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Strategies for Prevention and Management of Non-Communicable Diseases among Community Women in Nigeria: Insights for Family Social Welfare

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Abstract

In this study, modifiable risk factors, prevention and management plans for non-communicable diseases (NCDs) among women were examined. This study examined published and grey literature that was gathered from a number of sources, such as open data portals on the five major illness categories that make up the NCDs such as cardiovascular diseases (CVDs), diabetes, malignancies, chronic respiratory diseases, and mental health. Literature shows that the primary behavioural risk factors for NCDs, including CVDs, diabetes, and cancer(malignancies), can be largely avoided. Inactivity, tobacco use, alcohol use, and unhealthy eating habits (often high in processed sugar, fats, and salt) are a few of these. These factors in turn raise the risk of developing metabolic risk factors like hypertension, a high body mass index (BMI), high fasting glucose levels, and elevated cholesterol. Urbanization, a longer life span, and poverty are other factors linked to the rise in NCDs. These led to the conclusion that in order to ensure family social welfare, as women are recognized as contributors to the welfare of their families, strategies should be put in place by government and non-governmental organisations through execution of a mass media campaign on healthy diets, including socially acceptable marketing to lower the consumption of total fat, saturated fats, sugars, and salt and to increase the consumption of fruit and vegetables.

**Strategies for Prevention and Management of Non-Communicable Diseases
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Non-communicable diseases (NCDs), or chronic diseases, are long-lasting and slowly progressive diseases. The development of most NCDs is influenced by a combination of genetic, physiological, behavioral, and environmental factors (World Health Organization, [WHO], 2019). According to the WHO, NCDs represent the leading cause of death globally, accounting for 71% of annual fatalities. The four most prevalent NCDs include cardiovascular diseases (17.9 million deaths per year), cancers (9.0 million), respiratory diseases (3.9 million), and diabetes (1.6 million). NCDs are a significant cause of morbidity and mortality among women worldwide, encompassing a broad spectrum of health issues, including liver, renal, gastrointestinal, endocrine, hematological, neurological, dermatological, genetic, trauma-related, mental, and physical disabilities (WHO, 2020).

Currently, over 80% of the burden of NCDs is concentrated in middle- and low-income countries, including Nigeria, which has the largest population in Africa and ranks as the sixth most populous nation globally (World Health Organization, 2018). According to the World Bank's 2021/22 classification, Nigeria is designated as a Low Middle-Income (LMI) country, characterized by its Gross National Income (GNI) per capita, Gross Domestic Product (GDP), sociopolitical dynamics, weak institutions, and pressing health needs (Jobarteh,

2023; Sharma & Popli, 2023; World Bank, 2024). The prevalence of NCDs is exacerbated by the socio-economic challenges faced by women, who play a vital role in the largely informal economy. Women in communities are particularly among the poorest of the poor and are not expected to speak out on issues relating to their lives in which health is inclusive (Olajide & Omokhabi, 2014). These challenges include issues related to production, health, and environmental factors impacting their livelihoods (Ememe & Fajimi, 2024).

Nigeria continues to grapple with elevated rates of NCDs among women (Yaya, et al., 2018), many of which are preventable or modifiable through addressing risk factors (World Health Organization, 2020). Modifiable risk factors are those that can be reduced or controlled through intervention, such as physical inactivity or lack of exercise, smoking or tobacco use, alcohol consumption and unhealthy diet and feeding, poor rest or sleep, stress, and a lack of medical checkups (World Health Organization, 2018). An understanding of the scope of NCDs risk factors may aid in the design and execution of effective interventions to halt the epidemic in the country. Globally, NCDs account for nearly 65% of all female mortality, with over three-quarters of these deaths occurring in low- and middle-income countries (YayaReddy, Belizán, & Pingray, 2020). Research by Godfrey et al. (2017) indicates that maternal obesity may lead to various health complications, including coronary heart disease, stroke, Type 2 diabetes, asthma, and other pregnancy-related issues. However, the WHO asserts that lifestyle

modifications can prevent or delay 30-50% of cancers and 80% of cardiovascular diseases, strokes, and Type 2 diabetes (Vineis, & Wild, 2014; Koch, et al., 2016 cited in Irani, et al., 2022).

In Nigeria, NCDs are responsible for 29% of all deaths, with cardiovascular diseases accounting for 11% of these fatalities (Federal Ministry of Health, 2019). Approximately 28.9% of the population suffers from hypertension, and 4.1% have diabetes (Adeloye et al., 2015). Nigeria has established national NCDs targets in accordance with the Global Action Plans (World Health Organization, 2013) and Sustainable Development Goal 3.4 to strengthen responses for NCDs prevention and control (United Nations, 2015). These include 25% reduction in high blood pressure and diabetes mellitus by 2025 (Federal Ministry of Health, 2019). It has been recommended by the World Health Organization that effective and feasible NCD prevention and control strategies require strengthening the health system and aligning it to person-centered primary health care in low- and middle-income countries (World Health Organization, 2017). This study, therefore, examined modifiable risk factors and strategies towards prevention and management of NCDs.

