken for BDNF analysis pre/post intervention in both groups. The total phenolic compounds and total flavonols content were higher in grape juice than placebo. It was observed a significant increase on BDNF levels in GJG) and GJEG after intervention. However, this increasing was not observed in placebo group with exercise. In conclusion, the grape juice consumption per se is capable to increases BDNF levels, response that was not potentiated by exercise practice.

Speaker Biography

Caroline Dani has completed her PhD in 2008 from Universidade de Caxias do Sul, Brazil. She has completed her pos doc at Georgetown University, Washington, USA. She is professor of Methodist University Center, IPA, Brazil. She is a master co-ordinator. She has almost 80 publications. She is studying about grape juice since 2004. She has supervised more than 20 master and graduation students.

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Notes:

Promoting healthy eating at the workplace: The role of the interest in different groups of employeesJoao Lima^{1, 2, 3, 4}, Teresa Brandao⁵ and Ada Rocha^{3, 4, 6}¹ Coimbra Health School, Portugal² ciTechCare, Portugal³ GreenUPorto, Portugal⁴ LAQV – Requimte, Portugal⁵ Escola Superior de Biotecnologia da Universidade Católica Portuguesa, Portugal⁶ University of Porto, Portugal

INTRODUCTION: Health promotion activities at the workplace may be more effective and targeted if the key drivers and motivations of food consumption are previously identified.

AIM: This work aims to identify health promotion strategies at the workplace pointed out by employees as more interesting of a faculty of the University of Porto.

METHODS: Data was obtained through the application of a self-administrated questionnaire. There were assessed 513 individuals, including academic and non-academic workers.

RESULTS: The majority of respondents classified as extremely interesting the ‘free access to water’, ‘free distribution of fruit in the workplace’ and ‘healthy choices at meals available in the restaurant/bar’. Strategies such as ‘cooking classes’, ‘access to health promotion materials such as leaflets and posters that promote healthy eating’, ‘access to messages about healthy


eating via email and/or bulletin boards’ and training, lectures and workshops about healthy eating’ were considered extremely uninteresting or uninteresting more frequently.

CONCLUSIONS: This work shows that strategies related to food availability were considered by respondents as the most interesting in opposite to strategies related to nutrition literacy that were considered uninteresting. Differences found according to the type of activity and academic degree on interest in strategies point out to the need of adapting specific interventions to different target groups.

Speaker Biography

Joao Lima is currently working at the Coimbra Health School, Portugal. He has published a number of research papers in the field of Nutrition.

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 Notes:

Apples and cardiovascular health—Is the gut microbiota a core consideration?

Francesca Fava¹, Koutsos A² and Tuohy K M¹

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There is considerable scientific evidence that a diet rich in fruits and vegetables improves human health. Apples are a good source of polyphenols and fiber and are widely consumed worldwide. An important proportion of apple bioactive compounds escape digestion in the upper intestinal tract and reach the colon where they can be fermented by the colonic microbiota. Results from our group have shown that apples from different varieties can induce substantial changes in microbiota composition and metabolic activity in in vitro batch culture models. In particular one apple variety significantly increased Bifidobacteria, Proteobacteria and Faecalibacterium prausnitzii populations, as well as butyrate levels and polyphenol microbial metabolites. In a human nutrkinetic study we previously demonstrated the existing correlation between faecal bacteria and specific microbial plasma and urine catabolites derived from apple. Based on these results we have performed a randomized, controlled, crossover, dietary human intervention study (NCT01988389) in 40 mild hypercholesterolaemic subjects, which showed that a daily consumption of 2 apples for 8 weeks can decrease the risk of cardiovascular disease by reducing total

and LDL-cholesterol, improving vascular function, reducing circulating vascular cell adhesion molecule, beneficially modulating gut microbiota and increasing microbially-derived small phenolic compounds. Modulation of bile acids profiles is one of the physiological processes linking gut microbiota metabolism to the beneficial effect of whole healthy foods, such as apples. We are currently investigating the role of microbial modulation of bile acids in response to a range of beneficial functional foods, through a specifically designed mechanistic human dietary intervention, including apples, within the CABALA_Diet&Health project framework (JPI- HDHL-healthy diet for healthy life, grant n. 696295).

