Dear Colleagues,

On behalf of University of Agder and the Organising Committee, we are pleased to welcome you to the

**2nd International Conference on Global Public Health**
Focus on UN Millennium Development Goals – Health promotion in a
National and International perspective

This conference is the 2nd conference on Global Public Health, arranged by Faculty of Health and Sports, University of Agder, Norway in cooperation with institute of Health Sciences in Molepolole, Botswana. This first conference was held in Gaborone, Botswana in 2005 and was a success.

This conference is a celebration of our status change from University College to a full established University in September 2007.

This conference provides an opportunity for all public health workers to be introduced and exposed to a variety of aspects associated with the changing demands in the field of public health worldwide. The Organising Committee has worked diligently to organise a wide-ranging programme focusing on important health issues. We are pleased to welcome participants from about 30 different countries. Collaboration is needed to overcome the serious health challenges of our time, and this conference is a place for developing relationships across borders.

With its population of 79,000 Kristiansand is Norway’s fifth largest town and the largest on the southern coast of Norway, usually referred to as “Sørlandet”. Kristiansand is a Renaissance town founded in 1641. Located on the southern tip of Norway, it has always been a commercial centre with easy access to and good connections with the European continent and the rest of the world. Visitors appreciate that Kristiansand is the sunniest place in Norway. Travellers benefit from regular domestic and international flights in addition to intercity bus connections and ferry and railway services, in addition to regular ferry connections to Gothenburg (Sweden), and Hirtshals (Denmark). Kristiansand is today the second largest port in Norway, after Oslo. It is the largest summer tourist resort in Norway with its armada of pleasure boats, and it has one of Northern Europe’s largest zoos and amusement parks.

The Organising Committee has arranged for a rich programme throughout the conference. We hope that you will enjoy your stay in Kristiansand and that you will meet and share your ideas and knowledge with all participants.

Thank you and enjoy your stay with us!

Aud Fíndal Dahl       June Jacobsen Steen       Berit Johannessen       John Olav Bjørnestad
DEVELOPMENT OF AN INTEGRATED MODEL TO CONTROL LIFE STYLE RELATED DISEASES AT WORKPLACE SETTING

Gaurav Aggarwal
India

Healthy workplace is the need of an hour and it involves health promotion, specific protection and early detection of occupational health problems and providing a safe and disease free environment to the employee. It is not a cost but an investment to the company just like resources are must for the effective productivity so are these investments which will be for human capital. Various statistical data and studies have revealed that lack of an effective healthy workplace strategy has a negative impact on the productivity. DALY of non-communicable diseases in India are cancers 8992, diabetes 1981, mental illness 22,944, cardiovascular diseases 26,932, blindness 3699, COPD and asthma 4061, oral diseases 1247, injuries 45,032. The study conducted by Confederation of Indian Industry revealed that the 11.6% employees had habits (smoking, consuming alcohol and an addiction to other tobacco products) for more than five years. Thirty-seven percent people indulging in all three addictions are proven diabetics, 66% had reported heart problems, 74% had high blood pPressure (HBP), 48% had COPD, 53% cancer and 47% had shown symptoms of gastroenteritis, insomnia and a range of other disease. 62.96% of people at sedentary jobs are more stressed and the level of stress is apparently more for respondents working in the services sector (IT, BPO). Forty-six percent of the respondents in the service sector with stress had diabetics, 39% heart problems and 49% had a history of HBP and 31% showed symptoms of COPD. Women (52.41%) have higher levels of stress than men (40.08%). Even though companies have their own infrastructural arrangements for health care provision only 36% of the employees go on to utilize them. It certainly asks for more investment in health facilities for the employees. Therefore this proposed model is being developed to control NCDs at workplace which became evident from different studies and literature available in journals and electronic media. This proposed model will help to control NCDs at workplace and it comprises capacity building, surveillance, health promotion in the form of sessions, workshops and distribution of IEC materials.

INTERPERSONAL COMMUNICATION (IPC) MODULE APPLICATION IN HIV/AIDS FIGHT IN SUDAN

Rashad Gimmar Ahmed and Hamid Mohyeldin Idrees
Sudan

One of our ongoing projects is on adopting Interpersonal Communication (IPC) module to approach general population with focus on most at risk population (MARPs) to HIV infection in Khartoum State in Sudan. We are implementing this project through training of medical and paramedical staff ‘doctors and midwives’ and community volunteers including medical, paramedical and non-medical students on the module through partnership with Sudan National AIDS control Programme and other international NGOs. IPC project aims to approach the communities in remote areas ‘out-reach’. Since these communities are more vulnerable to HIV infection due to poverty, illiteracy and lack of health infrastructures. IPC is a behavioral change communication approach that takes place between a trained agent and a member or several members of a specific target population. It is an ideal technique to engage hard-to-reach groups in Sudan such as men who has sex with men, sex workers, injecting drug users), or uniformed services personnel. IPC focuses on one-on-one interactions that address the underlying causes of risk taking and specific barriers to behavior change. IPC programs are a proven methodology for accessing and addressing those who are hard to reach. This is because risky behaviors exhibited by members of high risk groups may marginalize them from the mainstream population, requiring more highly focused intervention strategies. The project has two components

1) Training of medical and paramedical staff ‘doctors and midwives’ and community volunteers including medical and non-medical students. We train them on basic facts on HIV/AIDS together with IPC skills to approach communities using local languages to apply the intervention package. We select at least one trainee from each of the targeted villages who knows their language.

2) To conduct out-reach activities applying an intervention package. The package includes: awareness raising sessions, condom use promotion, mobile voluntary counseling and testing (VCT) as well as promotion of existing nearby VCT centers, referral to HIV/AIDS management centers and stigma reduction in targeted villages and internally dislocated persons camps.

Throughout the project, a strict monitoring and evaluation system is applied. Final reports will be written which will be analyzed. Modification of the project can be done if necessary before its replication in other selected states.

MOHABET: A TOOL OF COMMUNICATION

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We live in a world that has become increasingly small due to migration and travel, be it tourism or business. An increasing number of people with different cultural, religious, educational and economical meet and interact. We meet on many different arenas, many of them include sexual meetings. A consequence of this closeness is a felt need to protect one’s beliefs and culture, at the same time as opening up is necessary for beneficial interactions. In many cases, lack of knowledge and understanding about morals, attitudes and practices concerning sexuality, leads to misunderstanding, harassment, and even violence. Increased knowledge and understanding about sexual issues is necessary to develop better premises for communication and interaction.
The president of African Federation for Sexual Health says that if the situation for African women shall be improved, the attitudes of African men must change. In Norway we see violence and withdrawal as a consequence of misunderstanding and lack of knowledge about other people's beliefs and attitudes. Mohabet is a communication tool developed to increase knowledge and understanding about sexuality between interacting individuals and interacting cultures. It is a way of communication where everybody can say what they think, and where everybody is right. It is not a point to have a better argument, or argue against, but to ask until you understand the other person. A Mohabet always has a theme, or an issue, like sexual ethics, views on gender, sex and the law, prostitution, sexual health, good sex, use of contraceptives. Mohabet is an exchange tool for knowledge and attitudes between people from different cultures. Its special quality is to alleviate communications that include all participants as equal partners. This presentation describes the method, and how it could be used in order to prevent discrimination, misunderstandings, and even to develop equality and respect between people.

CONSCIENTIOUS STUDENTS COMPLY WITH HEALTHY DIET

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Introduction: Implications of a healthy diet to health are well known, and a lot of work is currently being put into the effort to promote healthy dietary habits to school children. The objective of this study was to evaluate school environment and performance with dietary habits among pupils in elementary school.

Methods: One hundred and fifty 9th graders from three elementary schools in the southern part of Norway were included in this study. The pupils answered one questionnaire about school environment and one food frequency questionnaire. A healthy food score was calculated based on frequency intake of healthy food items like dark bread, low fat milk and vegetables, and of low intake of unhealthy food items like sugar sweetened sodas, sweets and chocolate. With the use of principal component analysis on the school environmental questionnaire three main traits were found; the conscientious pupils (CON), the obstinate, not well behaved, but popular pupils (OBS), and the well behaved, not very fond of school pupils (BEH). Linear regression was performed on trait scores as dependent variables.

Results: In the CON group 45% of the variance was explained by grades in social sciences \((p < 0.001)\) and the healthy food score \((p < 0.05)\). In the OBS group 22% of the variance was explained by grades in home economics and dinner intake, whereas the healthy food score had no impact. In the BEH trait none of these variables had impact.

Conclusion: Conscientious pupils seemed to comply with a healthy diet, whereas the obstinate pupils did not, even though complying well with home economics in school.

Keywords: healthy food score; elementary school; factor analysis

THE HEALTH SEEKING BEHAVIOURS OF RURAL TO URBAN FEMALE MIGRANT WORKERS IN GHANA

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This study examined the living conditions and health promoting behaviours of young girls (most of whom are school dropouts, aged 12-28) who are part of the wave of internal migrants streaming from the rural areas of northern Ghana to the urban centres of southern Ghana. Employing both qualitative interviews and quantitative questionnaire (similar to the HPLP-II, Walker et al.,1995), the study unveiled both the systemic issues that promote the increasing migration of young female school drop-outs to southern Ghana, contribute to poor quality of life, impact on the young girls' capacity to adopt healthy living habits. Specifically the results showed that most of the participants (who had either dropped out of school or never attended school) were very stressed with their head-potter jobs in the central business district of Accra and earned barely enough to break even. Further, the girls had poor eating habits, which impacted negatively on the babies and infants some of them had in their care, did not visit doctors, but relied on self medication, and practised unprotected sexual activities (sometimes unwillingly or under pressure of the circumstances). The finding suggests that a very significant health/child protection issue is given no attention and that recent governement policies such as National Health Insurance Scheme and service delivery capacities still leave many in the lurch. Implications are discussed.

A HEALTH ENHANCING AND ENVIRONMENTAL FRIENDLY NORDIC DIET

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Because most of the top determinants of world-wide burden of disease are diet-related, promotion of healthful diets is important for population health across the world. Furthermore, changes in eating habits may also contribute to preservation of the environment. It will be argued that recommendations for healthful eating should be more tailored to regional circumstances. This will promote population health as well as help to preserve cultural diversity in eating habits and contribute to more environmental friendly eating. A regional Nordic diet, mimicking to some extent the Mediterranean diet, is presented as an example. Based on four criteria (potential of local environmentally sound production, tradition as a food source, health effects superior to other foods within the same food category and potential of being eaten in amounts as foods (not only as supplements such as spices)), foods were selected for a theoretically health enhancing and environmental friendly Nordic diet. The foods included are: (1) native berries, (2) cabbage, (3) native fish and other seafood, (4) wild (and pasture-fed) land-based animals, (5) rapeseed oil and (6) oat/barley/rye. However, putting this into practice comes with some challenges. First, how can we produce/harvest enough healthy animal foods (meat as well as fish) without expensing the environment? A second challenge is whether all plant food we will need can be
produced or harvested locally. Finally, how can we get people to indeed eat these foods instead of the (sweet, fatty and salty) foods modern people have grown accustomed to?

**Topic:** 2. Lifestyle and health challenges – with focus on physical activity and nutrition.

**COMMUNITY NURSES’ EXPERIENCES OF ETHICAL DECISION-MAKING IN PALLIATIVE CARE**

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**Background:** Palliative care implies problem-solving and ethical decision-making in which nurses are engaged as human agents in personal and interpersonal actions. This means that nurses have to deal with how to perform ethical decision-making on an everyday basis.

**The aim:** To illuminate nurses’ experiences of ethical dilemmas in palliative care and how they arrived at ethical decisions.

**Method:** Seven nurses with experiences of palliative care wrote a narrative about one ethical dilemma they have experienced when they cared for a patient in palliative care. The data were analysed using phenomenological-hermeneutic method (Lindseth and Norberg, 2004).

**Results:** The analysis revealed three core themes: powerlessness, frustration and worrying.

**Comprehensive understanding:** The result was interpreted by means of Ofstad’s (1991) ethical theory, according to which if a nurse is physically or psychologically constrained and is not free to act, she/he is still free to make a decision. A nurse can be forced to care in conflict with her/his own fundamental values. To make decisions and solve ethical dilemmas is the nurse’s duty. The nurses in this study experienced powerlessness, frustration and worrying when they had difficulties to make ethical decisions with the patients’ best in focus. The nurses need to develop the professional autonomy so that their area of responsibility becomes more visible. They can attain this through clinical supervision (CS) which is a way of supporting nurses to deal with, e.g. ethical dilemmas. CS may have a positive effect on the quality of care. Time to receive CS is important for nurses. Therefore, to regularly set aside time for CS is related to nurses’ decision-making process. Ethical decision-making in palliative care can improve the situations for nurses. In addition, knowledge about ethical value systems and self-awareness are important factors for nurses in palliative care.

