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Mini Review

Interprofessional Care for Chronic Diseases of Lifestyle

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ABSTRACT

Public health and other healthcare practitioners are facing the challenges that arise from chronic diseases of lifestyle. Astronomical increase in the prevalence and burden of chronic non-communicable diseases in the high and low/medium income countries has been reported in literatures. Reducing the burden of chronic diseases of lifestyles requires steps that will be all encompassing. Though, a variety of effective lifestyle modifications/interventions for chronic diseases of lifestyles exist, the primary aim of each of them is to reduce the burden of chronic diseases of lifestyle, which can be achieved through different ways. This review was carried out to highlight the common inter-professional ground in the prevention and management of chronic diseases of lifestyle with special focus on physiotherapy. There have been little or no studies on joint efforts of healthcare providers in preventing and managing chronic diseases of lifestyle. Also, there is a need to take into consideration social and cultural values and differences of persons that might affect chronic diseases of lifestyle while planning the interventions.

Keywords: *Chronic diseases, dietary, physical activity, lifestyle diseases, collaboration*

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INTRODUCTION

Chronic diseases of lifestyle are group of diseases that share similar predisposing factors resulting from exposure, for a long period of time, to smoking, lack or reduced physical activity, unhealthy diets and in some cases stress (Steyn & Damasceno, 2006). The prevalence of non-communicable diseases (NCDs) has been on the increase in high/low income countries and has become major health problems (WHO, 2003; Islam *et al.* 2014). It has been well documented in literatures that deaths from NCDs are increasing worldwide without exception to countries in Sub-Saharan African. Over three-quarters of global deaths will result from NCDs and a larger percentage of these will be from low/medium income countries (Beaglehole & Bonita 2008). This ugly trend is also reported in South Africa with an estimated 37% of all deaths resulting from NCDs (Bradshaw *et al.*, 2003). The reasons behind rising in the number of death in Africa has been linked with changing lifestyle practices, poverty, urbanisation and globalisation as well as increased life expectancy (WHO, 2005).

Chronic diseases were viewed as diseases of the elderly but reverse is the case nowadays as younger adults now suffer from the diseases because of lifestyle modifications of the young adults which they manage as lifetime diseases (Flynn *et al.*, 2006). Physical inactivity has been identified as one of the lifestyle shift responsible for the earlier onset of chronic diseases of lifestyle (Blair & Brodneyn, 1999). This only shows that being physically active prevents and reduces the incidence and prevalence of chronic diseases of lifestyle. In South Africa, WHO (2005) reported that less than one third of South Africans met the ACSM and CDC recommendation for health-enhancing physical and most disturbing was that nearly 50% were inactive. These results might be applicable in other sub-Saharan African countries that are undergoing same epidemiological transition.

Biological precursors of CVD and other chronic diseases of lifestyle are unhealthy lifestyles that individuals engaged in. Conversely, an improvement or change in unhealthy lifestyles leads to reduction in CVD and other chronic diseases of lifestyles. Reducing the burden of chronic diseases of lifestyles requires steps that will be all encompassing. Though, a variety of effective lifestyle modifications/interventions for

chronic diseases of lifestyles exist, the primary aim of each of them is to reduce the health an economic challenges associated with chronic diseases of lifestyle which can be achieved through means. Hence, one might be prompted to ask if there is any collaborative care by all stake holders in healthcare delivery system for chronic diseases of lifestyle management and prevention.

