

# Health psychology and health care interventions in sub-Saharan African countries

John Adwok<sup>a</sup> MBBS, MMED (Surg.), FRCS (Edin.), PhD and Patricia Wolskee<sup>b</sup> PsyD

## Introduction

Health psychology is a specialty within the discipline of psychology concerned with individual behaviours and lifestyles affecting physical health. The discipline strives to “enhance health, prevent and treat disease, identify risk factors, improve the health care system, and improve public opinion regarding health issues” (1. p. 16).

Health psychology evolved by incorporating the goals of behavioural health which promotes improving health and preventing diseases in healthy people—away from the traditional diagnosis and treatment of disease. Such an approach is well suited to resource poor countries in sub-Saharan Africa where preventable degenerative as well as infective diseases are on the rise. The **biomedical model** considers disease to be a result of a disease-causing organism and defines health as ‘absence of disease’. The **biopsychosocial model** is the holistic approach to medicine that considers social, psychological, physiological, biological and even spiritual aspects of a person’s health. It views health as a positive condition. Health psychology could play a significant role in alleviating existing and emergent health care issues in sub-Saharan African countries.

The migration of large numbers of rural Africans to the urban areas in recent decades in search of a ‘better’ life has been associated with life style and dietary changes. This has resulted in new or rarely experienced health care issues in their rural communities and tribal groups (2, 3). The need to consider political, economic, cultural, and social dimensions of health beyond the traditional individual model has been a driving force behind the transformation of health psychology (4). Including community development and social change as health promotion strategies in health psychology provides

the right tools to tackle life style related diseases of the urbanized African.

Previous anecdotal evidence indicated that the urbanized African was resistant to ‘western’ diseases. However, recent studies show that ‘western’ diseases are becoming rampant in African towns and cities - affecting mainly the middle class (2, 3). This development could lead to insurmountable health care issues if left uncontrolled. We argue that health psychology interventions could help to ameliorate the impact of these emerging health care issues. Most African immigrants to the cities are unaware of the risks of newly acquired ‘western’ habits like smoking cigarettes, excessive alcohol consumption, and high fat intake until it is too late. The wide range of health

psychology interventions and the ability of health psychologists to work effectively in interdisciplinary settings makes them well suited to tackle emerging diseases in developing countries.

## Background

Previous claims that the African is resistant to ‘western’ degenerative diseases even when they migrate to urban areas are not supported by current research findings. According to Segal et al. (5), “Rapid urbanization is occurring in many regions of Africa leading to marked changes in lifestyle and diet, and a decrease in physical

activity but increases in smoking and alcohol consumption, all features of populations in transition”(5. p731). The authors argue that despite some environmental factors that favour an increase in the incidence of ‘western’ degenerative diseases, the incidence remains low. Claims that the incidence of diseases like acute appendicitis in Africans is low because critical events in early infancy lay the foundation for a healthy gastrointestinal tract that withstands insults that may occur in later life have been disputed. By extension, the assumption that the so-called western diseases like hypertension and diabetes do not afflict the African to the same degree as the westerner is no longer tenable.

Cardiovascular disease risk factors are as high in urbanized Africans as in their western counterparts. Tibazarwa et al (2) examined the cardiovascular risk factor

Health  
psychology evolved by  
incorporating  
the goals of behavioural  
health which promotes  
improving health

<sup>a</sup> Consultant General and Endocrine Surgeon, Nairobi Hospital, Kenya. jadwok@wananchi.com

<sup>b</sup> Adjunct Professor, Health, Mind and Body Department, Saybrook University

profile of volunteers in the predominantly black Soweto Township of South Africa in 2006-2007. "Screening comprised a combination of self-reported histories and clinical assessments that included calculation of body mass index, blood pressure and random blood glucose and total cholesterol levels" (2 p3). The data strongly suggested a high prevalence of related risk factors for heart disease in this population—considered to be in epidemiologic transition.