**Keywords:** palliative care; fundamental value; frustration; autonomy; ethical dilemmas; hermeneutical-phenomenology

**A STUDY OF THE ENCOUNTER BETWEEN CARE AND MANAGEMENT: AN INTERPRETATION BASED ON INTERVIEWS WITH COMMUNITY NURSES**

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**Background:** This study highlights ‘the disagreement’ between nursing organization and nursing practice. In nursing practice focus is on good caring for the individual and in nursing organization the focus is management. Maben et al. (2006, p. 470) means that nurses are in front of ‘organizational sabotage’ i.e. structural and organizational constraints such as lack of time, to be constraint in the professional role as a nurse, shortage of staff and high workload. Berggren (2005), Carlstrom (2005), and Bégat (2006) showed that nurses have difficulties to uphold their professional role due to demands from the organization. Ofstad (1961) points to this ‘disagreement’ in his theory of decision-making. Among a lot of factors in his theory three are useable in this study: ‘The use of attention’; ‘Efforts to decide’ and ‘Environment.’ The two first are related to nurses’ desire to support the patient and create a relationship. ‘Environment’ is related to the organizational level.

**The aim:** To identify dividing lines between the daily work demands from the organization as well as from the nursing practice and their influences on nurses’ decision-making process.

**Method:** Individual interviews with nurses (n = 4) in community health care were conducted in October 2007. The data are interpreted hermeneutical in order to reach a deeper understanding.

**Results:** The interpretation revealed in three themes; spiders or octopuses, consultants and decision-makers. The nurses negotiated with managers and other predecessors in order to achieve good solutions for the individual patient. All of this with the purpose to strengthen the patients’ decision-making as well as the nurses’ own decision-making. The findings will provide knowledge for the future collaboration between the actors involved in order to give the best care for the individual patient.

**WHAT IS THE CURRENT PRACTICE CONCERNING THE USE OF OMEGA 3 IN THE PSYCHIATRIC FIELD?**

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**Introduction:** Mental health problems have increased in western countries. Several studies suggest covariation between seafood consumption and rates of mood disorders. The marine fatty acids DHA and EPA that are present in Omega-3, are known to be essential for the brain’s development. Studies indicate that people with depressive disorders suffer from deficits of DHA and EPA and can obtain therapeutic benefits from Omega-3 supplementation. The purpose of the study was to survey the practice concerning Omega-3 in the psychiatric field.

**Method:** Nursing students who had their clinical practice in the psychiatric field were informed and asked to participate in the study. They answered a questionnaire after concluding their placement.

**Results:** There is little emphasis on the therapeutic use of Omega-3 in the psychiatric field. Two wards focused on Omega-3 in connection with eating disorders. There were few routines regarding the evaluation of the patient’s dietary. It was unclear which of the health workers who were responsible for the patients’ dietary and food supplement.

**Discussion:** Health workers do not have extensive knowledge of the research on Omega-3 and it is by some regarded as alternative medicine. The use of Omega-3 for psychiatric purposes may raise the question of whether it is dietary or therapy. Whether the use of Omega-3 comes under the responsibility of nurses or doctors is also unclear.
20,000 DAILY DEATHS GLOBALLY DUE TO PREGNANCY COMPLICATIONS: MORE THAN ALL DEATHS FROM AIDS, MALARIA AND TUBERCULOSIS COMBINED – THE SCANDAL OF OUR TIME

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Globally more than half a million mothers die a maternal death every year. These deaths still represent a small minority of deaths due to pregnancy complications, approximately 7%. We tend to forget the ‘passenger death’ (of the viable unborn baby in late pregnancy) when we focus on the ‘carrier death’ (of the pregnant mother). The mother is the carrier of the baby, who resides for nine months (or so) in the carrier. If the carrier compartment (the uterine cavity) does not provide an enabling environment for passenger survival (freedom of infection, sufficient nutrition through the placenta, oxygen supply, etc.) the passenger may ultimately die or be born with permanent neurological or other disability. We have, annually, around four million stillborn babies in the world and three million early neonatal deaths (deaths very soon after birth), amounting to seven million deaths. All these dead, otherwise viable, ‘passengers’ die as a consequence of maternal ill health and poor delivery care. In comparison, AIDS kills around 2.1 million, tuberculosis around 1.6 million and malaria around 1.3 million human beings, or, combined, around five million deaths. To cater to these potentially avoidable deaths there is a shrinking workforce. Globally, there is a deficit of approximately four million health workers to achieve the Millennium Development Goals. Among them the deficit of midwives amounts to 600,000–700,000. An OAU statement concluded in 2004 that ‘Low-income countries now sponsor high-income countries by approximately USS 500 millions/year in the exodus of trained health workers.’ Most low-income country governments do not invest sufficiently in strategies for serious and significant maternal and perinatal survival. There is a lot of rhetoric double talk since several decades in increasingly far-reaching commitments to reduce maternal mortality. Still, the fifth MDG on maternal survival continues to be the MDG by far the least on track of all MDGs. Countries with the highest maternal mortality ratios still have to make up their minds, with professor Fathalla’s words: ‘Women are not dying because of diseases we cannot treat. They are dying because societies have yet to make the decision that their lives are worth saving.’ We can therefore conclude, with confidence, that ‘Any country has the maternal mortality its government deserves.’

ACHIEVING MILLENNIUM DEVELOPMENT GOALS FOR MATERNAL AND CHILD HEALTH IN INDIA – THE ROLE OF HUMAN RESOURCES IN HEALTH

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India continues to perform poorly in achieving MDGs especially for maternal and child health, ranking 128 among 177 countries (Human Development Report 2007–2008). Recent cross-country studies have indicated such health outcomes and related service utilization to be associated with the size, distribution and composition of the health workforce (Anand and Barnighausen, 2004; Joint Learning Initiative, 2004). However, there is scarce empirical analysis on this association in the Indian context. This study examines the effect of the availability and composition of health workers on key maternal and child health and service utilization outcomes in India.

Data from the 2001 Census of India is used to estimate the number of health workers, their density and composition across 593 districts in India. Multiple linear regression is used to examine the association between key child health (infant mortality) and service utilization (immunization, antenatal care, institutional deliveries) indicators after controlling for socioeconomic factors such as female literacy and economic well-being.

Greater health worker density is positively and significantly associated with lower infant mortality, higher institutional deliveries, greater receipt of antenatal care and better immunization coverage. The availability of the health workforce was found to be as important as its composition, with doctors and nurses having a different impact on these health outcomes. Further, higher density of female health workers is significantly associated with greater use of antenatal care and attended deliveries.

The size of the health workforce is intimately associated with key health and service utilization outcomes in India. Importantly, the availability of female health workers is critical for improving use of maternal health services. These findings highlight the importance of addressing health workforce issues for achieving MDGs in India.

ATN – ACTIVE TRANSPORTATION (TO SCHOOL AND WORK) IN NORWAY

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Background: In modern times there has been a decrease in physical activity levels with the industrialization, urbanization, economic development and market globalization. These developments tend to discourage activity by reducing the energy needed for activities of daily living. Childhood obesity is on the rise in Norway, as well as other western countries. WHO recommends countries to develop governmental strategies and policies to promote healthy diets and physical activity levels in order to prevent the increasing trends in the prevalence overweight and obesity. Active commuting, such as cycling and walking to work/school, is an opportunity to integrating regular daily physical activity. It is important to establish behaviours that encourage physical activity early in life that might be carried on into adulthood. This is likely to influence current and future health. Very few studies in Norway have been conducted on active commuting to school and work. Studies indicate that approximately 30–40% of primary schoolchildren use passive transport to/from school. In order to increase active commuting, or to prevent decline in prevalence, it is important to investigate different factors and determinants that do relate to and predict the behaviour. No studies on determinants of active commuting to school/work has been conducted in Norway. In surveys, active commuting is usually measured with few items, often single items only, and measures are usually not validated or tested for reliability. Few measures also include seasonality and topography, two important aspects of active commuting in Norway.

Reaches objectives: The objectives of the ATN project is to: (1) create a comprehensive measure on active commuting to school and work, and to report the reliability of this measure; (2) report
the prevalence of active commuting to school and work in a Norwegian sample, and (3) assess determinants of active commuting to school and to work.

Presentation: The present presentation will present the rationale, objectives and methods of the ATN project. Preliminary results will also be included.

EFFECTS OF PHYSICAL ACTIVITY USED AS TREATMENT IN REGIONAL PSYCHIATRIC SERVICES

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The number of people suffering from mental illnesses is increasing, and such illness is currently one of the major causes of disability and poor health. Research has shown that people suffering from mental disorders are generally in poorer physical shape compared with the remainder of the population. The reason for this is most likely a lack of physical activity.

Furthermore, there was a significant connection between physical condition and health-related quality of life. The number of people suffering from mental disorders are generally in poorer physical shape compared with the remainder of the population. The reason for this is most likely a lack of physical activity.

The purpose of this study was to discover if physical activity was an effective mode of treatment for psychiatric patients at an outpatient treatment facility. The study included an exploration of whether or not patients having physical activity included as an integral part of their treatment (to a greater degree than do patients who are physically inactive) would achieve (1) an improvement in their physical condition, (2) a reduction in symptomatic pressure and (3) an increase in their health-related quality of life. The intervention period lasted a total of 12 weeks. The training group completed a minimum of two training sessions per week with an intensity of 60–75% of maximum heart rate. The participants’ health-related quality of life (SF-36), symptomatic pressure (SCL-90-R) and physical condition (UKK-walking test) were measured before and after intervention. Twenty participants were pre-tested, and out of this initial group, nine patients completed the intervention program and participated thereafter in post-testing. The results showed that participants on average improved their physical condition, reduced their symptomatic pressure and increased their health-related quality of life.

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step closer to the realization of an AIDS free generation vision by 2016.

**Intervention:** The Government of Botswana, with funding from the African Comprehensive HIV/AIDS Partnerships (ACHAP), and the United Nations Development Programme (UNDP) developed the Teacher Capacity Building (TCB) programme that was launched in 2003. This was a dual strategy aimed at supporting teachers in their roles as frontline mentors and role models to promote HIV preventative behaviours amongst learners and also address their individual vulnerability to getting infected with HIV. Teachers were trained in ground-breaking interactive teaching and interpersonal communication skills to facilitate meaningful relaying of HIV prevention messaging for students.

**Results:** Since its launch, 5000 teachers have been trained in total. Approximately 469,938 students in 974 schools were reached by TCB TV programme. Survey findings state that teachers, pupils, students and parents report conversing more freely on sexual reproductive health issues and HIV and AIDS as a result of the programme.

**Lessons learnt:** Involving school leadership motivated wider teacher interest in HIV & AIDS programming within schools. Contextualizing an intervention to meet the peculiar needs of various school environments and cultural background proved extremely useful in this project. The programme was well received in primary schools but the uptake was not as good in secondary schools.

**PROMOTING MENTAL HEALTH OF SECONDARY SCHOOL STUDENTS IN HANOI, VIETNAM: A PILOT INTERVENTION PROGRAM (2007–2008)**

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**Background:** Nowadays, students face with many pressures from their parents, teachers, friends and themselves which not only create an unhealthy environment for them to study and to growth up, but also pushed them into mental health (MH) issues (anxiety, depression). A pilot intervention program (PIP) was implemented to promote MH in two secondary schools. This paper investigates the needs of MH intervention program in schools.

**Study objective:** Implementing a PIP in two secondary schools which aim to improve some influence factors to MH and to decrease some common MH of students in Hanoi (both inner and suburban areas).

**Methods:** This is pre and post intervention evaluation design which included quantitative and qualitative methods. The PIP was divided into three periods: baseline survey, intervention program and post intervention evaluation. The PIP was developed based on results of the baseline survey (934 respondents – anonymous self-reporting questionnaire; in-depth interviews and FGDs with teachers, parents, students). The process evaluation was implemented. (*The post intervention evaluation is in analyzing process.*)

**Results:** Adolescents in inner area reported having more anxiety and depression problems than their counterparts in the peripheral area (*p* < 0.05). Attitude toward children of parent, school connectedness, school environment, school social activities, school regulations toward bullying as well as bullying were identified as correlated factors of both depression and anxiety (*p* < 0.01) after controlling for a number of background variables including demography and family environment. The evidence-based intervention activities were designed and implemented through the school year.

**Conclusion:** Findings support the perspective that it is necessary to pay attention to the MH problem in school, especially in the inner city. The design, implementation and evaluation of health promotion interventions should incorporate our knowledge of these associated factors. While implementing intervention program, teachers and parents play a key role for the successful of program.

**MENTAL HEALTH AND SUBSTANCE ABUSE; ABSENT FROM THE MDGS!**

Thomas Clausen
Institute of Psychiatry, SERAF, University of Oslo, Norway

According to the ‘Global burden of disease’ the morbidity from alcohol has a greater impact on health, globally, than malnutrition, poor sanitation or unsafe sex. Alcohol use disorders accounts alone for nearly 4% of the attributable-disease burden and about 1-in-8 deaths worldwide are attributable to tobacco, alcohol or illicit drugs. Nonetheless, mental health and substance abuse problems are not explicitly addressed in the Millennium Development Goals. Alcohol, tobacco and some illicit drugs are increasingly consumed in developing countries which typically are ill prepared in terms of public health prevention strategies. Work productivity among the adult workforce is negatively influenced by substance use, and alcohol alone is linked to more than 60 distinct medical disorders. It is appropriate to address substance use disorders and other mental health problems in order to achieve several of the MDGs such as, poverty eradication, combat diseases (including HIV/AIDS) and develop partnerships for further development.

