DELAYS IN SOUTH AFRICA'S PLANS TO BAN ALCOHOL ADVERTISING

Charles Parry

Last year Cabinet moved forward on its intention to ban alcohol advertising by approving “The Control of Marketing of Alcoholic Beverages Bill”. This bill, now subject to a regulatory impact assessment (RIA), aims to help reduce alcohol-related harm and protect public health through limiting the public’s exposure to alcohol marketing by limiting advertising of alcohol products to points of sale, banning all sport and arts sponsorships associated with alcohol products and prohibiting the promotion of alcoholic beverages. The liquor industry is strongly opposed to the bill and has mobilized interest groups (including the advertising industry) to challenge its merits. Industry criticisms have denied evidence for a link between alcohol advertising and consumption, and argued that an advertising ban is anti-competitive, will have negative consequences for the economy, will promote trade in illicit liquor, will erode personal freedoms and hurt the arts and sports development. Minister Motsoaledi has been accused of being a “nanny from hell” and his supporters labeled “prohibitionists”. In response, the government, public health researchers and advocacy groups have pointed to the evidence supporting a ban. If alcohol advertising is banned in South Africa, bans in neighbouring countries may follow and this would undermine industry’s efforts to develop new markets targeting women. The last minute addition of an independent RIA, despite the fact that the Department of Health had already conducted one, has delayed the legislative process considerably and mirrors concerns that the way RIAs are applied may undermine healthy public policy because of possible corporate influence.

THE CHALLENGES OF RESEARCH ON VIOLENCE IN POST-CONFLICT BOUGAINVILLE

Rachel Jewkes

Until the release of the movie Mr Pip this year, life on Bougainville, an island of Papua New Guinea, has rarely attracted global attention. However the island experienced a bitter civil war which raged for over a decade from its start in 1988, with incremental peace building and disarmament thereafter. Violence against women was a key feature of the war, and so this is an important setting to study in order to understand the origins of the problem and search for post-conflict solutions. In 2012 staff from the Gender & Health Research Unit conducted gender-based violence research in Bougainville Island, as part of the UN Multi-country Study on Men and Violence in Asia and the Pacific. This article draws on their experiences of work in post-conflict Bougainville to reflect on the challenges of research on sexual and other gender-based violence in post-conflict settings.
ANXIETY DISORDERS, OBSESSIVE-COMPULSIVE AND RELATED DISORDERS, TRAUMA- AND STRESSOR-RELATED DISORDERS, AND DISSOCIATIVE DISORDERS IN DSM-5

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is a widely used classification system, which provides diagnostic criteria for a range of different mental disorders. The DSM is widely used in clinical settings, and plays a particularly important role in psychiatry research. Thus, clinical trials throughout the world typically rely on DSM diagnostic criteria in selecting subject samples. Further, a good deal of international psychiatric epidemiology, has relied on DSM diagnostic criteria for assessing the prevalence of and risk factors for mental disorders.

Given accumulating scientific knowledge about psychiatric disorders, and the long gap since the publication of the 4th edition of DSM, a decision was made to work on a 5th edition, DSM-5. This editorial summarizes some of the changes made to the anxiety and related disorders. Taken together, these disorders are not only the most prevalent of the mental disorders, but they also comprise a large portion of the total number of DSM mental disorders; any changes are therefore important for the field.

Perhaps the biggest change, was that DSM-5 has split the anxiety disorders into different chapters; on anxiety disorders, obsessive-compulsive and related disorders, and trauma and stressor-related disorders. This reflects growing evidence that the different sets of conditions have different psychobiological underpinnings (and may therefore respond to different interventions), and the hope that dividing them up will enhance the clinical utility of DSM (for example, by encouraging clinicians to screen more carefully for a range of under-diagnosed and under-treated conditions).

Aspects of psychiatric diagnosis can be controversial, and a number of points about the DSM-5 revision are worth emphasizing. First, there was significant representation from international scientists. Indeed, members of the MRC Unit on Anxiety & Stress Disorders participated in literature reviews on anxiety and related disorders, and led field surveys on obsessive-compulsive and related disorders. Second, there was significant input from both clinicians and consumers. Thus, for example, consumer advocates played a key role in shaping the decision about which disorders were included in the section on obsessive-compulsive and related disorders.