Adwok (3) studied a probability random sample of an urban civil service population in South Sudan and got similar findings. Other areas that could be studied with the help of health psychology interventions in the African setting include the patient doctor-relationship and adherence to medical recommendations.

Many patients, especially in developing countries, still depend on their doctors to make health care decisions on their behalf. However, an increasing number no longer receive health care passively but demand to participate in decisions concerning their treatment. In spite of the proven advantages of this trend, a careful balance between respecting patients' autonomy, and proactively guiding them to make the right decisions is necessary (6).

More and more information about health care is now available on the internet and through the media but this information is often flawed and misleading. So the doctor still needs to play an important role in guiding the patient towards the best health care choices. The health psychologist could fill the widening gap between the doctor and the patient and also improve adherence to medical recommendations.

Adherence to medical recommendations is not simply the ability and willingness of a person to follow recommended health practices. Hynes (as cited in 1 p78) defines adherence as: "The extent to which a person's behaviour—in terms of taking medications, following diets, or executing lifestyle changes—coincides with medical or health advice". The later definition broadens the concept of compliance beyond the simple act of taking medicines regularly to include maintaining healthy lifestyles - like healthy diets, exercise, avoidance of stress, and abstaining from smoking among other health promotion measures. Therefore, adherence is a much broader concept when used in this context, encompassing more health seeking activities than simple compliance. Health psychologists have the skills and training to disseminate this concept in

communities and achieve better health outcomes.

Many factors determine adherence to medical advice and include the all-important relationship between the doctor and the patient. Moore et al. (7 p422) state that "in addition to its impact on patient comfort and satisfaction, doctor-patient rapport can also affect patient health behaviours, most notably treatment adherence". Patients follow the instructions of doctors they trust. The ability of the doctor to listen attentively, make eye contact, and allow the patient to tell their stories with little interruption promotes trust. Yet, few doctors could spare the time to listen to a rambling octogenarian or even to give clear instructions. The balance sheet of the health care organization might depend on how many patients its doctors can see in a given time period. Social and economic factors also play a big role in adherence to medical advice.

Although little research into treatment adherence has been done in African countries, social and economic factors are considered to affect adherence outcomes. Non-adherence to professional advice has been associated with medical and psychosocial complications of disease, compromised quality of life, and mismanagement of meager health care resources in African countries (8). Health centres in Africa - especially rural areas - are far apart, poorly equipped, and under-staffed. The sheer effort of walking miles to queue for hours, interact with hostile and overworked staff, and

the unlikelihood of actually filling a prescription due to chronic drug shortages, discourage many Africans from using the available health care services. The extensive use of traditional and alternative medicine in Africa, even in urban areas, is probably partly due to the lack of quality health care services and poor doctor and patient relationship.

Health psychology interventions could close the widening communication gap between the doctor and the patient and achieve better health care outcomes. Behavioural and lifestyle changes can be achieved when health care professionals interact effectively with their patients. The role of behaviour and lifestyle in the causation of cancer and hypertension has been studied extensively and can be used to illustrate how health psychology interventions could be applied to control these diseases.

## Health psychology interventions could close the widening communication gap between the doctor and the patient

## MAIN ARTICLES

### Behaviour and chronic illness

#### Cancer and behaviour

A number of risk factors for cancer have been identified and yet their interactions are still not yet clearly understood. Cancer is currently known to cause about 7 million deaths per year worldwide - more than malaria, tuberculosis, and HIV/AIDs combined (9). The cancer toll in Africa each year is estimated at 600,000 deaths and this is expected to increase significantly in the next 10 years. According to Brannon and Feist (1) most risk factors for cancer are a result of personal behaviour, notably diet and smoking. Others like environmental and hereditary factors exist and are beyond personal control. Populations in developing countries are more likely than their western counterparts to develop cancers in which infectious agents appear causal. The development of such cancers can be controlled through community interventions.