Relevant public health interventions include; provision of adequate healthcare in terms of diagnostic, therapeutic and preventive expertise. Regulation and limitation of availability and taxation are effective public health measures to reduce substance abuse. However, there is no doubt that politicians initiating such public health preventive strategies must expect criticism both from the general public (previously accustomed to easy access of cheap i.e. alcohol and tobacco) and from commercial actors and producers of substances of abuse. In a global perspective approximately 80% of the world’s populations live in low- or middle-income countries – the developing world; consequently the vast majority of individuals living with mental health problems and substance abuse disorders live in developing countries.

Politicians in developing countries should give higher priority to mental health and substance abuse disorders when developing public health systems and interventions to alleviate the burdens from these conditions and to reach basic goals such as poverty eradication.

**AGEING WITH NON-COMMUNICABLE DISEASES IN AFRICA; A PUBLIC HEALTH CHALLENGE – THE EXAMPLE OF BOTSWANA**

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**Background:** Population ageing is a global phenomenon and the process which at varying pace occurs in most countries has been characterized by the UN as a success story of modern history. Nonetheless, Botswana as many other developing countries is...
characterized by rapid transitions, including social transition; more urbanization and individualization, resulting in increasing numbers of older persons being left in relative isolation in rural areas.

**Sample and methods:** During 1998–1999, a national cross-sectional health survey among the elderly was undertaken in Botswana, including a prospective sub-study focusing on risk of mortality among older persons. Nearly 400 persons, 60 years or older were included at baseline; examined and interviewed in their homes. The data collection included standardized screenings and tests, in addition to a full clinical examination. Follow-up visits were performed at average six months after the baseline examinations.

**Results:** All older persons lived at home, as no old-age institutions existed. A mean eight separate diagnoses were recorded per respondent, typically representing non-communicable disorders which were often previously undiagnosed. Twenty percent lived in household with only 1–2 persons. During follow-up, 16 deaths were confirmed. Death in old age was associated with: living alone, eating alone, cognitive impairment and reduced physical capacity. Mortality rates calculated represented about twice the risk of death compared with European agemates.

**Conclusion:** Population ageing and societal transitions pose challenges to vulnerable groups such as older persons in Botswana. Older persons in increasing numbers experience non-communicable disorders of old age and are as a result of disintegration of the traditional social care system, experiencing relative isolation. Lack of helping hands combined with reduced cognitive or physical capacity result in premature deaths. African governments should include adequate healthcare including terminal care services for older persons when planning for future health care delivery in order to avoid older persons dying prematurely alone under unacceptable circumstances.

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**THE CHALLENGE OF HIV/AIDS TO THE RICH, POST-MODERN WORLD – FROM THE PERSPECTIVE OF A GLOBAL HEALTHCARE ETHICS AND THE HUMAN RIGHTS**

*Antonio Barbosa Da Silva*
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My thesis for this lecture is that HIV/AIDS as pandemic is a challenge to people everywhere, especially in the rich world. To meet this challenge requires a global ethics, i.e. a normative ethics which is trans-cultural or cross-cultural. Only such an ethics can impose fundamentally global moral obligations on human individuals, groups, organisations and nations everywhere in the world. There is, however, an important fact that hinders the existence and/or the application of a global ethics to global problems today. It is the paradoxical situation caused by the clash of globalisation with postmodernism. The success of a non-imperialistic globalisation requires universal/global ethical norms and values equally applicable to all human beings, which are capable of motivating global solidarity, social justice, and healthcare ethics. Postmodernism, as a Zeitgeist, dominating the Western world today, is based on cultural relativism, normative ethical relativism and epistemological relativism, which deny the existence of global norms, values and truths. People who experience this paradox – which profoundly impacts in moral and ethics, have great difficulties in accepting and following global moral obligations that HIV/AIDS challenge confront them with. I argue in this lecture that in order to deliver oneself from the above mentioned paradox and its negative consequences for a global ethics, one must reject postmodernism and endorse the global ethics implied by the positive aspects of globalisation. A global ethics can be defended on good grounds that can be ultimately justified by an appeal to a religious and/or a humanistic worldview. As a Christian, I shall defend the point of view of a Christian-humanistic worldview, view of Man and ethics.

**Keywords:** HIV/AIDS; pandemic; ethical challenge; globalisation; human rights; postmodernism; normative ethical relativism; moral obligation; Christian-humanistic worldview; view of man and view of ethics

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**CONSTRUCTION OF THE \( \alpha \)-AND \( \gamma \)-TOCOPHEROL CEN- TILES DURING THE GESTATIONAL PERIOD: A COM- PARISON OF SMOOTHING METHODS**

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Pregnant women are under the risk of developing pre-eclampsia. There are studies indicating that women with pre-eclampsia have higher values of isoprostanes (\( \alpha \)-and \( \gamma \)-tocopherol) compared to women without pre-eclampsia. To be able to predict who will develop pre-eclampsia it is important to know what the normal values of \( \alpha \)-and \( \gamma \)-tocopherol are so that women with high values can be identified.

In my presentation, the data set involving 37 uncomplicated pregnant women throughout the gestational period is provided by Uppsala University. I construct the age-related reference range of \( \alpha \)-and \( \gamma \)-tocopherol, respectively, which are the dependent variables measured biweekly (from 10th week to 42nd week gestation) for each woman. The reference range is frequently defined as an interval covering 95% of all values from the general population. Further, larger than the upper bound is likely to imply pre-eclampsia.

What’s more, two smoothing methods are applied to construct the age-related reference range centiles with the aid of maximum penalized likelihood. One is LMS method based on Box-Cox transformation, estimating the centiles in terms of three cubic spline curves for the three parameters in the original distribution: L curve (skewness), M curve (median), and S curve (coefficient of variation).

As a generalized form of LMS method, LMSP method is developed recently. It provides a possible way to deal with the dependent variable, implying both skewness and kurtosis based on the Box-Cox power exponential (BCPE) distribution. Additionally, the centile curves are obtained by modeling each of the parameters as a smooth non-parametric function of the explanatory variable.

In conclusion, I represent similar centile curves and make a consistent predict on the women in pre-eclampsia risk with both of the approaches. Besides, I give a hint on the choice of smoothing methods. In short, LMSP is useful for kurtosis not LMS, on the other hand, LMSP robust to outliers not LMS. Furthermore, LMSP is more flexible while LMS is simpler. As the further research, we are trying to extend the methods to the multivariate situation, as well as the analysis of ordinal variables, which will be more versatile for the real problems.
APPLICATION OF EFFECTIVE COMMUNICATION STRATEGIES IN TUBERCULOSIS HOSPITALS

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To communicate well with patients is an essential skill for health personnel. Managing the emotional aspects of the interaction is especially challenging when dealing with patients who suffer from tuberculosis, cancer and other potentially deadly diseases. Available data indicate that the quality of the health provider–patient communication has a significant impact on patient satisfaction and medical outcomes.

**Methods:** Process training was implemented over a period of one year with health staff in TB hospitals in Lithuania, Latvia and Arkhangesk, Russia. The training addressed lack of constructive communication among health staff and patients, based on thorough needs assessments. Main aspects of the training were self-assessment, contents of teaching being directly related to stated needs, use of experience based learning and participatory methods, and addressing emotional aspects of health staff as well as patients.

**Results:** indicate that staff at the TB hospitals did not earlier assess their own emotional needs to cope with fear, anger and conflicts, nor did they assess patients’ social and emotional needs. After observation, tasks and baseline survey awareness were created about lacking skills to communicate effectively with patients and colleagues. Training was tailored to their expressed needs and results indicated that use of effective communication strategies facilitates patients to open up and express needs and results indicated that use of effective communication skills training. Process training is a powerful method to facilitate insight in own emotions and behavior and to learn effective communication strategies with patients. A main challenge is training of trainers to use methods and approach widely.

SUSTAINABILITY AND NUTRITION

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Nutritional advices may be confusing and scientists have often difficulties to agree and to get their massage clear to the public. However, most official and national advices should be easy to follow, consisting for the most part of advice to increase intake of vegetables and fruit, reduce intake of sugar and go easy on the fat. Why do we then have a worldwide increasing problem with overweight and obesity, and at the same time we have not the capability to solve the problem with starvation and malnutrition? We encounter huge problems trying to grasp what has gone wrong and to understand the impact of oil prices, climate changes and political decisions on food prices and food availability. What can we do to keep sustainability into what we eat? In Norway as well as in the rest of the developed world intake of animal protein has gone up. Today at least 40% of the world grain harvest is fed to livestock and we know that meat production is responsible for a disproportionate share of the environmental pressure. Another problem is fishery and the commercial harvesting of fish and seafood. Sustainability in a nutritional context would be to favour locally grown food items, especially vegetables and grain and perhaps to use organically grown food.

IMPLEMENTATION OF A HEALTHY SCHOOL LUNCH DID NOT IMPROVE DIETARY INTAKE AMONG SECONDARY SCHOOL PUPILS

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**Objective:** Interventions aimed at establishing healthy dietary intake are grounded on epidemiological evidence of the link between diet and non-communicable diseases. We wanted to study if a healthy school lunch would improve the dietary intake, and performed a controlled intervention study with implementation of a free healthy school lunch for four months to 9th grade pupils. Weight and height were measured before study entry and after four months of intervention. At the same time were a short food frequency questionnaire (FFQ) and a questionnaire concerning self perceived school behaviour and class environment completed. A healthy food score was calculated with use of the FFQ registrations.

**Subjects:** Fifty-three pupils (90%) from the intervention school and 78 pupils (78%) from two control schools participated.

**Results:** At study entry food score was significantly higher in girls (P = 0.003) and correlated positively with those who scored high on school content (P < 0.001). The healthy school lunch served for four months had no impact on weight or food score analysed with repeated measures ANOVA. Weight and BMI increased statistically significant during the study period, except for BMI among the girls in the intervention school.

**Conclusion:** Implementation of a healthy school lunch to 9th grade pupils in a Norwegian elementary school did not result in improved food score or had any major impact on BMI.

PUBLIC HEALTH IN SCHOOL: INTRODUCTION OF FREE SCHOOL LUNCH IN A NORWEGIAN ELEMENTARY SCHOOL

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**Introduction:** Introduction of free school lunch is an issue in both political and public discussion in Norway. The objective of this study was to evaluate if a free school lunch will improve dietary habits and better public health among pupils in elementary school.

**Methods:** All pupils in 9th grade in one elementary school in the southern part of Norway were offered a free school lunch for four months. The lunch consisted of bread with different kinds of spreads, milk and fruit. The 9th graders in a second school were offered an ICT-supported education program in home
economics. The 9th graders in a third school were controls. The pupils answered one questionnaire about school environment and one food frequency questionnaire (27 food items) before and after the study. Weight and height were measured and a healthy food score was calculated based on frequency intake of healthy food.

**Results:** No changes were seen in BMI, except a significant increase in BMI among boys in the lunch group ($p < 0.001$). Weekly intake of breakfast and supper were significantly reduced ($p < 0.05$) in the school offered ICT-supported learning, and weekly intake of breakfast was reduced in the control group ($p < 0.05$). Significantly more pupils in the control group bought food from school cafeteria or outside school at the end of the study. In all three schools the pupils healthy food score was reduced at the end of the study ($p < 0.05$).

**Conclusion:** Free school lunch for four months did not improve dietary habits as measured by healthy food score.

**Keywords:** School lunch; ICT-supported learning; elementary school

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**BIRTH AND DEVELOPMENTAL OUTCOME AMONG CHILDREN OF SUBSTANCE ABUSING WOMEN ATTENDING A SPECIAL CHILD WELFARE CLINIC IN NORWAY**

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**Background:** Exposure to alcohol and other substances during pregnancy can influence the child for the rest of its life. The offspring of substance abusing mothers are exposed to various risks. A Special Child Welfare Clinic (SCWC) in Norway provides care for pregnant women with substance abuse problems and their children up to 4 years of age. Pregnancy is not an indication for opioid replacement therapy in Norway. We want to show the birth outcome of the users of SCWC and the results of a neuropsychological screening of children between 4 yrs 8 months and 11 yrs 6 months in relation to a comparison group.

**Methods:** Retrospective cohort study including 59 of 60 children whose mothers have attended SCWC in pregnancy. Further a neuropsychological screening of 40 of 42 of the children born in the years 1994–2000.

**Results:** Birth weight and head circumference were significantly lower in the drug abusing group than in the comparison group. Psychiatric illness was associated with low birth weight. Women who continued moderate abuse during pregnancy, had higher frequency of premature births, birth weight under 2500 g and birth complications. The children of mothers who stopped their substance abuse early in pregnancy had less birth complications. Their children did more poorly on the tests. Almost all children of mothers who continued a moderate use of substances were raised in foster homes. This might indicate that if the foetus is influenced by moderate use of substances, it has been on such a level that it has been compensated for by a stimulating environment.

**Conclusion:** It is of great importance to reduce the amount of substances used by pregnant women. If a substance abusing mother stops the abuse, support from the child welfare system is still necessary to secure the child a safe environment to grow up in.

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**STUDENTS’ EXPERIENCES WITH THEIR PROCESS OF EDUCATION THROUGH A DIPLOMA NURSE EDUCATION**

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**Background:** As a part of my MsH I interviewed six students doing their diploma in nursing. Focus was their experiences with process of education/being educated. What were their understandings of their education process?