Interprofessional Care for Chronic Diseases of Lifestyle

Prominent roles and importance of interprofessional care in patients' care has been subject of discussion in the literatures. Mitchell, Parker, Giles and White (2010) reported that collaboration between healthcare professional give rise to sound planning and policy development, more clinically effective services, and problem solving and these have shown to be effective in acute hospital setting (Deneckere *et al.*, 2013) and terminally ill patients (Pype *et al.*, 2014). Diverse of definition is given to interprofessional care and practice in literature. It is defined by WHO (2010) as a situation when there is conglomeration of many healthcare providers from different disciplines work together to deliver and render utmost health care for a patient. An all-encompassing definition of interprofessional care should include, among others, sharing, partnership, power, interdependency and process concepts (D'Amour, Ferrada-Videla, Rodriguez & Beaulieu, 2010). This is necessitated because of the complex demands of our patients (Lumague *et al.*, 2008) which can only be provided by healthcare carers of diverse disciplines. Chronic diseases of lifestyle share the same risk factors and hence might require a multidisciplinary approach for successful prevention and intervention.

Among the chronic diseases of lifestyle is type II diabetes mellitus. Sieber, Newsom and Lillie (2012) reported that the use of collaborative care to identify and activate self-management behaviour in diabetic patients had their blood sugar well controlled unlike those without collaborative care. They also reported that collaborative approach enhances greater patients' activation in managing their health. Russell *et al.*, (2013) also reported that community integrated model of complex diabetes care that was delivered by the experienced clinicians and supported by the specialist and multidisciplinary team are of benefits when compared with a tertiary outpatient clinic without any interprofessional inputs. Devalia (2010) also reported the importance of multidisciplinary approach in diabetes mellitus, especially diabetes ketoacidosis (DKA). Proper handling over as well as documentation by the specialist increase the survival rate in DKA.

While looking into the role of primary healthcare nurses in a multidisciplinary team, Wilkes (2012) reported that they perform advocacy, supportive, coordinative, educative, assessing and team member for clients with chronic conditions with the primary aim of improving positive clinical outcomes. In a qualitative study by Monsen *et al.*, (2014), four themes emerged on how to translate obesity practice guidelines by the nurses. These themes were: (1) a shift from powerlessness to positive motivation, (2) heightened awareness coupled with improved capacity to respond, (3) personal ownership and use of creativity, and (4) a sense of the importance of on increased interprofessional collaboration. The last theme emphasised the

need for all members of healthcare to collaborate to achieve positive results for their clients.

The interprofessional roles of physiotherapist, dietician, exercise physiologist and psychologist have not been well documented in the prevention of chronic diseases of lifestyle. It has been, however, shown that each of these specialists individually plays major role in diseases of lifestyle prevention and management. Exercises and physical activity have been shown, over the past decades, to have positive impact on illness and death reduction from hypertension, diabetes, stroke and coronary heart disease. The prescription and implementation of exercise and physical activity in chronic diseases of lifestyle prevention and management fall under the jurisdiction of qualified physiotherapists and exercise physiologists. In a recent study by Young *et al.* (2014), it was reported that physically active individuals, irrespective of the gender, have lower diastolic blood pressure, glucose and HbA1c levels than individuals who are constantly physically inactive after using exercise vital signs (EVS) as a measure of moderate to vigorous physical activity. Warburton, Nicol and Bredin (2006) reported that the effectiveness of regular exercise and physical activity is outstanding in the primary and secondary prevention of several chronic diseases, premature death and that participation in physical activity leads to positive health status. They also reported that there is a positive relationship between physical activity and health status to the extent that any increase in physical activity and fitness leads to additional and correspondent improvement in individuals' health status.