In Africa, up to a third of cancer deaths are considered potentially preventable. Vorobiof and Abratt (9) state that in the year 2002 there were more than half a million cancer deaths in sub-Saharan Africa, 40% of which can be explained by chronic infections and tobacco usage. Schottenfeld and Beebe-Dimmer (10 p38) estimate that "the proportion of cancer deaths attributable to infectious agents is about 20% - 25% in developing countries and 7% - 10% in more industrialized countries". For example, chronic infections with the sexually transmitted human papillomavirus increase the risk of uterine cervical cancer and chronic infection with the hepatitis virus increases the risk of hepatocellular cancer. Unfortunately, although highly effective vaccines against these infections have been discovered, they are generally unavailable to people in countries where they are needed most. Although preventive health programmes exist in developing countries, they remain inadequate and poorly funded. Awareness about cancer related infections could be created using health psychology interventions. The incidence and prevalence of Kaposi's sarcoma and non-Hodgkin's lymphoma could be reduced by sexual behaviours that discourage the dissemination of HIV/AIDs - the main risk factor.

Cancer is often not considered a priority in developing countries because of the wide range of other serious health problems(11). Nevertheless, if cancer prevention programmes like vaccination, safe sexual practices and antismoking measures are not implemented, many African countries will be overwhelmed by patients with cancer in

the foreseeable future.

Furthermore, both the developing and the industrialized worlds have their unique environmental and hereditary risk factors for cancer. Family history, ethnic background, and advancing age are considered cancer risks beyond the control of the individual behaviour. For example, a woman with a first degree relative who has breast cancer has a two-fold to three-fold chance of developing the condition (1). This explains why about two thirds of all women with breast cancer have a family history. Dark skinned people rarely develop malignant melanoma due to overexposure to ultraviolet sun rays because of the protective nature of sufficient melanin in the skin. Finally, advancing age increases the chances of developing cancer irrespective of behaviour patterns. Screening for common cancers like prostatic, colonic, gastric, and breast tumors in the elderly probably offer the only opportunities for cure in these cases.

#### Hypertension and Life-style

Hypertension - considered to occur when the systolic blood pressure (BP) reaches or exceeds 140 mm Hg and the diastolic 90mm Hg - is the principal preventable risk factor for stroke. According to Mensah (12), an estimated 16 million first-time strokes and 5.8 million stroke deaths occurred in 2005 alone, accounting for 10% of deaths worldwide. Available compelling clinical trial and epidemiological evidence suggest that within 3-5 years of lowering BP by 10mm Hg, most of the increased risks of stroke are reversed (Lawes as cited in 12). In African countries, more than 90% of patients with hemorrhagic stroke and more than half with ischemic stroke had high BP and yet awareness of hypertension and its prevention, treatment, and control remains very low (12.). Studies in mainly urban regions of East Africa have shown rates of stroke mortality higher than those of England and Wales (Walker et al. as cited in 13). Enough epidemiological data now exist to inform public health action in Africa with a view of educating its people on life style changes and overcoming the unique challenges of this disease.

A number of behaviours are implicated in the development and management of hypertension. For example, there is good evidence that reducing salt intake reduces high blood pressure and that black people are more sensitive to this than white people (13). As most black Africans have negligible intakes of highly salted processed food, salt reduction strategies should be easy

Cancer is often not considered a priority in developing countries because of the wide range of other serious health problems

to implement with a good chance of success. However, the recent rapid urbanization and dietary changes of many Africans have resulted in obesity and stress related excessive alcohol consumption. A public health action to reduce blood pressure would be to return to the high fibre traditional African diet and encourage regular exercise and moderation in alcohol consumption. Yet, strategies that rely on education and threats of disastrous consequences for non-adherence are not often effective in changing people's behaviours. Behavioural strategies in health psychology focus more directly on changing the person's behaviours as they relate to compliance.