**Methods:** Six qualitative interviews of students in a nurse education off campus done in 2000/2001. Each interview last 90 minutes, transcribed and analysed hermeneutical, looking for common themes who could explain or give understanding to the process of education. I do an etymological search in Old Norwegian Language for the word education. I found a relation to the German word ‘Bildung’, and there are also links to the Swedish and Danish language as Norway was a part of these countries centuries ago. In ONL the meaning of education can be sense of ‘decorum, decent, honourable’. Another meaning can be ‘Good qualities in a person, personal capabilities and will to do what man ought to do’. A third meaning can be ‘To do the best you can, and know personal competence or abilities’. The last meaning I will present is to be ‘loyal’ or ‘faithful’.

**Founds:** I extracted five themes; learning and knowledge, relations, dialogues, reflections and identity. In this abstract I will emphasize the themes relations, dialogues and reflections as they are essential in the education process towards being a nurse. Learning and knowledge is fundamental in all education, but also a part of the whole process. Personal and professional identity is an aim as well as a part of the education process. The paper will give examples from the students as a basis for presentation of the themes and discussion. As educators we can use the themes in different scenes in the education. They are useful in teaching, supervising, research and innovative processes into and together with the clinical area. My experiences from other projects are that we as educators need closer cooperation with clinical area to the best for students and patients.

Looking back to the different meanings of education / being educated in ONL, we can recognize some very important personal qualities or characteristics being a nurse or another professional health worker. The students emphasized that the themes together with their personal characteristics and life experiences create an identity as a nurse through the diploma.

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**WHAT DO NURSE ANAESTHETISTS EXPERIENCE AS STRESSFUL IN THEIR WORK, AND HOW DOES THIS AFFECT THEM? A QUALITATIVE STUDY ON WORK-RELATED STRESS AMONG NURSE ANAESTHETISTS**

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Stress is a central theme within public health. Theories about stress and coping are having an ever increasing role in WHO’s efforts on describing health and the determinants for health promotion. Different studies worldwide describe physical, psychological and behavioural outcomes caused by stress.
The aim of this qualitative study is to explore work-related stress among nurse anaesthetists. Two research questions were posed: What do nurse anaesthetists experience as stressful in their work, and how does this affect them? A semi-structured interview-guide was used to answer these questions. Ten nurse anaesthetists from three different hospitals participated in the study.

The results show that nurse anaesthetists experienced stress in four areas: stress in situations of patient care, stress related to co-workers, stress related to leadership and administration and stress as a senior nurse anaesthetist.

Lack of time and reduced professional update together with increased personal responsibility and increasing demands from the surroundings creates an experience of being under ever increasing pressure. Nurse anaesthetists experience little influence on the political, economical and administrative frames of their work situation. Senior anaesthetist nurses can experience stress related to job performance, loyalty and computer skills. Stress related to situations in patient care and to co-workers seems to be of a temporary nature if the nurse anaesthetists are able to find time and opportunity to accommodate their experiences. Social support and the experience of meaningfulness in their work seems to be important factors to reduce stress caused by high demands and little influence on the frames of their work.

CAM IN A GROWING NORWEGIAN HEALTH MARKET – IS THIS A SIGN OF MEDICALISATION IN A RICH COUNTRY?

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Introduction: In Norway, which is one of the world's richest countries, there is a general increase in the use of health services. Norwegians use more and more money on their health. Also the use of Complementary and Alternative Medicine (CAM) have increased a lot, although it is not included in the public health service. A growing number of registered nurses quit their jobs to work as CAM practitioners. Theories about medicalisation describe a process where medicines have got an extended position in our western society. A growing numbers of conditions are defined as relevant for medicine.

Research question: Are nurses who choose to offer CAM, contributing to a growing health market which encourage medicalisation?

Method: Field research was chosen as empirical method for collecting data, this included interviews, participant observations and text/document analysis. The informants were registered nurses who offered CAM.

Results: CAM Nurses offer therapy for persons who are tired, have low energy, have demands at work, have problems in relations, have problems sleeping, experience indigestion, pain, depression etc. They focus on holism and offer courses to improve life quality, health and self-realization.

Discussion: Usually, registered nurses work in settings with seriously ill patients, but when they choose to offer CAM, their patients must be well enough to come to their office. When they offer therapies for 'everyday' worries and problems, they reach out to almost everyone. They advertise to tempt people to be in need of their offers. In this perspective CAM nurses can be described in terms of medicalisation. But CAM nurses offer treatment with less scientific authority, less status than medical doctors and they often focus selfcare. This, combined with our western society's lack of family ties and private networks, can put CAM in another perspective. In this perspective, CAM nurses can be said to express an extended network and then counteract medicalisation.

WHEN INTIMACY BECOMES PUBLIC. HOW DO WOMEN WITH BREAST CANCER PRACTICE AND EXPERIENCE DISCLOSURE ABOUT THEIR OWN DISEASE?

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This study deals with women diagnosed with breast cancer, and their disclosure about their own disease. Every year approximately 3000 Norwegian women are stricken by breast cancer. This means that every 11th woman will get the diagnosis within her lifetime. Due to improved treatment more women will survive breast cancer now than earlier, and in Norway there are approximately 30,000 breast cancer survivors. Today the public opinion is that disclosure about sufferings and diseases is good for many reasons: both for the patient herself, her close relations and the rest of the population as well. The woman who is stricken gets someone with whom she can share her experience, her close relations get the opportunity to be supportive, and the rest of the population receives knowledge of breast cancer. It is also a common opinion that disclosure contribute to diminishing prejudice and taboos. In 'Kreftforeningen', disclosure in private as well as in public is one of their visions. Many women decide to come forward in media with pictures and their personal history. This shows a kind of disclosure which is relatively new.

Approach: It is common to think that disclosure takes place in two arenas; the public and the private. According to Hannah Arendt (1958) the private/public distinction became unsufficient as the modern society was complicated by the rise of 'the social'. This indicates a third arena between the privat and public. Whether we talk about the public or the private arena (or an arena between the two), the value of disclosure is not discussed to a very large extent. A relevant question to be asked is whether disclosure about one's disease is entirely positive or whether it can lead to unintended negative consequences as well. In this study I take an interest in women's experiences with disclosure about their breast cancer. How do they handle this in the private, the public and 'the social', and how do they experience disclosure expressed as a public discourse?

Reference
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A SYSTEMATIC REVIEW OF OBSERVATIONAL STUDIES EVALUATING THE EFFECTS OF PHYSICAL ACTIVITY ON THE RISK OF OVARIAN CANCER

Ms Neha Khandpur

Background: Physical activity has been shown to play a pivotal role in decreasing risk of several chronic diseases including many cancers. However, there is limited data supporting its relationship with the lesser studied ovarian cancer. Although, important studies have emerged over the last few years evaluating this association, till date, there have been no reviews systematically mapping the size and direction of this association.

Methods: A systematic review was undertaken to accurately summarise the change in risk of ovarian cancer with different
activity levels and to give an overall estimate of that risk based on the studies reviewed. A rigorous procedure was implemented to locate and appraise relevant literature. Selection criteria were applied to the studies located and data was extracted from all the eligible studies. Details of study design, participant characteristics, and information on the different covariates, exposure measures and study outcomes were extracted from every study by three researchers, working independently. A statistical analysis of the data extracted is currently underway.

Results: Seventeen papers representing a total of 14 different observational studies met the selection criteria and were included in the review. Effects of sedentary behaviours and occupational physical activity were also assessed by two and five studies respectively. A narrative comparison of studies has been done and discrepancies in results highlighted. Overall, more case-control studies than cohorts demonstrated a statistically significant inverse relationship between physical activity and ovarian cancer and seven studies found a significant dose-response. The results of only one study were significantly indicative of an increase in cancer risk with increasing activity levels.

Conclusion: The data from the studies reviewed are indicative of an inverse association between physical activity and ovarian cancer risk. This trend is more pronounced in case-control rather than in cohort studies.

THE STUDY FOR THE RELATIONSHIP BETWEEN RISK FACTORS AND THE INCIDENCE OF STROKE IN KOREAN ADULTS

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Objective: Stroke is a serious disease despite improvement in medical and surgical treatment and the second leading cause of death in Korea. The purpose of this case-control study was to show the relationship between risk factors (past medical history, BMI, WHR, smoking, drinking), warning signs (dyscinesia, sightless, dysarthria, sensory disorder, numbness, blephalospasm, facial spasm, tension) and the incidence of stroke in Korean adults.

Methods: Four hundred and fifty-five stroke patients were enrolled as the case group and 180 non-stroke patients as control group from October 2005 to February, 2006. Patients were hospitalized within two weeks after the onset of stroke. Obesity were defined as BMI ≥ 25 kg/m², WHR ≥ 0.9 in male and WHR ≥ 0.8 in female. Risk factors and warning signs were obtained from personal interview. The analysis of the data was done by chi-square test, Fisher’s exact test and two-sample t-test. Results: The percentage of current smokers (or current drinkers) of case group is higher significantly than that of control group. The past medical history of risk factors were found to be transient ischemic attack (p = 0.0698), facial palsy (p = 0.4061), hypertension (p < 0.0001), hyperlipidemia (p = 0.1484), DM (p < 0.0001), ischemic heart disease (p = 0.0093), migraine (p = 0.0014) and hypochonidria (p = 0.2370). WHR ≥ 0.9 in male had a 6.696 (3.711-12.082) odds ratio, WHR ≥ 0.8 in female had a 1.567 (0.659-3.726) odds ratio. BMI ≥ 25kg/m² had a 2.017 (1.263-3.222). The dyscinesia and sensory disorder of warning signs were found to be statistical difference between case and control group.

Conclusions: According to the above results, it was found that smoking, drinking, BMI, WHR, hypertension, DM, ischemic heart disease, migraine affected to the incidence of stroke.

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RISK ON HIV/AIDS AMONG HOTEL BASED SEX WORKERS IN DHAKA METROPOLITAN AREA

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Introduction: The commonest risk behavior for HIV/AIDS across Asia is the trading of sex for money. In the context of a conservative society such as Bangladesh, the issues surrounding sexuality and STDs are stifled, stigmatized and hence hidden. This study aimed to assess the risk of HIV/AIDS among the hotel based sex workers (HBSWs) which may help the policy makers in implementing programs to prevent spread of HIV/AIDS.

Objectives: To assess the risk of HIV/AIDS among hotel based sex workers in Dhaka Metropolitan area.

Methodology: Data was collected from seven residential hotels and three NGO clinics (Drop in centre for hotel based sex workers) at old Dhaka, Motijheel and Mohakhali. Face to face interview of 120 hotel based sex workers were done using a pre-tested semi structured questionnaire.

Results: Average age of the respondents was 17 years. 57.50% received foreign clients and 80.83% had non-commercial sexual relation. 51.67% were infected with sexual transmission infection (STI). Around 97% sought treatment for last STI but 37.77% of them selected wrong professionals for treatment. About HIV transmission 79.17% said of sexual act, 39.17% unscreened blood, 15% sharing of needle syringe, 6.67% mother to child and 20.74% do not know about HIV transmission. About knowledge on HIV prevention 81.67% know about the use of condom, 38.33% blood screening, 14.17% use new needle syringe and 3.33% know avoid commercial sex as a HIV prevention method and 18.33% hotel based sex workers do not know any prevention method. Nobody said of using condom constantly.

Conclusion: Based on this study the risk of HIV/AIDS is very high among the hotel based sex workers of Dhaka city. Appropriate initiative is needed to increase the level of knowledge about safer sex among HBSWs.

Keywords: HIV/AIDS; ST; HBS; Bangladesh

EFFECT OF QIGONG TRAINING IN A UNIVERSITY STUDENT’S PHYSICAL, MENTAL HEALTH AND SELF-ESTEEM

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Background: Qigong is one of the energy-healing intervention used to prevent and cure ailments and to improve health through regular practice. Although qigong – neither itself nor its postulated mechanism of action – is within the paradigm of
the modern Western medical science, effects on the human body could be possible.

Objectives: This study aims to know the effect of qigong training in a University student’s physical, mental health and self-esteem.

Method: There are 120 students who take a Yangsaengki-gong(?) course in D University college of oriental medicine during four weeks beginning in April 10th 2008. I researched 41 of them trained about the effect of qigong training.

Result: Qigong training made significant change in self-esteem measurement and SCL-90-R. And there wasn’t significant change in KHP and happiness index.

Conclusions: The depth study for the each Qigong is needed. Specifically, I think it should be a clinical studies and qualitative research methods for evaluation are needed.

IMPROVING PUBLIC HEALTH IN NORWAY – KEY COMPONENTS AND CHALLENGES

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Compared to most other countries in the world, the public health in Norway is excellent. Few other countries have lower perinatal death rates, and few other countries have higher life expectancy. A newborn child may look forward to a life span of 78 years being a boy and 83 years being a girl. The prevalence of dangerous infectious diseases is also exceptionally low, and the death rates from cardiovascular diseases are falling. However, during the last 20 years health inequalities have increased due to less improvements in health in the lower than in the higher socioeconomic groups. Furthermore, there has been an ageing of the population. Consequently a larger part of the population has to endure chronic diseases and physical and mental disabilities. And there is a paradox: never being healthier, yet never been less able to work. The number of persons on sick-leave and the number of people receiving disability benefits have never been higher than now.