Booth, Roberts and Laye (2012) itemized three ways in which exercise acts as primary, secondary and tertiary preventer of diseases. As primary preventer, the aim is to direct the management towards the cause of the diseases as well as to prevent its occurrence which can be achieved through physically active or using physical activity to treat physical inactivity. Treatment of existing hypertension using physical activity is a form of secondary preventer of diseases. This can be made possible by preventing physical inactivity. Tertiary prevention comes into play during cardiac rehabilitation whereby exercise benefits have no influence on the anatomical pathology of myocardial infarction. Having realised the importance of exercise and physical activity in the prevention and management of chronic diseases of lifestyle as well as improving general well-being of the populace thereby reducing the economic and health burdens of chronic diseases of lifestyle, South Africa government, through her Health Ministry commenced an advisory and advocative process to develop guidelines for the prevention or management of chronic diseases of lifestyle (Lambert & Kolbe-Alexander, 2006). Among these were encouragement of physical activity among older adults and initiation of guidelines for promoting 'active ageing' as well as launching of inter-sectorial strategy to enhance healthy lifestyles and changing from unwholesome and unsafe behaviours especially among the South African youth. However, little or no success has been achieved regarding prevention and management of chronic disease of lifestyle. Self-reported hypertension and physical inactivity were the highest risk factors in both urban and rural communities in South Africa and about 40.1% rural and 34.4% urban population had three or more risk factors for

chronic diseases of lifestyle as reported by van Zyl *et al.* (2012). They also reported that 52.2% of rural and 39.7% of the urban population had three or more risk factors for metabolic syndrome. More still need to be done to fight the menace of chronic diseases of lifestyle in South Africa and other developing countries.

The role of the physiotherapist in chronic diseases of lifestyle management cannot be over emphasised. Because physiotherapists employ the use of non-invasive methods for management of diseases/ ailments which places them at a vantage position in the preventive and managing aspects of healthcare delivery system. Dean (2009) reported that physiotherapist should be trained to be able to assess smoking and smoking cessation, nutritional assessment and counselling, physical activity recommendation as well as basic stress reduction all of which encourage competences in physiotherapy practice in this millennium. Because they work with clients of varied ages and background, they are best positioned to give information and advice to individuals with chronic diseases of lifestyle. It is however pertinent to point out that the concept of health promotion to fight chronic diseases of lifestyle in physiotherapy is different from other areas of health promotion because physiotherapy places more emphasis on health education as a form of health promotion (Perreault, 2008) thereby making individuals with chronic diseases partners in managing their health. It has also been shown that patients taking responsibility for their own health can influence the risk factors of non-communicable diseases (Eales & Stewart 2001). Furthermore, they highlight that there is a need for healthcare professionals to realize and appreciate the barriers to the assumption of self-responsibility for health care in South Africa are factors such as lack of knowledge and cultural differences.

Having realised the chronic diseases of lifestyle burden, the Australian Physiotherapy Association (APA, 2009) came up with position statement among which are:

- Physiotherapists offer a wide variety of services to people at risk of developing or who have chronic disease. These services occur in a variety of highly accessible community and inpatient settings, in both private and public sectors
- Optimal treatment for people with chronic disease is person-centred, promotes self-management, and involves multidisciplinary team care which includes physiotherapy
- Physiotherapists have the necessary expert knowledge to prevent and manage the co-morbidities and complications of chronic disease
- The current funding mechanisms that support multidisciplinary team care limit the ability of people with or at risk of developing chronic diseases to pay for adequate levels of physiotherapy service, particularly where co-morbidities exist. Supervised group programs are a cost effective way of preventing and managing many chronic diseases, yet funding restricts the affordability of group sessions for people who would benefit most from these services
- Current Medicare funding mechanisms do not support health professionals to use their clinical judgement to assess the number and type of interventions required to provide person-centred team care. Instead, they are rigid and prescriptive. This severely limits attendance and thus the

opportunity for physiotherapy to improve wellness and quality of life

- Private health insurers should support chronic disease prevention and management programs through rebates to their members for suitable physiotherapy programs
- Funding must be flexible enough to ensure that people with chronic disease are not denied access to innovative and cost effective treatments, including classes and self-management education sessions run by skilled health professionals such as physiotherapists

Though physiotherapists render services that are preventive and curative, their roles in preventing and managing non-communicable diseases have not been thoroughly explored especially in low/middle income countries. The APA (2009) position on chronic diseases of lifestyle should be an eye opener for physiotherapist in South Africa and other countries in sub-Saharan Africa undergoing epidemiological transition.