Cognitive-behavioural interventions in hypertension attempt to enhance patients' social support and improve their self-efficacy for adherence to healthy behaviour. For example, training patients to monitor their health-related behaviours and evaluate those behaviours against a predetermined criterion such as a lowered BP reading of 5mm Hg or loss of 2kg after a month of exercise. The use of positive self-enforcement for any progress towards meeting the criterion has also been found to be effective when using cognitive-behavioural interventions (1). Although educational methods may increase the patient's knowledge, behavioural approaches aimed at increasing patient involvement and encouraging an active ongoing relationship with the practitioner offer better chances of compliance with the BP reducing life-style change.

### Summary

In spite of rampant poverty and a heavy burden of infectious diseases, African populations continue to explode with many migrating to towns and cities. The resultant changes in behaviour and lifestyles are leading to a rapid increase in non-communicable diseases like diabetes and cardiovascular diseases in African urban areas.

Modern health care remains elusive for the average African as health care authorities grapple with inefficiency and budgetary constraints. African health care systems are already struggling to control infectious disease epidemics like HIV/AIDS, malaria, and tuberculosis. The adoption of the new health psychology strategies and interventions in promoting health will help reduce the burden of both communicable and non-communicable diseases. This approach would supplement the existing but inadequate public health and curative interventions in resource poor countries in Sub-Saharan Africa.

### References

1. Brannon L & Feist J. 2004. *Health psychology: An introduction to behavior and health* (5th ed.). Belmont, CA: Wadsworth

Thomson. ISBN: 0534506003

2. Tibazarwa K, Ntyintyane L, Sliwa K, Gerntholtz T, Carrington M, Wilkinson D & Stewart S. 2009. A time bomb of cardiovascular risk factors in South Africa: Results from the heart of Soweto study "Heart Awareness Days". *International Journal of Cardiology*, 132(2):133-239. doi:10.1016/j.ijcard.2007.11.067
3. Adwok JA. 2010. Changing Lifestyles and the Risk of Hypertension in an African Population—The Alcohol Factor. (PhD Thesis). Available from Proquest Dissertation and Theses database. (UMI No. 3409074)
4. Hepworth J. 2004. Public health psychology: A conceptual and practical framework. *Journal of Health Psychology*, 9:41-52. doi 10.1177/1359105304036101
5. Segal I, Walker ARP & Wadee A. 2001. Persistent low prevalence of western digestive diseases in Africa: Confounding etiological factors [Electronic Version]. *Gut*, 48:730-732
6. Bottles K. 2000. Patients and doctors: Some thoughts on an evolving relationship amid unprecedented change. *Managed Care Quarterly*, 8(3):34-36. Retrieved on 22 July, 2008 from <http://ezproxy.library.capella.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=6906673&site=ehost-live&scope=site>
7. Moore P, Sickel A, Malat J, Williams D, Jackson J & Adler N. 2004. Psychological factors in medical and psychological treatment avoidance: The role of the doctor-patient relationship. *Journal of Health Psychology*, 9(3):421-432. doi: 10.1177/1359105304042351
8. Kagee, A, Le Roux M & Dick J. 2007. Treatment adherence among primary care patients in a historically disadvantaged community in South Africa: A qualitative study. *Journal of Health Psychology*, 12(3):444-460
9. Vorobiof D & Abratt R. 2007. The cancer burden in Africa. *South African Medical Journal*, 97 (10):937-938.
10. Schottenfeld D & Beebe-Dimmer JL. 2005. Advances in cancer epidemiology: Understanding causal mechanisms and the evidence for implementing interventions. *Annual Review of Public Health*, 26:37-60. doi: 10.1146/annurev.publhealth.26.021304.144402
11. Lingwood R., Boyle P, Milburn A, Ngoma T, Arbuthnott J, McAffrey R. et al. 2008. The challenge of cancer control in Africa. *Nature Reviews Cancer*, 8:398-403. doi: 10.1038/nrc2372
12. Mensah, G A. 2008. Epidemiology of stroke and high blood pressure in Africa. *Heart*, 94:697-705. doi:10.1136/hrt.2007.127753
13. Cappuccio F, Plange-Rhule J, Phillips R & Eastwood J. 2000. Prevention of stroke and hypertension in Africa. *The Lancet*, 356:677-678