The main challenge for further improvements of the public health is getting people to change their lifestyle. Tobacco smoking, alcohol consumption and abuse of illicit drugs, unhealthy eating habits and insufficient physical activity are still causing many preventable deaths. Society must make it easier for the individual to live a healthy life, but the individuals still have to change their behaviour. The question is: how to make that change happen.

In an historical perspective, there has been a shift from poverty-related diseases to diseases caused by a wealthy lifestyle in Norway. We live longer than ever, but do not necessarily enjoy a better life. Thus, future public health initiatives should to a higher degree aim at enhancing quality of life, i.e., by taking measures to improve mental health and influence social factors as well as maintaining a low incidence of physical diseases.

MEN’S HEALTH – GENDER EQUALITY AND PUBLIC HEALTH

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Several reports from all part of the world on men’s health shows, the environment in which a man finds himself is the single greatest factor for inequality. Statistically, men have a higher mortality than women, at some ages twice as much or even higher. (WHO, Eurostat, OECD and Statistics Norway). The fact that men seek the help of the health service much less than women may also interpreted as they denying the existence of crises and illness or as opposition to asking for help (Madsen 2006, White 2003). Men are often referred to as the strong sex and in this paper – drawing on a variety of qualitative and quantitative studies from two large-scale research project – I shall be looking in more detail at how men talk about their bodily experiences and working life (Lilleaas og Widerberg 2001, Lilleaas 2006, Lilleaas 2007). I shall stress that men’s relationships to their bodies, are linked to what the surroundings are expecting from men and what men are expecting from themselves. It is argued that although, social gender roles vary between communities, the development of a male identity appears to require risk taking (White 2003). This may be through paid work or through men engaging in risky behaviour to ‘prove’ their masculinity. Finally, the question is raised in what extent men’s health and gender equality is a public health issue.

CHALLENGES IN MENTAL HEALTH IN A GLOBAL PERSPECTIVE

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The paper addresses five challenges: (1) The Macro problem (Zone I, the external world). As nations move from poverty to wealth mental health problems begin to account for some 25% of the total health problem. (2) The Micro Problem (Zone II, the internal world). Negative family experiences influence the development of the brain, limiting the ability to cope with everyday and intimate relationships in school, work, family and social life, and leading to anxiety, depression, personality disorders, substance abuse, violence and serious mental illness. (3) The Diagnostic Problem. Complex relational trauma is expressed in many somatic, cognitive, emotional and social ‘symptoms’ and diagnoses. (4) The Treatment Problem. Complex relational trauma requires complex treatment procedures that may be very different from conventional medical approaches, such as medication. (5) The Research Problem. Randomized controlled trials (RCT) are designed precisely to remove the influence of any relationship between experimenter (or therapist) and the results (patient), and are therefore unsuitable for research on mental health problems in which relationship is central. We have a major challenge in developing new approaches to dealing with intersubjective issues in mental health research. The challenge is even greater when we consider the scale of the problem indicated in the first part of this presentation. We need to find much more large-scale approaches to community mental health. My proposal is to focus on Zone III, the transitional zone between external and internal worlds, in which creative, group methods are employed.

BIRTH COMPLICATIONS IN BAMIAN, AFGHANISTAN. METHODOLOGICAL CONSIDERATIONS AND ETHICAL REQUIREMENTS IN STUDY DESIGN

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Background: Neonatal birth mortality in Afghanistan is 6%, maternal mortality 1.6%, third highest in the world. Rudimentary
registration outside health services makes planning and improvement difficult.

Main aim: Improve registration in cooperation with Bamyan health directorate and local midwives and community health workers. See how difference in education of birth attendants, closeness to hospital, access to clean water and hygiene procedures influence outcome of birth.

Method: Prospective study comparing birth complications in a cluster of villages with difficult access to health facilities with birth complication in two hospitals near villages. Registration of birth complications for one year by local birth attendants.

Methodical and ethical considerations:
- Doing a study with no promise of follow up of findings from our side
- Make sure study outcome is important for local communities and official bodies
- Make local community contracts
- Informed consent
- Use of WHO guidelines for studies on indigenous people and developing countries
- Registration by illiterate birth attendants
- Use of known symbols and drawings used otherwise for registration
- Follow up throughout the registration period.

Using local resource persons and regular foreseeable contacts from Norway using known time references such as Persian New Year, full moon and Ramadan.

VIEWS OF THE REPRODUCTIVE GROUP (21–49 YRS) ON THE USE OF FEMALE CONDOMS IN MOLEPOLOLE, BOTSWANA

Manyothwane, Tsima, Molao, Lehasa, Olebile, Keatswitswe, Maphalala and Modse
HIS, Molepolole, Botswana

Women represent nearly half of all new patients with HIV/AIDS infections worldwide and heterosexual contact remains the primary mode of transmission especially in Sub Saharan Africa and South East Asia. The purpose of this qualitative study was to explore the views of the reproductive group on the use of female condoms in Molepolole. The Health Belief model was used as the theoretical framework for the study. Content analysis was used to direct the analysis of data. Interviews were conducted until data saturation was reached and 38 respondents were conveniently selected and interviewed. The findings of the study revealed that eight – twenty or 74% of the respondents knew both of the male and female types of condoms and that the male condom was the most commonly used as it was said to be always available and accessible as compared to the female type. However, it was interesting to note that 55% had general information on the female condom while 45% did not know anything about it. Hundred percent of the respondents said that they have never used it, reasons being that its not always available and only 3% said they do not use it because it is too big and noisy. The findings of the study have implications for health education and nursing practice. The implications include the need for intensive ongoing educational campaigns and or promotion on the use of the female condoms.

SENIOR MANAGEMENT TEAM APPRAISAL: A CASE FOR INSTITUTE OF HEALTH SCIENCES MOLEPOLOLE

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Staff appraisal in most organizations is a one way process, where senior staff appraises their subordinates performance for purposes of promotion, guidance, performance improvement, etc. Little attention has been given to the fact that management can benefit from being appraised by their subordinates for purposes of improving processes at the workplace which will meet employee needs. For this reason the researchers saw it fit to develop a tool to appraise management.

The purpose for management appraisal was to enhance a culture of continuous quality improvement for all employees including the management team. The objectives were to (i) involve employees in evaluating the affairs of their organization (ii) identify employee needs which may necessitate modifying or changing certain institutional policies and regulations (iii) gather ideas for better work ethic and culture (iv) improve productivity at the workplace.

A tool was administered twice to Permanent and Pensionable employees and General and Field Staff to evaluate management’s performance. The results showed that performance of senior management team improved by 10% from September 2007 to January 2008. Results from General and Field Staff will be computed in July 2008 after they are interviewed for the second time.

Implications for senior management team appraisal are that management of the I.H.S. Molepolole is aware of their strengths and weaknesses and have started improving on their weak areas. This will ultimately lead to a satisfied customer/ employee which will lead to an effective and efficient organization. This process has the potential to develop a performance oriented culture because when employees have input in the affairs of their organization they develop a sense of belonging and become motivated and productive. Potential implications for other organizations are that senior management team appraisal can be benchmarked by other government and non-governmental organizations.

THE ROLE OF HAPTOGLOBIN POLYMORPHISM IN PROSTATE CANCER

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Background: Damage to the DNA has been attributed to cause mutations leading to prostate cancer. Oxidative stress, which may arise from Hb-related oxygen reactive species, has been shown to be one of the causes of DNA damage. Haptoglobin inhibits Hb-related oxidative stress. The antioxidant capacity of Hp is genetically determined. The study was aimed at determining the role of Hp polymorphism on susceptibility and outcome of prostate cancer in a case-control study.

Materials and methods: Prostate specific antigen confirmed the clinical status of 82 prostate cancer cases, 62 benign prostate hypertrophy (BPH) patients and 56 hospital-based controls. Starch-gel electrophoresis (EPS) determined the Hp phenotypes.

Results: The z1 allele phenotypes had higher PSA concentrations in the control group. Prostate cases had a lower z1 allele
frequency. Severe cases of the disease were over represented in the Hp 1-1 phenotype among individuals within the 60-65 years age group. A higher odds ratio of dying from prostate cancer was seen in the Hp 1-1 phenotype.

Discussion and conclusion: Haptoglobin polymorphism seemed to have an influence on prostate cancer. A higher incidence of the disease in Hp 2-2 individuals pointed to their increased susceptibility. The \( z^1 \) allele influenced higher PSA concentrations in the control group and increased mortality in prostate cancer cases. Higher PSA values may potentiate aggressive prostate cancer in Hp 1-1 individuals. The protective antioxidant capacity of Hp 1-1 phenotype might be compromised by acute haemolysis, which reduces Hp concentration.

REHABILITATION IN NURSING HOMES – EXPERIENCES AND CHALLENGES OF REGISTERED NURSES.

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Rehabilitation is one of the services offered within the framework of the short-term stays in nursing homes. These places are seldom arranged in a special unit, but are located in wards, also include long-term and other short-term placements. The nurses who work in nursing homes have traditionally focused on care and now they will be focusing on treatment and rehabilitation as well.

What experiences can be gained from rehabilitation work in nursing homes, how aware are they of their role and what are the challenges? This article is based on a qualitative study, which started in the autumn of 2007 and are expected to be ended in autumn 2008. The method used was focus group interviews with nurses working in short-term departments of three different nursing homes in Oslo and Akershus. Altogether 14 nurses took part in the study.

Preliminary analysis of data seems to show that the nurses identify areas in connection with coordination of the rehabilitation process, pursuing measures initiated by others and motivation of the patient as essential to the role. The nurses identify challenges associated with the correct use of beds and resources in the nursing homes and challenges associated with organisation on several levels in the municipal health services. Lack of cooperation and common conceptual understanding among the players involved in the rehabilitation work, are indicated as important factors.

Keywords: nursing home; rehabilitation; focus group interview; nurses

PERCEPTION OF INSTITUTE OF HEALTH SCIENCES, MOLEPOLOLE GENERAL NURSING YEAR ONE STUDENTS ON SCIENCE SUBJECTS

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During the past seven years the researchers have identified a problem of poor performance in science subjects (Anatomy & Physiology, Physics & Chemistry and Microbiology) among the I.H.S. Molepolole General Nursing first year students. To have positive perceptions towards science subjects include having an opportunity to conduct experiments, seeing specimens, free to consult lectures at all times, having study groups and study plans and being determined to pass science subjects.

The factors that make subjects to have negative perception towards science subjects include factors such as finding it difficult to understand science subjects, too much content covered in science subjects within a short period of time, use of the lecture method, long lecture hours, lack of laboratory equipments to do experiments, unreliable library opening hours, out-dated library material, unreliable electricity, being pulled from the clinicals for classes/tests, lack of time for extra-curricular activities and social life, and negative attitude of students towards other students.

We therefore recommend that the lecture method be minimally used and lecturers promote the discussion method of teaching, the I.H.S. Molepolole management should avail internet services for students and assess and approve test and assignments before the students write the tests, provide up-to-date title in the library and the library staff adhere to the library opening hours. The study findings are only limited to I.H.S. Molepolole students.

ECONOMETRIC ANALYSIS OF HEALTH PROMOTION IN KENYA: A HEALTH PRODUCTION APPROACH

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Human capital is regarded as a consequence of long-term education, good health and good nutrition (Becker, 1965). The stock of health capital depreciates over time and the consumer can produce gross investments in it according to a household production function using market goods, non-market goods and their own time as inputs (Humphreys and Ruseski 2006). Hence, the health production process depends, in part, on the healthcare system and its resource input but also on the non-medical, social, economic and physical conditions (Or, 2000). In Kenya, the Second National Health Sector Strategic Plan (NHSSP II 2005–2010) and the vision 2030, emphasize on promoting preventive health care and healthy individual lifestyles (MoH, 2005; RoK, 2007) through strengthening and expanding the role of Community Owned Resource Persons and Community Health Extension Workers working at grassroots levels, by helping people change their behavior/lifestyle to move toward a state of optimal health. In the most general sense, ‘lifestyle’ refers to all the factors over which individuals have some control, such as alcohol and tobacco consumption, physical exercise, personal hygiene, dietary patterns etc. (Grossman, 1975; Backett et al, 1994; Or, 2000;). The specific role of health education, which aims to increase individuals’ health knowledge, and in turn affects the efficiency of the production of more health (Kiiskinen, 2002), as one main elements of health promotion strategies, is not given adequate consideration in health production studies. Hence, it is necessary to search for an appropriate definition of health knowledge and review the ways that individuals can invest in this area of human capital. This is a relatively under-investigated topic in the economics of health.

This thesis will bridge the gap, in addition to examining the role of health knowledge in individual’s choice of health promoting life-styles by utilizing the flexible transcendental logarithmic production function.
THE EFFECT OF TELEVISION IN TEACHING THE CONCEPT OF ENVIRONMENTAL HEALTH TO THE PEOPLE OF YASOOJ

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Environmental health means control and supervision on certain factors of environment that influence our mental and physical health. Health education is regarded as the first priority in the basic planning of environmental health. The present research is carried out based on a quasi-experimental design to determine the effects of television programs in conveying the concepts of environmental health to people.