HIGH NASOPHARYNGEAL PNEUMOCOCCAL DENSITY, INCREASED BY VIRAL CO-INFECTION, IS ASSOCIATED WITH INVASIVE PNEUMOCOCCAL PNEUMONIA

Pneumococcal disease is preceded by nasopharyngeal pneumococcal colonization, however Streptococcus pneumoniae is a commensal of the nasopharynx and most carriage episodes do not result in disease. We aimed to identify factors that are associated with the acquisition of colonizing pneumococci, increased colonization density and invasive pneumococcal disease that may be useful when considering prevention and treatment strategies for individuals with an increased risk of developing pneumococcal disease. From January through December 2010, 4025 patients hospitalized with acute lower respiratory tract infections were enrolled at four surveillance sites in South Africa through the Severe Acute Respiratory Illness (SARI) surveillance programme. Nasopharyngeal and blood specimens, together with demographic and clinical information, were collected. 969/4025 (24%) systematically-selected nasopharyngeal specimens were tested for respiratory viruses and S. pneumoniae by real-time polymerase chain reaction (PCR). Of these, 749 (77%) had blood tested for S. pneumoniae. Despite S. pneumoniae being a common colonizer (55%; 534/969), only approximately 7% (52/749) of patients tested positive for invasive pneumococcal pneumonia. Individuals with a concurrent respiratory virus infection (influenza and/or adenovirus and/or rhinovirus) or HIV infection were more likely to be colonized with pneumococcus. Respiratory virus co-infection was also associated with an increased nasopharyngeal colonization density. Amongst colonized individuals, invasive pneumococcal pneumonia was associated with underlying HIV infection, influenza virus infection and nasopharyngeal colonization density of ≥1000 genomic copies/ml. In conclusion, respiratory virus infection was associated with elevated colonization density and, in turn, invasive pneumococcal pneumonia. Understanding factors such as these that may enable clinicians to predict the potential development of pneumococcal disease, and therefore target treatment appropriately could improve patient outcome.
Recent developments in the clinical evaluation of a GBS polysaccharide-protein conjugate vaccine have renewed interest in the potential of this vaccine protecting newborns against invasive GBS disease either by:

i) increasing transplacental serotype specific anti-capsular antibody transfer to the fetus; and/or

ii) by reducing recto-vaginal colonization during pregnancy.

We undertook a longitudinal cohort study, which to our knowledge for the first time details the dynamics of GBS colonization in pregnant women during the latter half of pregnancy at the serotype level. Specifically, this study explored rates of recto-vaginal GBS acquisition, duration of colonization and loss of GBS colonization at the serotype level during pregnancy.

South African pregnant women have a high prevalence of GBS recto-vaginal colonization from 20 weeks of gestational age onwards, including high GBS acquisition rates in the last pregnancy-trimesters. The most common identified serotypes were Ia and III and there are differences in specific-serotype colonization patterns during pregnancy. The median duration of recto-vaginal GBS colonization for serotype III was longer than other serotypes. Pilus island proteins were detected in all GBS isolates and their subtype distribution was associated with specific serotypes.

The findings of this study will be important in considering study design when evaluating the efficacy of maternal GBS vaccination protecting against GBS recto-vaginal acquisition and colonization during pregnancy as surrogate information on clinical vaccine efficacy may be gained by determining the immune responses that correlate with protection against serotype-specific GBS acquisition and colonization during pregnancy.

With greater urbanisation and economic transition across Africa, and in particular, South Africa, there has been an increase in non-communicable diseases such as type 2 diabetes mellitus. Considering this, the prevalence of gestational diabetes mellitus (GDM), described as any degree of impaired glucose tolerance first recognised during pregnancy, is expected to be increasing too.

Despite most women with GDM reverting to normal glucose metabolism after their babies have been born, they are at a higher risk of developing type 2 diabetes later in life and so are their offspring. This vicious cycle of diabetes places a significant burden on the health and economy of a country. Before GDM screening policies can be suggested, the extent of the problem needs to be well described. Focussing on Africa, a systematic review on GDM was undertaken.

Fourteen full text articles were finally included in the systematic review. These articles described research on GDM in Ethiopia, Morocco, Mozambique, Nigeria, South Africa and Tanzania. These six countries represent only 11% of the African continent.

The review highlights the dearth of information on GDM in Africa. In addition, based on the included research articles, the overall prevalence of GDM in Africa is estimated to be in the region of 5%; approximately two and a half to seventeen times greater than some high income countries (Denmark (2–3%), the UK (2–3%), Germany (0.3–0.8%). Considering Africa is a continent undergoing rapid transition and urbanisation, obesity and diabetes are very real public health concerns. Therefore, research into GDM should be prioritised in Africa in order to optimise maternal and child health and reduce the concomitant economic and health burden associated with the condition.
The precise regulation of extravillous trophoblast invasion of the uterine wall is a key process in successful pregnancies. Kisspeptin (KP) has been shown to inhibit cancer cell metastasis and placental trophoblast cell migration. In this study primary cultures of first trimester human trophoblast cells have been utilized in order to study the regulation of invasion and angiogenesis-related genes by KP.