Speaker Biography

Francesca Fava has completed his/her PhD at the University of Reading in 2008. She previously worked at the Istituto Clinico Humanitas, Rozzano (MI). She is a permanent researcher at Fondazione Edmund Mach, Centro Ricerca ed Innovazione, Department of Food Quality and Nutrition, Nutrition and Nutrigenomics Unit, since 2011. Her main research interest is to study diet-microbe interactions through human studies and in vitro models. She is author of 42 research publications, with H-index=15 and over 5000 citations; she has been serving as an editorial board member of the International Journal of Food Science and Nutrition.

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Prevalence of diabetes mellitus in community

Vaibhav Chandrakant Shilimkar

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Diabetes mellitus is an autoimmune disorder. Diabetes mellitus is a one of the metabolic disorders characterized by metabolic abnormalities. Complications such as eye disease, urinary tract infection, nerve damage, cardiovascular disease, diabetic foot occurs due to diabetes mellitus. It was estimated that 415 million people are living with diabetes in the world. Out of which 46% people with diabetes are undiagnosed. According to International Diabetes Foundation India had more diabetics than any other country in the world. About 62 million Indians currently affected by diabetes, from that 7.1% are the adult population. The high incidence is attributed to a combination of genetic susceptibility plus adoption of a high calories, low activity and life style by India's growing middle class. Because of these reasons it is important to know how many people aware of their diabetes mellitus and what the complications are related with their inadequate diabetes mellitus monitoring. Thus, the survey is the best option to find out all this information. As a pharmacist, while doing survey a patient & pharmacist interaction was done

and because of that better patient counseling was takes place. Through this counseling patients and their family members were getting in depth knowledge about his/ her own disease like their do's and don'ts, how the exercise is important in their diabetes mellitus and importance of a low-calorie diet in their routine life style. In this present study a survey of local slum areas at Hadapsar near to Pune in Maharashtra was done. We collect all the data from 100 houses analyzed the data and simultaneously patient counseling was done.

Speaker Biography

Vaibhav Chandrakant Shilimkar took an interest in a wide range of sciences specially in fields of Pharmacognosy. He made contributions to plant physiology, extraction, isolation and characterization of plant metabolites and bioassays. He borns in 1983, in India. In his academic career, he make various revolutionary changes in educational patterns and guided so many students for career. Now he is working on development of monographs of traditionally used medicinal plants. He took an wide interest in arranging so many social activities in development of rurals, like heath awareness & importance of organ donation awareness campaign.

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Diabetes infection and malaria immunity: A case in diabetic patients in the central region of Ghana

Paulina Ampomah, Quarme Amponsah Boahene and Harrison Tawiah Nfodwo
University of Cape Coast, Ghana

In Ghana, non-communicable diseases (diabetes and hypertension) contribute to about 86,000 deaths annually. NCDs and infectious diseases (malaria and HIV Aids) are among the top ten killers in Ghana. Both malaria and type 2 diabetes are immune compromised diseases that pose a major challenge to health and therefore require immediate attention. We recruited diabetic patients from 9 major hospitals across the central region of Ghana and obtained about 3milliliters of venous or finger prick blood after an informed consent form was signed. We determined fasting blood sugar (FBS) levels by glucometer and parasitemia by microscopy (n=260). Plasma was isolated and used to serologically measure specific antimalarial antibodies to 3 important Plasmodium falciparum antigens (MSP1; AMA1 and Crude Schizont antigens) and determined the proportions of white blood cells (WBC) of importance (neutrophils and lymphocytes) (n=46). Data was

compared healthy individuals (n=56). Anti-diabetic drug in use was retrieved from patient's folder to determine drug efficacy. Preliminary results show a marked increase in antimalarial specific antibodies to all three P. falciparum antigens and a moderate rise in WBC counts in diabetic patients compared to healthy and hypertensive individuals. Only 3.8% of the 260 had malaria parasite in their blood. Patients with high FBS (>7.0mmol/L) are at 4.2x risk of malaria infection. To conclude, we show that effective management of diabetes provides patients with enormous immune protection against the malaria parasite.

Speaker Biography

Paulina Ampomah graduated from University of Copenhagen, Denmark as a biomedical scientist with specialty in B cell immunity and lymphocyte exhaustion markers. She is a lecturer at the University of Cape Coast where she is continuing with her research work.

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The relationship between insulin resistance and the intake of dairy products: A cross sectional study among employees at a private university in Lebanon

Jessy El Hayek Fares, Myriam Fahed, Maya Abou Jaoudeh and Samar Merhi
Notre Dame University, Lebanon

The literature is suggesting an association between dairy product consumption and insulin-resistance, however results are inconclusive. To our knowledge, no study examined this association in the Middle Eastern Region. The objectives of this study are to examine the association between dairy products' consumption and insulin resistance in a sample of Lebanese adults and to assess the effect of different types of dairy products on insulin resistance.