The subjects (340 Yasooj residents) were selected randomly. After determining educational goals of study, a questionnaire was prepared as pre and post test. Based on the educational contents, three movies were produced in different field of environmental health including water, air & waste material. Participants responded to pre test two weeks before showing movies through a provincial TV channel. Two weeks after broadcasting films, the post test was conducted. The results indicated that 56.5% of the samples were females. There was significant difference between the pre & post-test in water health section (p < 0.01). Considering the fact that all respondents to the post-test had failed to watch the films, the comparison between those who watched the film and those who didn’t, indicated that the difference of their awareness is statistically significant (p < 0.01).

Regarding the air, the workers had the most level of information and knowledge. There was a significant difference in the mean of awareness among diverse occupational groups (p < 0.01). This difference was more conspicuous and noticeable in the awareness on water and the air.

The present research may be considered as a stimulus for more efforts in promoting people’s level of awareness on health issues. According to the results of the study, television was effective in promoting people’s level of knowledge, but it was not as effective as it was expected to be. Therefore, it seems that some other factors should be taken into consideration such as the taste and motives of the addresses.

Keywords: television; health education; environmental health; knowledge

TO STAND ON YOUR OWN FEET. THE DIFFICULT TRANSITION FROM STUDENT TO PROFESSIONAL NURSE

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The aim of the study was to assess how recently graduated nurses experience the transition period from the exam until they have been in regular nurse jobs during 4–18 months. The information is collected through narrative interviews. The nurses were asked to tell about their experiences about being newly educated nurses in practical professional work. The information was collected in medical departments, surgical departments, nursery homes, and home care. The informants told about the following items:

- Great responsibility that felt overwhelming, even if their education included 50% of practical studies. ‘Suddenly you have to stand on your own feet’!
- The feeling of loneliness at work was a central issue.
- Complicated work challenges and often difficulties to find supervision and support.
- Stress and pressure were dominating in the working environment.
- Nursing care had a low priority in practice.
- It was very difficult to make the visions and ideals from the education come true when they met the daily challenges.
- Economy was the ruling priority.
- On the other side; you learn very quickly when you have to. It is crucial to get support and backup from experienced colleagues and supervisors.
- The feeling of failure and insecurity is often compensated by the good working atmosphere and kind colleagues.
- In spite of all the worries and problems the new nurses mostly enjoy their work.

The presentation will focus on the complex information presented in the narrative interviews and point out possible ways to improve the difficult period that the new nurses often experience in their first job.

KNOWLEDGE AND SELF-EFFICACY ON EMPowerMENT FOR CARDIOVASCULAR DISEASE RISK GROUP OF HEALTH SERVICE PERSONNEL IN BANGKOK AREA

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The objectives of this survey research were, to measure levels of knowledge and self-efficacy on Empowerment for Cardiovascular Disease Risk Group of health service personnel in Bangkok area, Thailand; and to study relationships between personal and work place factors, and their knowledge and self-efficacy.

Study population was personnel of health services in Bangkok, being a contractor unit with the National Health Security Office, Bangkok brance. Respondents were 272 purposive selected health services personnel, who were assigned to responsible for changing health behavior and sent to attend a three-day training course of health personnel competency development on empowerment for cardiovascular disease risk group during October to November, 2007. Data were collected by questionnaire with reliabilities of .603 for knowledge and .968 for self-efficacy. Descriptive statistics, Pearson’s Product Moment Coefficient and Chi-square were used for data analysis. The results are shown as follows: Most of the respondents were nurses (67.3%), female (91.2%), and hold bachelor education level (75.7%). Their health services were primary care units 56%, hospitals 40.1%, and supportive division of Bangkok Metropolitan Authority 44.5%, Private 42.6%, and government and NGO 12.9%. Three-fourths of health service personnel had never attended the health behavior change training course (71.3%). Half of them (52.2%) had no experience on the health behavior changing activities implementation. Their knowledge on empowerment was at the low level while self-efficacy was at the moderate level. The personal factors included education level, having experience, being trained, and professional were found associated with knowledge and self-efficacy. The only
variable of the workplace factors found its relationship with the knowledge was the belonging of the health services. Recommendations of the study for the effective policy implementation of changing health behavior among cardiovascular disease risk group found from a screening were training the responsible personnel about empowerment concept and increasing their skills on the empowerment activities implementation. The suitable attributes including professional, education level and experience should be set for the personnel who will responsible for the changing health behavior activities.

Keywords: empowerment; changing health behavior; knowledge; self-efficacy; personnel; cardiovascular disease

DILEMMAS IN EDUCATION FOR ADVANCED NURSING PRACTICE: THE EXPERIENCE OF BOTSWANA

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The training of Community Health Nurses in Botswana started in the early 1980’s following the Primary Health Care declaration of Alma-Ata in 1978, which required that services be made accessible to all the people. The program was initially one year, but later extended to 18 months (1½ academic years), to ensure adequate integration of emerging issues such as HIV and AIDS scourge and related programs, ICT, re-emergence and emergence of tuberculosis as well as multi-drug resistance tuberculosis, chronic diseases and decline in some health indicators.

Problem statement: Registered nurse-midwives, who graduate from this program, are awarded Post Basic (Advanced) Diplomas upon qualification. Thus, a Community Health Nurse in Botswana would end up with three diplomas that have used up to 6–7 years of study. This arrangement has continued regardless of the fact that it has been more than twenty years since the inception of the program, and the current development in nursing education and practice. Graduates from this program take another three years if they upgrade themselves to the Bachelor’s Degree. Therefore, for a CHN to attain a Bachelor’s in Nursing Science (BNS) degree, needs to study for up to 11 years in order to meet the established qualifications. They must successfully complete four programs (General Nursing, Midwifery, CHN and BNS), to be eligible to enroll in the Masters program at the University of Botswana (UB). This approach to nursing education in Botswana is not cost effective, does not facilitate for preparation of registered nurses for the futuristic roles in advanced nursing practice which require a Masters qualification, nor does it prepare Botswana nurses for global competitiveness. The process therefore demands review for currency of educational standards, soundness and cost effectiveness of the system.

Purpose of the paper: This study aims to:

- Review the CHN program in the country and the University of Botswana Nursing Programs.
- Compare the content of these programs in order to determine areas of repetitions.
- Propose modalities for articulating and harmonizing the programs.
- Benchmark the proposed model of articulation against international standards, to facilitate access to higher nursing education, in a timely and cost effective manner.

Results: Results of this review would provide information that can assist in consideration of recognizing prior learning, credit transfer and or exception for all post basic graduates who seek admission to the University, and facilitate articulation.

Keywords: articulation: credit transfer: exemption: recognition of prior learning

EDUCATORS’ PERCEPTIONS AND EXPERIENCES OF THE EFFECTS OF VIOLENCE ON THE LEARNING ENVIRONMENT IN PRIMARY SCHOOLS

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Violence in primary schools has been recognized as a significant and growing concern in South Africa, yet little research has been conducted on violence in this setting. This study explored the perceptions and experiences of primary school educators regarding the effect of school violence on the learning environment. The research was qualitative in nature, and utilized an explorative, descriptive and contextual design. Purposive sampling was used to draw a nominative sample from three primary schools in Port Elizabeth. Semi-structured one-to-one interviews were conducted with 11 voluntary participants. During data analysis Tesch’s framework in Creswell (1998) was used, and data was verified by applying the four criteria suggested in Guba’s (1981) model, namely, credibility, transferability, dependability and confirmability. Measures were put in place to ensure that ethical aspects were adhered to. The main findings emanating from the study are represented in the following themes:

- Educator’s general perceptions of violence in schools.
- Educator’s experiences of school violence.
- The impact of violence on the learning environment.
- Impact of school violence on the educator.
- Suggestions for the management of school violence.

COUNSELLING/GUIDANCE SERVICES FOR PREGNANT WOMEN

Silje Rendahl and Karianne Harv

Women’s right to choose an abortion is regulated by the act relating to the Termination of Pregnancy of 1975. In 1978, women themselves were granted the right to decide whether to terminate their pregnancy or not until the end of the 12th week of the pregnancy. The Ministry of the health and care services, county, communities, private gifts provide financial support. Amathea’s intention is to give a woman guidance, information and support when her pregnancy leads to serious difficulties. Women, who are dealing with an unplanned pregnancy, might be facing the decision of whether to continue or terminate the pregnancy. For many women this proves to be a difficult choice, and having somebody to discuss it with can be very helpful. Women can decide whether they want to be anonymous or not. It’s about choices.

The Amathea Foundation is a health-service offering free counselling to women and couples facing an unplanned pregnancy. We are the only organisation in Norway with such...
The Amathea Foundation provides:

- information and counselling on choices related to pregnancy and abortion
- consultations during and after a completed pregnancy
- consultations before and after an abortion
- Counsellors from the health-service sector with extensive experience with questions related to unplanned pregnancy.
- Free pregnancy testing and condoms.

Our conversations have four steps:

1) Recognizing that there are real choices
2) Assessing those choices
3) Making a choice
4) Living with the choice

We support women's health by offering time and room to reflect, enabling women to make and stand behind their own decisions.

Changes in health related quality of life and global quality of life, one year after low-energy wrist fracture: a prospective study

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Background. Lifestyle and co-morbidity have been identified as significant predictors of quality of life in fracture patients. Aims: Therefore the study aims to examine change in health related quality of life (HRQOL) and global quality of life (GQOL) from prior to fracture to one year after the fracture in patients with low energy wrist fracture compared to matched controls, and to identify clinical variables which predict differential changes in HRQOL and GQOL within low energy wrist fracture patients and within controls.

Methods: One hundred and sixty wrist patients (mean age, 67.09 years) and 169 controls (mean age, 669 years) participated in this prospective study. SF-36 was used to assess HRQOL prior to fracture and after one year. Quality of Life Scale (QOLS) was used to assess GQOL prior to fracture and after one year. Paired samples t-tests were used to compare SF-36 and QOLS between inclusion and one year follow-up. Multiple linear regression analyses were used to identify significant predictors of differential changes in HRQOL and GQOL.

Results: Compared to pre-fracture, the wrist fracture patients reported reduced SF-36 scores in HRQOL dimensions such as general health, physical function and mental health. The changes appear however to be modest. No significant changes in HRQOL were identified in the controls. Both the wrist fracture patients and controls reported reduced scores in GQOL. Co-morbidity was a significant predictor of worsened physical HRQOL and GQOL in the wrist patients. Low education predicted worsened physical HRQOL in the controls, while co-morbidity predicted worsened mental HRQOL. Osteopenia predicted worsened GQOL in the controls.

Conclusion: The wrist patients seem to manage well despite the fracture. Co-morbidity at the time of the fracture seems to be significant predictors of worsened HRQOL and GQOL one year after the fracture.

COSTS AND HEALTH CONSEQUENCES OF CHLAMYDIA MANAGEMENT STRATEGIES AMONG PREGNANT WOMEN IN SUB-SAHARAN AFRICA

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Objectives: Chlamydia is the most common bacterial sexually transmitted infection worldwide and a major cause of morbidity – particularly among women and neonates. We compared costs and health consequences of current syndromic management with point-of-care (POC) test screening among antenatal care attendees in sub-Saharan Africa. We also compared erythromycin with azithromycin treatment and universal with age-based screening.

Methods: A decision analytic model was developed to compare the diagnostic and treatment strategies, using Botswana as a case. Model input was based upon: (1) a study of 703 antenatal care attendees in Botswana; (2) literature reviews and; (3) experts’ opinions. We expressed the study outcome in terms of costs (US$), cases cured, magnitude of overtreatment and successful partner treatment.

Results: Azithromycin was less costly and more effective than was erythromycin, regardless of diagnostic strategy. Compared to syndromic management, screening with a 75%-sensitive POC test increased the number of cases cured from 1,500 to 5,600, with similar costs per case cured (~$20). This cost could be reduced to approximately $10 if screening were restricted to teenagers, who have higher chlamydia prevalence. Substantial reductions in overtreatment with antibiotics and improved partner management were additional advantages of the specific test.

Conclusions: Screening for chlamydia with POC tests during antenatal care in sub-Saharan Africa entails greater health benefits than syndromic management – at acceptable costs, especially when restricted to younger women. Changes in diagnostic strategy and treatment regimens may improve people's health and even reduce health care budgets.

MODERN MORAL FOUNDATIONS OF HEALTH AND HEALTH CARE, AND THE CHALLENGES FACED BY BUSINESS AND MARKET PRACTICES

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Australia

This paper is based on the results of a Master of Arts (Research) Humanities (Human Services) thesis completed at Queensland University of Technology, Brisbane, Australia, 2007. The paper concentrates on modern moral foundations of health and health care, specifically related to Western developed countries, and the challenges faced by market practices and
private enterprise in health care. The discussion of the moral foundation of health and health care is based on contemporary notions formed by the World Health Organization, the International Covenant on Economic, Social, and Cultural Rights, the Universal Declaration of Human Rights (United Nations), and the United Nations Millennium Development Goals relevant to human health and health care, as well as notions by current health care researchers. Market practices, business management theories and practices, and private enterprise have become increasingly significant in health care, as the welfare state and public health care have been challenged by factors such as rising costs, economic efficiency, globalisation and increasing competitive demands. Most Western developed countries are today struggling in various degrees to contain health care costs, which have added to the consideration of market practices/private enterprise as a possible solution.