Trophoblast cells were isolated from first trimester placenta and their identity was confirmed by immunostaining for cytokeratin-7. Real-time quantitative RT-PCR demonstrated that primary trophoblast cells express higher levels of GPR54 (KP receptor) and KP ligand mRNA than the trophoblast cell line HTR8/Svneo. Furthermore, trophoblast cells also expressed higher GPR54 and KP ligand protein levels. Treating primary trophoblast cells with KP induced ERK1/2 phosphorylation, while co-treating the cells with a KP antagonist almost completely blocked the activation of ERK1/2 and demonstrated that KP can activate ERK1/2 through its cognate KP receptor in trophoblast cells. KP reduced the migratory capability of trophoblast cells in a scratch-migration assay. Real-time quantitative RT-PCR demonstrated that KP treatment reduced the expression of matrix metalloproteinases 1, 2, 3, 7, 9, 10, 14 and VEGF-A, and increased the expression of tissue inhibitors of metalloproteinases 1 and 3.

These results suggest that KP can inhibit first trimester trophoblast cells invasion via inhibition of cell migration and down regulation of the metalloproteinase system and VEGF-A.

**Figure:**
KP inhibits trophoblast cell migration:
(A) Images of the scratch migration assay performed on trophoblast cells treated for 48 hours with vehicle (-), 100 nM KP, 1 µM KP antagonist (p356) or both treatments (KP + p356) together. Images were taken immediately after performing the scratch (0 h) and 48 hours later (48 h).
(B) Quantification of the relative migration of vehicle treated trophoblast cells (white bar) and trophoblast cells treated with KP (light grey bar), p356 (dark grey bar) or KP + p356 (black bar) (n = 6). ANOVA test p<0.05, columns with different letters represent statistically different values, while same letters indicates no significant difference.
(C) Staining of the migrated cells with DAPI (blue, nuclear stain), anti-GPR54 (green) and the merge of staining. Scale bar indicates 200 µm.

**References:**
1. INTRAMURAL RESEARCH UNITS

Alcohol, Tobacco and Other Drug

Reed E, Myers B, Novak SP, Browne FA, Wechsberg WM. Experiences of violence and association with decreased drug abstinence among women in Cape Town, South Africa. AIDS and Behavior. 2014 June 17.


DOI: 10.1016/S0140-6736(14)60954-5.

Biostatistics


Environment and Health


DOI:10.7196/samj.8052.

Gender and Health


DOI: 10.3402/gha.v7.24589.


DOI: 10.1016/S0140-6736(14)60969-7.

Health Systems


HIV Prevention


DOI: 10.1136/sextrans-2014-051537.

Non-Communicable Diseases


DOI: 10.1136/bmjopen-2013-004747.

South African Cochrane Centre


Violence, Injury and Peace


DOI: 10.1080/17457300.2014.912236.
2. EXTRAMURAL RESEARCH UNITS

Anxiety and Stress Disorders


Bioinformatics Capacity Development


Drug Discovery and Development


Exercize and Sports Medicine


Diarrhoeal Pathogens

Celebrates Science

JUNE 2014

3. GRANT FUNDED RESEARCH

Self-Initiated Research

DOI: 10.1016/j.ijmedinf.2014.06.008.

Strategic Health Innovation Partnership

Diabetes Discovery Platform

DOI: 10.1007/s13105-014-0341-4.

4. CLOSED RESEARCH UNITS

Health Promotion Research and Development Unit

DOI: 10.1007/s10508-014-0307-1.

Oncology

DOI: 10.4103/0377-4929.134665.

Promec Unit


Rural Public Health and Health Transition


DOI: 10.1371/journal.pone.0100420.
5. RESEARCH UNITS WITH NO QUALIFYING PUBLICATIONS

INTRAMURAL
- Burden of Disease
- Centre for Tuberculosis Research

EXTRAMURAL
- Cancer Epidemiology
- Health Policy
- Human Genetics
- Immunology of Infectious Disease
- Maternal and Infant Health Care Strategies
- Medical Imaging
- Molecular Mycobacteriology

6. GRANTS AWARDED

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