This is a cross-sectional study conducted among Notre Dame University employees, in Zouk Mosbeh, North and Shouf campuses. Four questionnaires were administered including a background and International Physical Activity Questionnaire short form questionnaires, food frequency questionnaire and a 24h recall. Bioelectric Impedance Analysis was used to measure percent body fat (PBF). Fasting insulin levels were measured using Enzyme Linked Immunosorbent Assay technique. Homeostatic Model Assessment for Insulin Resistance (HOMA-IR) was used to quantify insulin resistance. A person with HOMA-IR ≥ 2.5 was considered as insulin resistant. Statistical analyses were performed using SPSS version 23. $P < 0.05$ was considered to be statistically significant.

The sample consisted of 286 subjects (46.9 % men and 53.1 % women) with a mean age of 41.2 ± 11.0 years. Average


dairy product intake in the total sample was 2.2 servings per day. More than one third of participants (38.0%) were insulin resistant with higher proportion of men (47.0%) being insulin resistant compared to women (31.6%) ($p=0.008$). After controlling for confounders, variables that were directly associated with HOMA-IR when total dairy intake was included in the model were gender ($p=0.001$), marital status ($p=0.016$) and PBF ($p < 0.001$) and inversely associated factors included age ($p=0.049$) and low-density lipoproteins ($p=0.041$). The same factors were associated with HOMA-IR, when the types of dairy products were included in the model, in addition to yogurt intake ($p=0.021$).

This study suggests that yogurt consumption, but not total dairy consumption, was associated with increased insulin resistance.

Speaker Biography

Jessy El Hayek Fares joined the Department of Nursing & Health Sciences in fall 2012 shortly after completing her PhD and postdoctoral fellowship in Human Nutrition, at McGill University, Canada, in Spring 2012. Currently El Hayek is teaching multiple graduate and undergraduate courses including basic human nutrition, lifecycle nutrition as well as community nutrition. As of fall 2014, she was appointed as chairperson of the Department of Nursing & Health Sciences. El Hayek 's main research interests include repercussions of low vitamin D status on bone health and other extra skeletal functions, particularly chronic diseases.

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 Notes:

Diabetes mellitus in developing country, in the era of high HIV prevalence

Daniel Azmeraw Workluel

ALL African Leprosy, Tuberculosis, Rehabilitation Training Center (ALERT Center) | Ethiopia

Diabetes mellitus (DM) is a chronic disease with wide spectrum etiology, risk factors, pathophysiology, and clinical presentations, as well variety of armamentarium employed for management of patients with DM nutritional, non-pharmacological and pharmacological recommendations applied for mitigating the effect of DM on morbidity and mortality. I was thought that Type I DM was the most prevalent from types of DM, however with advent of urbanization, decrease physical activities and sedentary life style the trend of DM is changing in developing countries. Currently from the place where I came from, Ethiopia the prevalence of DM is nearly 6 % and there is a rise in prevalence and incidence of DM attributed to urbanization, decrease physical activities, sedentary life style, increment in prevalence of obesity especially in urban areas, as well increase in life expectancy as a result of decrease in prevalence and incidence of communicable disease (malaria, relapsing fever..) which translates as aging of population with increasing the prevalence and risk of non-communicable disease like DM. Ethiopia is a country with high prevalence of HIV with estimated prevalence of 1.8%, with 1.2 million individuals living with HIV and more than

70 % currently on antiretroviral therapy (ART). Besides the traditional risk factors for DM, 40-70% of patients with HIV are estimated to have dyslipidemia, and ART incurs additional risk factor for atherosclerosis, dyslipidemia and DM. On top of this as ART prolong the life of patients, and the prevalence of DM especially Type II is logically expected to increase and treatment of both HIV and DM may complicate the life style of patients and create difficulty for clinician managing the patients. With respect am asking the participants of this conference to give emphasis on DM in developing country especially in area where HIV is prevalent, by conducting research, providing training on management of combined chronic illnesses communicable and non-communicable, support this counties to develop guidelines.