Due to the above, essential moral values underlining health care services have been challenged; values such as universal health rights, solidarity, social justice, the common good, and health care as a basic human need. Evidently, health and health care concerns all people, and are, at a fundamental level, universal concepts with intrinsic value, underpinned by an ontological complexity and reality of the human condition involving concepts such as interdependency, vulnerability and need. In this view, market practices in health care (which are based on a different set of values) may become problematic. It is thus the intention that this paper will provide a framework for reflection on the moral nature of health and health care, and the influence of market and business practices. To achieve this objective, the research strategy is that of philosophical inquiry, additionally drawing on political philosophy. The research is, therefore, basic, theoretical research, based on literature and document review as well as philosophical and political analysis (conceptual, theoretical analysis).

This paper finds that making health care part of a free, competitive market is in conflict with and may undermine the moral nature and purpose of health and health care, and the ontological complexity and reality of health and health care. It is concluded that a market/business based approach to health care offers no well-founded moral alternative to the universalistic, solidarity based approach common in most Western developed countries (except in the United States).

METHODOLOGICAL CHALLENGES OF EXPLORING BIOPHOTON EMISSION IN HEALTHY VOLUNTEERS

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Objective: Biophoton emission of the aliving system has received specific phenomena because of its scientific potential for monitoring metabolism to human body. This study proposes a new challenge possibility of the biophoton emission in biophysiological human condition index.

Method: Twenty-one healthy volunteers were enrolled as 10 males and 11 females, respectively. In this study, we explored the change rate of biophoton emission on the stimulus of Naegwan (PC6) acupoint at the right hand, exposing the sun and –18°C temperature. Two photomultiplier tubes with spectral ranges from 300 nm to 650 nm were used for the detection of biophoton emission at left hand palm. The data were analyzed by one- or two-way repeated-measurement analysis of variance (ANOVA).

Result: There was a reversion of relative emission rates from the palms which affected the environment condition. There are personal differences in biophoton emission. The emission rates from the palm of the right hand did not show any statistically meaningful with the acupuncture stimulus (p <0.05).

Conclusion: In this study, biophoton emissions depends on the environment condition for all subjects but does not significantly change on the acupuncture stimulus. Measurments with the biophoton emission rate analysis might be very much considered in future studies.

IMPLEMENTING PDA’S IN HOME CARE – ACTION RESEARCH ON BENEFITS MANAGEMENT ISSUES

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Introduction: Effective utilization of technology in healthcare services, may give great opportunities for innovation in research and practice. In this project implementing ICT in municipalities is a national strategy that will play a greater role in taking care of the healthcare services in the future.

Materials and methods: The action research project is conducted in a medium size Norwegian municipality. PDA’s are implemented for healthcare personnel in the home-based services. As a foundation for defining competence needs, the project is aiming to define vital and concrete benefits from new portable technology, and develop adequate measurement criteria in order to follow the development of the impact competence building in the organization. The need for strategic competence building in all levels of the organization is becoming apparent. We will (1) conduct a query on the ICT competence in the organization; (2) suggest new action in competence building and process change; (3) conduct a measurement to document any changes in the effectiveness of the operations, and quality in the results; (4) analyze and document the results; (5) dissemination of the results.

Results: The project develops aimed competence skills in a sector where technology is implemented. In a human level, the project will investigate and develop innovative ability by the members. It will develop new competence skills, and existing will be put in a new context.

Discussion: In addition to this project, the researchers are partly involved in similar projects in other municipalities, and data from these projects will form an additional data source for the discussion. ICT alone is definitely not a ‘silver bullet’. We will discuss how targeted competence building is a base for innovative thinking and organizational development, and will give better quality of health care, user participation and an effective work situation.

YOUNG NATIONAL TEAM FOOTBALL-PLAYERS IN NORWAY – DO THEY HAVE SOME COMMON BACKGROUND CHARACTERISTICS?

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Introduction: In order to develop football players’ skills, possessing more knowledge about elite players’ backgrounds, lifestyles,
activities and motivation may be important. The aim of this study is to describe some characteristics regarding the family backgrounds and motivation.

Method: Forty-five male football players in three National teams of Norway, U17, U19 and U21 participated in the study. A questionnaire package with retrospective items were distributed.

Results: Among these players, two thirds reported that they were part of big families. Two thirds were three or more siblings and more than 20% reported that they were four or more siblings. More than two thirds reported that they have older siblings. Furthermore, they reported about athletically active families; all of their siblings, more than 50% of their mothers and 75% percent of their fathers had been athletically active. All of the players reported about a very high activity level in their childhoods, at age six, 65% and at age eight, more than 90% had been members of an athletics club. Moreover, most of the players also reported about a diversified involvement in a number of sport activities. From the ages of six until 14, more than 70% participated in one or more athletic activities in addition to football. The players’ ambitions were high; more than 75% wanted to be National team players or players on the international level.

Conclusions: 'The Social Heritage of Sport'. The players report about physical active families with siblings and parents that have experience from sport on local or top level. It seems that, to be a successful football player in Norway is highly linked to family lifestyle. It is an advantage to be a part of a physical active family, living an active lifestyle during the childhood, with lot of possibilities to physical active play, in certain with siblings, especially older ones.

GROWTH MONITORING RELATED TO OBESITY

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Overweight and obesity are major global public health issues problems affecting both adults and children. The World Health Organization estimates that at least 20 million children under the age of 5 years are overweight globally. Identifying children and adolescents at risk for over- or underweight gives the possibility for prevention and early treatment. To support the development of new guidelines for height and weight measuring for children, we summarised research on the effect of growth monitoring related to obesity.

Objectives:

1) What effect does growth monitoring have on overweight, underweight and eating disorders?
2) What are the benefits, harms and costs associated with the different measuring-programs?
3) What is the association between overweight in childhood and overweight later in life?

Methods: We searched systematically for literature in 10 databases to identify studies of height and weight measuring of children and adolescents from 0-20 years. Outcome measures were overweight, underweight, eating disorders, harms, costs and resource use of measuring. The search gave 6 280 hits.

Results: Three systematic reviews and 15 studies met the inclusion criteria for types of studies, participants, interventions and outcome measures. There was little research to conclude on the benefits and harms of regular measurements of height and weight. Normal measuring of height (in centimetres) and weight (in kilograms) was the best method to classify overweight and underweight.

Self-reported height and weight gave inaccurate information. Adolescents overestimated their height and underestimated their weight.

Overweight in childhood was associated with increases risk for overweight in adulthood.

We found no research on harm, age intervals or frequencies of measurements.

Conclusion: Despite overweight being considered a growing epidemic, there is little research to aid decisions on regular height and weight measuring for children. We do not know if growth monitoring is effective beyond the ability to identify abnormal growth and monitor growth development.

COMMUTING TO SCHOOL IN KRISTIANSAND, NORWAY

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Introduction: Overweight and obesity among adolescents is increasing worldwide, as is also the case in Norway. Active commuting to school is one of the daily activities that can be an important component of the recommended level of physical activity for adolescents. The purpose of this study is to report frequencies of commuting to school among adolescents in Kristiansand, Norway. A second objective is to assess how mode of commuting is related to weight status.

Methods: The project ‘Youth In Balance’ included a survey of health behaviors in adolescents in Kristiansand. All pupils in eighth grade (mean age 13.5) in 2004 were invited to participate. The cohort was again surveyed in 2005 and 2006. Mode of commuting was assessed by one questionnaire item: How do you usually travel to school? Response alternatives were: Bus, car, walking, cycling, rollerblades and scooter. Weight and height were measured by project staff. Overweight was calculated according to sex and age-specific international cut-off values for body mass index. If overweight at one of the time points, the pupils were categorized as overweight.

Results: A total of 1097 pupils responded to the commuting item at least at one of the three time points. Of the sample, respectively 31%, 25%, 22%, and 2% reported cycling, walking, commuting by bus, or by car at all three measurement time points. A total of 21% were not categorized into mode of commuting due to non-consistent reporting at the different time points. The cyclists were less frequently overweight (12% overweight) compared to the walkers (19%), non-active commuters (bus + car, 20%) and those not categorized into mode of commuting (24%). In a logistic regression analysis, adjusting for distance to school, sex, and ethnicity, cyclists were less likely to be overweight than non-cyclists (OR =0.52; 95%/CI =0.34-0.79).

Conclusions: The majority of adolescents in Kristiansand actively commute to school. Cyclists are less frequently overweight than those not cycling to school.

Topic: 2. Lifestyle and health challenges – with focus on physical activity and nutrition.
NUTRITIONAL SCREENING – A WAY TO IDENTIFY OLDER PEOPLE AT NUTRITIONAL RISK

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Introduction: Being at risk for developing undernutrition or to be suffering from undernutrition is a frequent, well-known and world-wide health problem among older patients in both hospitals and community resident living. It is a serious condition because undernutrition contributes to poor health, decreased quality of life and is a risk factor for increased morbidity and mortality. It is a global health challenge to identify those who are at nutritional risk or suffering from undernutrition. A possible way to do this is to use a nutritional screening instrument.

Aim: The aim of the presentation is to present a new nutritional screening instrument developed in the Swedish culture, the Nutritional Form For the Elderly (NUFFE), and give examples from studies using NUFFE.

Methods: NUFFE was constructed in order to get a simple useful instrument and was tested regarding reliability and validity in two studies. A nutritional screening was performed among older patients and in one study the screening result was related to the patients' perceived health. In another study the screening result was related to self-care ability and sense of coherence (SOC).

Results: NUFFE was designed as a summated ordinal scale containing 15 three-point items reflecting nutritional, social, functional and health-related aspects of the nutritional intake. Evidence of reliability and validity was shown for identifying older nutritional at-risk patients. In the nutritional screening, 69% were found to be at medium or high risk for undernutrition and association was found between risk for undernutrition and perceived ill health. Association was also found between risk for undernutrition and lower self-care ability and weaker SOC, respectively.

Conclusion: In conclusion, NUFFE is a simple useful screening instrument with evidence of reliability and validity. The prevalence of nutritional at-risk patients was high. Being at medium or high risk for undernutrition was concomitant with perceived ill health, lower self-care ability and weaker SOC.

CULTURAL DIFFERENCES IN HEALTH EDUCATION WHICH ARE IMPORTANT TO KNOW ABOUT IN ORDER TO GIVE BENGALEE PEOPLE GOOD CARE

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Background: My experience as nurse in Bangladesh gave the idea for this study. It was difficult to talk to Bengalee colleagues and patients about nursing. The reason why we did not understand each other had nothing to do with the vocabulary. I sensed a difference in culture. My point of departure has been to shed light on how Bengalee immigrants experience the Norwegian health service. Through these experiences my aim has been to identify which cultural differences are important for the nurse to know about in order to give Bengalee people good care through health education.

How have Bengalee immigrants experienced the Norwegian health service, and in particular nursing? How have they experienced the health education in the nursing situations?

Method: I have tried to answer these questions through the inductive approach. Their experiences here in Norway are compared with their experiences from Bengalee culture.

In my first work, 10 interviews took place and in my last work 20. They were analyzed using hermeneutic principles of interpretation.

Findings: The respondents did not expect any help from the Norwegian nurses. They described them as being illiterate, uncultural and prostitutes, and looked upon the nurse's career as being a non-serious one. They did not trust them and had little respect for them. These attitudes the respondents had brought with them from Bengalee culture. In Bangladesh one must conform to Islamic norms. These norms are not compatible with girls nursing others than members of one's own family. The same cultural attitudes were made to apply to Norwegian nurses.

When taking part in the nurse's health education, the respondents got an extra understatement of their thought of the nurse's untrustability. When the nurses gave them questions as a part of their guidance in health education, the Bengalees understood that they were right: the nurses were in lack of knowledge. The nurses did not know how to treat patients.

In Norwegian nursing, however, to listen to the patient's own apprehension of the situation is one of the most important parts of health education. One has to know where the patient is and begin there.

MEDICAL PLURALISM IN THE AREA OF AIDS – STRENGTHENING THE LINKS BETWEEN TRADITIONAL AND MODERN HEALTH WORKERS IN BOTSWA

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Methods: Ethnographic research was conducted in Botswana to develop an empirical, culturally appropriate strategy for analysing the potential for co-operation between modern and traditional health workers in their struggle against HIV/AIDS. Interviews were performed using a semi-structured interview guide. The material includes a sample of traditional healers of the categories that are typically found in Botswana: diviners/ herbalists, herbalists and prophets. The material also includes interviews with modern health workers of different categories: nurses, tuberculosis co-ordinator, social worker and medical doctors.

Results: There is an understanding of the benefit of co-operation between the health workers belonging to the two different medical paradigms. Awareness has been created among the traditional health practitioners about the magnitude of the AIDS problem and about ways and means of controlling the spread of the infection. Tswana healers regard AIDS as a new ‘white’ disease and they find it difficult to recommend the use of condoms because they believe it interferes with the child’s growth. The study has also revealed conflicts between public information and messages to Abstain, Be faithful and use Condoms (ABC) and traditional sex education and practice. Rapid urbanisation has led to the breakdown of traditional mechanisms for controlling sexual behaviour. Poverty and women’s relative lack of power in sexual and social relations are also significant.