Unhealthy diets have been implicated as one of the major causes of chronic diseases of lifestyle. The health, growth and development of people are dictated by the type of diet they consume (WHO, 2003). To fight chronic diseases of lifestyle in the United States, the therapeutic lifestyle changes (TLC) was designed (NCEP, 2002). Therapeutic lifestyle changes (TLC) is the lifestyle component of Third Report of the National Cholesterol Education Programme (NCEP) Adult Treatment Panel (ATP). Among the TLC lifestyle method for lifestyle modification include tailored dietary prescriptions (TLC diet), weight management as well as reduction of sedentary lifestyle. The TLC diet encourages reduction in dietary cholesterol (<200mg/day), saturated fats (<7% of total calories) and trans fats (lower intake). The aggregate effects of the TLC diet have been shown to decrease LDL by 25-30% as well as decrease in the blood pressure and serum triglyceride levels but with little or no effect on HDL levels (Appel *et al.*, 2005). In South Africa, the most important strategy to prevent and manage chronic diseases of lifestyle is the evolution of the food-based dietary protocols targeting the general population (Love *et al.*, 2001). These guidelines were developed from joint efforts of Nutrition Society, Association for Dietetics in South Africa, Medical Research Council, industry and the DOH. The guidelines encourage ample consumption of fruits, vegetables, dry beans, peas, lentils and soya regularly and reduction in fats, salt, sugar containing drinks and food, and alcohol. Recently, Hector, Espinal and King (2012) in a report submitted to obesity prevention planning in NSW, Australia, recommend the development, implementation and advertisement of communal kitchens, food co-ops, community gardens and cooking groups, promotion of healthy menu in clubs and other food services popular with older people, and healthy catering guidelines among agencies and services working with older people. Government at national and regional levels, developed and developing, have been advised by WHO (2009) to come up with a nutrition-based health policies that will be all inclusive, to also be in the know of the effects of modernisation and diet modifications which, eventually, results in changes in the health of the population as well as seeking most favourable National diet that enhances the populace health benefits and antagonizes adverse health effects. To successfully reduce the

health and economic task of chronic diseases of lifestyle in South Africa and other low/medium income countries, need arises for healthcare professionals to possess adequate knowledge so as to counsel patients effectively regarding special diets as well as removing the barriers militating against counselling (Steyn, Fourie & Temple, 2006).

The behavioural clinicians have many roles to play in the prevention and management of chronic diseases of lifestyle. Their duties include assessment of psychosocial and behavioural issues and development and implementation of psychosocial and behavioural interventions (O'Donohue & Tolle, 2009). A combination of healthy-body upkeep, routine physical activity, moderate alcohol consumption as well as reduction or lack of smoking are factors that prevent stroke, type II diabetes mellitus and coronary artery disease (Willet, 2002). White (2001) advised people with chronic diseases of lifestyle to have behavioural modification as a means of taking control of their health-care and also persevere with the effects of the diseases and the management. Common sense, which is not that common, and a modicum of medical knowledge dictates that proper diet, exercise and achieving a healthy weight will improve glucose, blood pressure, cholesterol, metabolic function and reduce inflammation (Hartley, 2014). Also, lifestyle changes that are aimed at behavioural changes and weight reduction hinder the onset of type II diabetes mellitus and metabolic syndrome in overweight/obese adults with pre-diabetes history (Ma *et al.*, 2009).

Conclusion

Successful reduction in chronic diseases of lifestyle can only be achieved if all members of healthcare delivery system work together to achieve a common goal of a healthy society. There have been little or no studies on joint efforts of healthcare providers in preventing and managing chronic diseases of lifestyle. Also, need arises to take into consideration of norms, and sociocultural values that enhance chronic diseases of lifestyle while planning the interventions. Culture and other practices that enhance chronic diseases of lifestyle need to be addressed if an effective action is to be taken for chronic diseases management and prevention. These include socio-economic, cultural and environmental factors

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