Speaker Biography

Daniel Azmeraw Workluel has completed MD, M.PH and internist at the age of 36 from Jimma University and University of Gondar, Ethiopia, currently working as leader of internal medicine case team and senior medical specialist (internist/public health specialist), clinician at ALERT center, with 3 published research and more than 3 ongoing research at ALERT center and Armaur Haunssen research institute (AHRI) one of the renowned in Ethiopia and worldwide.

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Clinical presentations, glycemic control, complications and associated autoimmune diseases among children and adolescents with type 1 diabetes mellitus**Asmaa Milyani**

King Abdulaziz University Hospital, Saudi Arabia

To study the correlation between initial presentation, metabolic control, long-term complication and the concomitant autoimmune diseases. In addition to exploring the various risk factors that can impact the glycemic control in children and adolescents with type 1 diabetes mellitus (T1DM).

Methods: A retrospective cross-sectional study was conducted on 461 patients including children and adolescents with T1DM, who were followed up at the pediatric clinic at King Abdul Aziz University Hospital from January 2004 to December 2016. The medical records and laboratory findings in the hospital's electronic system of all patients were reviewed. Collected data comprised of the primary disease presentation including hyperglycemic and diabetic ketoacidosis (DKA) symptoms, associated autoimmune diseases and consequent chronic complications.

Results: The mean patient age was 10.4 ± 4.8 years. A total of 62.1% and 27.9% initially presented with hyperglycemia and DKA, respectively. Glycemic control did not significantly differ between the pubertal and the pre-pubertal groups, although


the glycated hemoglobin A1C levels were higher in the pre-pubertal group (62.3%) than in the pubertal group (37.7%). Chronic complications were observed as follows: steatohepatitis (11.1%), microalbuminuria (11%), dyslipidemia (10.3%) and retinopathy (5.7%). Regarding the associated comorbidities, vitamin D deficiency was present in 58.9% of children and was significantly associated with gender (68.4% females and 51.9% males), whereas autoimmune thyroiditis and celiac disease were present in 20% and 8.2% of children, respectively.

Conclusion: Pre-pubertal children exhibited less glycemic control as compared to adolescents. The most common presentation at diagnosis included signs of hyperglycemia rather than those of DKA. The co morbidities showed a significant relationship with gender. Vitamin D deficiency is the most common associated medical condition in children with diabetes.

Speaker Biography

Asmaa Milyani is a humble student, a passionate physician and an aspiring researcher with a prospering interest in the field of pediatrics.

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Optimizing treatment for diabetic patients with integrated approach of behavioral management, food science, artificial intelligence and pharmaceutical care

Ahmad Hussien Tareq

Nanyang Technological University, Singapore

Diabetes is a major, non-communicable disease with increasing prevalence at a global level. Optimized diabetic care comprises of various factors. It starts from right medications, frequent blood glucose monitoring, modification in diet, increasing physical exertion and behavioral intervention for patient compliance. Pharmaceutical care addresses the drug related issues and assist in sustaining desired blood glucose levels. However, lifestyle changes are the significant component of diabetes management. To adjust with these changes' patient needs continuous education, motivation and monitoring. To track patient progress, pharmaceutical care and behavioral challenges, we are developing tool to manage clinical data, applying artificial intelligence and data analytics to acquire expedient actionable insights for the clinicians. Our focus is to resolve behavioral challenges of patients particularly with diet. With reference to South Asia, diet transition is significant part of disease management, and it poses high barrier for patient compliance. Most diabetics are accustomed to refined carbohydrate with high glycemic index (GI) food. They have difficulty following dietary recommendation for long term.

The likely causes of poor adherence are headaches, craving for carbohydrates, habituation for their preferred food choices like white rice, noodles and bread. We are developing a composite to incorporate it into raw food ingredients. Aim is to enable food production with lower GI. It will potentially help in addressing the challenges of nutritional adherence in diabetic patients. Although further research is needed to understand and explore this route, nevertheless it offers a promising route to replace high GI products with medium/low GI products.

Speaker Biography

Ahmad Hussien Tareq is pharmacist and scientist who did extensive work in peptide engineering, its application in infectious diseases drug development and nutrition sciences. After completing his PhD from NTU, Singapore, he has been extensively involved with the deep tech startup ecosystem of Singapore. Recently he is building his own startup focused on developing optimized nutritional care and behavior compliance for diabetics. As a pharmacist, he worked with numerous diabetic patients, particularly in developing countries with aim of reversing type 2 diabetes. His work is focused on using integrated approach of behavior management, AI, sports science, big data, optimized nutritional & pharmaceutical care.

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