Conclusions: AIDS is the most serious public health problem in Botswana. Botswana is living under the influence of various coexisting medical systems. The health workers should respect each other and not disparage each other and there should be
dialogue between them to enhance their common purpose in serving the public. Prevention policies should be based on culturally specific education principles that mobilise people to seek solutions within their own diverse culture context. The majority of the population stands with one foot in the traditional paradigm and one foot in the modern. If this is recognised by the government, chances are good for developing co-operation between modern and traditional health workers.

**Keywords:** Botswana; AIDS; traditional and modern health workers; co-operation; culture

### MEASURING HEALTH BY USING A SINGLE-ITEM QUESTION

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Studies show that self-rated health (SRH), as measured by the questions ‘How is your health now?’ is a good predictor of future health status as measured by mortality and morbidity. Because SRH has strong predictive power, it is important to understand the concept and its components.

The objective of this study was to examine the association between SRH and physical, functional, social and mental health measures in community dwelling elderly people needing nursing care. Of special interest was how sense of coherence (SOC) influenced this relationship.

A hierarchical regression analysis was applied in a cross sectional sample of 242 elderly. Subjective health complaints in both sexes, and psychological distress (only in men), was associated directly with SRH. SOC associated with SRH directly and indirectly through subjective perceived health (SCH and GHQ), but only in men. The influence of registered illness was mediated through the effects of subjectively perceived health in both women and men. Sex differences moderated the effects of SOC on SRH.

Subjectively perceived health was more important in the perception of SRH than objective health measures. Men, in contrast to women, tend to convert physical illness into emotional distress. Further research on SRH in a multicultural context is needed.

### ‘GO FEDISA GO TLA THARI MO TIRONG’ WHICH MEANS – DOING AWAY WITH LATE COMING FOR WORK

**Onalenna Tsima and Bakhola Motswagole**

Botswana

As a developing country, Botswana has quite a number of work improvement strategies which are geared towards improving productivity. It is hoped that this will contribute positively towards economic growth and development as well as a sustainable livelihood. As such, each and every organization in Botswana is expected to adopt these initiatives/strategies as a way of addressing and contributing towards the long term vision for Botswana, known as Vision 2016. According to one of the pillars of this Vision (A Prosperous, Productive and Innovative Nation), Botswana will be a society distinguished by pursuit of excellence through a new culture of hard work and discipline. It is in view of the above that I.H.S. Molepolole as a government institution has also adopted these government reforms and started embarking on a number of work improvement projects that are geared towards timely and efficient services as well as customer satisfaction. To carry out these projects each unit in the organization has a Work Improvement Team to tackle issues within their capability and jurisdiction that impact negatively on productivity. One such team is Ngata Work Improvement Team, which is made up of industrial class workers, mainly cleaners. This team was formed in 2002. The name Ngata means togetherness and they believe that if ‘they work together’ as a team, they will overcome barriers and as such produce more positive results.

The team embarked on their second project in 2006–2007, entitled ‘Go fedisa go tla thari mo tirong’ which means – doing away with late coming for work.

The team acknowledges that time is a valuable resource, and that once it is wasted, it can never be replaced. They identified late coming for work as a problem because it delays the day’s work output, leading to very low productivity at the end of the day. To carry out the project the team utilized the WITS process systematically. In identifying the problem the team brainstormed several problems and then ranked them according to order of priority, that is those that required immediate attention.

They then verified the existence of the problem by conducting a survey on late coming from 20th September to 6th October 2006. The findings of the survey revealed that 43% of the support staff (cleaners) came late for work within these two weeks and that they wasted 268 minutes (which translates to 4 hours 5 mins). The time wasted was further calculated in monetary terms as follows, a minimum wage for the industrial class employee per hour is P10.00, therefore when multiplied by time – 4 hours 5 mins becomes P40.50 in two weeks which becomes P81.00 per month and P972.00 per year the money which is paid by the government. The team set a target to reduce late coming from 43 to 5%. The 5% being to account for emergency situations beyond anybody’s control.

Several possible solutions were analyzed utilizing the ‘force field analysis’ which assisted them to settle for a solution which had more enabling forces than the disablers. The solution settled for was to put in place a committee that would perform the following functions:

- Keep a record of employees who come late for work.
- Counsel those who come late persistently.
- If no improvement, to ultimately report to management for disciplinary measures.

The first report by the committee indicated no improvement in the late coming situation. The team then decided to engage the administrator to address the employees on the problem and its implications to the organization as a whole. Following this meeting the committee recorded slight improvement, but still the target was not reached. Then the team decided to call upon top management to address them emphasizing on what was discussed by the administrator.

This last meeting resulted in significant reduction in the number of employees who came late and ultimately the 5% target was reached by 28th February 2007.

### CLINICIANS’ ATTITUDE TOWARDS TWELVE-STEP GROUPS AND REFERRAL RATES IN A SETTING TYPICALLY UNFAMILIAR TO TWELVE STEP IDEAS – A SURVEY IN A NORWEGIAN HEALTH REGION

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**Background:** In the addiction treatment field, the Twelve Step Groups (TSGs) are the most available and widespread self-help groups (SHGs). Studies demonstrate that patients who attend TSGs following formal treatment are more likely than those who do not to maintain abstinence. In a public health perspective, SHGs may be considered a complementary form of care that could supplement professional help and provide sustainable aftercare. To date, current attitudes and referral practices of health workers have not been investigated and ‘self-help’ is a subject virtually absent from the curricula of health workers in Norway. In addition, few studies have so far been conducted outside the US.

**Aim:** The study investigates health professionals’ attitudes, awareness and referral practices to TSGs in Norway, a setting more unfamiliar to Twelve Step ideas than in the US.

**Method:** The study is a cross-sectional multi-center study. A US questionnaire has been translated and culturally adapted. The questionnaire has been distributed to ±320 addiction treatment health workers in one Norwegian Health Region serving 1/5 of the total population. The questionnaire pertains to personal opinions about TSGs and descriptions of actual referral practice, which is the primary outcome measure.

**Preliminary outcome:** The ratio 8/10 seems to reflect the response rate, judged from three out of five sub-regions. Based on the first 40 questionnaires; about half of the health workers had referral experience to TSGs. Only 2/10 of the clinicians' patients received an active recommendation to participate in TSGs. Data collection will be completed by 01 August 2008.

**Further proceedings:** The findings will be descriptively presented as well as compared to other relevant international studies. Differences and similarities both between treatment sites included and with international findings will be discussed. Differing etiological understanding of addictions and varying educational/personal backgrounds are likely to influence the results. Appropriate policy strategies will be suggested based on the findings.

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**EXPERIENCES IN ESTABLISHING AN ADDICTION TREATMENT PROGRAM IN RURAL TANZANIA**

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Haydom, Tanzania (Norwegian peace corpse program)

**Background:** Substance dependence, and especially alcohol, is an increasing problem in the developing countries. In Tanzania, figures from WHO indicates that about 1/5 of the male population are heavy drinkers. Haydom Lutheran Hospital is a church-owned hospital based in a rural inland setting in Tanzania. In this catchment area health workers have noticed increasing alcohol related problems.

**Purpose:** The administration at Haydom Lutheran Hospital wanted to meet this challenge by establishing a treatment program for alcohol dependent patients. As a part of the exchange program, Sørlandet Hospital and Haydom have through the Norwegian peace corpse, and we got the chance to move to Haydom. We stayed for 10 months in order to assist in establishing such a treatment program.

**Method:** The new ward is based on the Minnesota Model which again is closely linked to the 12-step program of the Alcoholics Anonymous. It is a six-week residential treatment program based on structured group session combined with psycho education through lectures and also individual assignments. Family members are also included in the program by being invited to a four-day seminar. After discharge there is an 11-month follow-up program.

**Outcome:** We would like to give a presentation of our experiences so far with establishing and running structured, in-patient based treatment for patients with addiction in an African setting.

It was exciting to see whether it was possible to transfer a program developed and used in our western society and make it function in rural Tanzania.

Another challenge was to include the Tanzanian workers in such a way that they felt confident and eager to continue the running of the ward.

Therefore, we were thrilled to see that the establishing was welcomed and accepted by the locals and that patients started to fill the new ward soon after the opening in December 2007. Still it is early to talk about long-term follow up, but we would like to share what we have learned so far through this work. In our point of view, this is both preventive and curative health care as well as poverty alleviation.

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**STUDENT ACTIVE LEARNING AND TEACHING METHODS (SALT-M) IN NURSING COLLEGES**

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Malawi is one of the poorest developing countries in the sub Saharan Africa. It has 12 institutions that train nurses of which two are state-owned universities. Most of the nursing colleges (9) are run by Christian Health Association of Malawi. Apart from the two university colleges where teachers have a Masters or Doctorate degree, the majority of teachers in these colleges have a Bachelors degree.

Teachers in nursing colleges utilize a variety of learning and teaching methods to impart knowledge, skills and attitudes to student nurses. The most favoured and commonly used teaching method is the traditional lecture method. However, sometimes group discussions and presentations are used. Of late, there has been a change in teachers’ perception on how best they can facilitate students learning. They realize and accept the fact that students learn better by doing. As such, teachers in nursing colleges have gradually started using student active learning and teaching methods. It would be a far fetched dream to talk of the use of student active learning and teaching methods without orientating teachers because most of them are not used to this way of teaching. The Norwegian Church Aid (NCA) is one of the partners who are in the forefront of capacity building for teachers in this regard. Experts from Norway have facilitated training for teachers from nursing colleges on student active learning and teaching methods in the past two years. These experts have tirelessly made follow-up visits to all nursing colleges involved in the trainings to appreciate what is happening on the ground and support them. The NCA has even brought some teachers to Norway to learn how their colleagues’ are doing. In this endeavor, the NCA has even gone further to develop infrastructure in some nursing schools. Among other things it has built libraries so that the problem of accessing information is eased.

The use of student active learning and teaching methods is not without its challenges. There are pockets of resistance from teachers and students on the use of student active teaching methods in nursing colleges. Generally nursing schools do not
have adequate resources like books and manikins. Access to internet for both teachers and students is mostly limited. Little by little with help and support of partners like NCA, student active teaching methods are getting ground in nursing schools in Malawi.

DO SPORTS, NOT DRUGS. AN APPRAISAL OF POSTER COMMUNICATION FOR SUBSTANCE ABUSE PREVENTION TO DISADVANTAGED YOUTH IN SOUTH AFRICA

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Background: Internationally, consensus exists that sport and play programmes are important for child and community development. Through participation in sport, children can be taught essential values and life skills that help to build resilience and confidence and create a meaningful connection to adults through coaching relationships. This, in turn, creates a platform for communicating messages about health and behaviour change. Ke moja! (translated: I'm fine) is a national information and education campaign in South Africa aiming to create awareness of the risks related to substance use and to promote awareness and involvement in health promoting behaviours in youth aged 10–18. One of the posters, contains a visual about two boys playing basketball (the fastest growing sport in South Africa), with the wording ‘only you control your choices... be prepared to be in control.’

Methods: Eighty-six urban youths both in-school and out-of-school, participated in focus group discussions, where they were asked about their perceptions about the poster, its main message(s) and their recommendations.

Results: No marked difference in responses across age groups, or between in-school and out-of-school youth. Female participants were more pleased with the choice of models than the males. The male participants related more to the chosen sport as an alternative to substance use. The participants were generally able to identify the central message of the poster: to participate in sport, and not to take drugs. They also related taking drugs to hindering sport performance and general activity.

Conclusion: Poster communication is an ideal form to reach out to the most vulnerable populations – namely, girls, adolescents, and street children or young people with messages about substance use. However, the message needs to be tailored to various diverse groups, and take in consideration that youth prefers direct, positive messages rather than those that require their interpretation.

CONSUMPTION OF FAT FREE COCOA POWDER DRINK HAS POSITIVE EFFECTS ON ANTIOXIDATIVE AND PROLIFERATIVE ACTIVITY OF LYMPHOCYTES FROM HEALTHY HUMAN SUBJECTS

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The potential effects of cocoa on human health has been shown in many researches. Cocoa (Theobroma cacao L) is a rich source of flavonoid antioxidants such as catechin, epicatechin and procyanidin. The aim of this research was to evaluate the immunomodulation effect of Indonesian fat free cocoa powder drink consumption as observed through antioxidative properties and proliferation activities of human lymphocyte. Healthy woman subjects were divided into cocoa group (n=9) and control group (n=9). Cocoa powder drink containing skimmed milk and sugar was given to the subjects in cocoa group. The control group received only water containing skimmed milk and sugar. Both cocoa and control groups underwent physical medical check up at the beginning and at the end of the intervention. Their peripheral blood was withdrawn to analyze antioxidative properties and proliferation activities of B and T cells. Antioxidant analysis consisted of antiradical measurement by DPPH method, malonaldehyde (MDA) and glutathione analysis and cell defense against oxidation. The data of cocoa group showed that, there were significant increase in antiradical and glutathione level and decrease in MDA cell ($p<0.05$) when compared to the control group after consumption of the cocoa powder drink. Cocoa consumption increased lymphocyte resistance to formaline and erythrosine oxidation significantly. The cocoa drink consumption appeared to increase lymphocyte proliferation although not statically significant ($p>0.056$). The result of this research revealed that Indonesian fat free cocoa powder has a potential antioxidant activity which manifests good health functionality.