Literature Review

Non-Communicable Diseases

Non-communicable diseases (NCDs) are a group of chronic illnesses that have an impact on public health and are conditions that are long-lasting, not contagious.

These Lifestyle diseases are disorders that are not spread through person-to-person contact or acute infection but rather are a result from unhealthy behavioral patterns in individuals (Kebede et al., 2024). These diseases are chronic and caused by a confluence of genetic, physiological, environmental, and behavioural variables (Oloruntoba, 2020; Bhattacharya, Heidler & Varshney, 2023). These illnesses constitute a serious threat to health and are on the rise as the world's top causes of morbidity and mortality (World Health Organization, 2018). NCDs, such as cardiovascular diseases, cancers, respiratory disorders, and diabetes, account for approximately 41 million deaths annually, equating to 71% of all global deaths. Of these fatalities, 15 million occur in individuals under the age of 70 (World Health Organization, 2018). Considering NCDs' high mortality and morbidity rates, governments and societies worldwide are concerned about them (World Health Organization, 2021). These illnesses are known to advance slowly and last a long time (Budreviciute et al., 2020). NCDs are the leading cause of death worldwide, accounting for 86% of mortality and 77% of disease burden, according to the World Health Organization (Budreviciute et al., 2020). If no interventions are made, the World Health Organization estimates that deaths from NCDs could rise to 55 million by 2030. The four major NCD-related causes of premature mortality are cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes (Bureviciute et al., 2020).

Cardiovascular Diseases

Cardiovascular diseases (CVDs), which comprise a multitude of ailments affecting the heart or blood vessels, are the leading cause of mortality for both men and women. However, there is a significant geographic variance. In 2017, it was estimated that over 22 million women were living with CVDs, with 675,000 fatalities and 2.6 million new cases reported that year (Institute for Health Metrics and Evaluation [IHME], 2018; World Health Organization, 2018).

Cancers

Cancer affects women disproportionately. In 2017, women accounted for more than 65% of cancer cases on the continent, and more new cases of cancer were reported in women than in men (almost 560,000 cases in women versus nearly 500,000 cases in men (Institute for Health Metrics and Evaluation, 2018). Breast, cervical, ovarian, colon, rectum, and thyroid cancers were among the most common cancers in women.

Chronic Respiratory Diseases

The term chronic respiratory diseases (CRDs) refers to a variety of conditions affecting the airways and other lung components. Chronic obstructive pulmonary disease (COPD), asthma, occupational lung illnesses, and pulmonary hypertension are the most prevalent CRDs. Despite their significant impact on women's health, CRDs receive limited attention. In 2017, more than 37 million women globally were living with CRDs, and nearly 90,000 deaths from CRDs were recorded in Africa (IHME, 2018).

Diabetes

In 2017, it was predicted that more than 50.9 million people had diabetes (Institute for Health Metrics and Evaluation, 2018). However, this number is probably an underestimate because current research indicates that Africa has the greatest rate of undiagnosed diabetes patients, with around 18.7 million people expected to have no diagnosis in 2017 (International Diabetes Foundation, [IDF], 2017). The International Diabetes Foundation anticipates that 42.9 million have impaired glucose tolerance (IGT), putting them at high risk of developing type 2 diabetes (IDF, 2017). Impaired glucose tolerance is predicted to affect over 108.6 million individuals by 2045 (International Diabetes Foundation, 2017).

Additionally, there is some research that suggests women of African descent may be more likely than women elsewhere in the globe to experience insulin resistance, which would have significant effects on how these women should be assessed for risk (Goedecke, Mtintsilana, Dlamini, & Kengne, 2017).

Mental and Neurological Conditions

A wide range of illnesses that impact thoughts, emotions, behavior, and relationships are included under the umbrella term mental and neurological conditions. Epilepsy, dementia, and multiple sclerosis are neurological disorders, while depression, autism, and schizophrenia are mental health issues. Numerous mental health disorders may be experienced alone or as co-morbidities with other NCDs. Over 235 million women are expected to be affected by neurological

diseases in 2017, with nearly 73 million women affected by mental health issues (Institute for Health Metrics and Evaluation, 2018). There were more new cases of mental and neurological diseases among women than among males, and women had a greater frequency of neurological conditions overall (Institute for Health Metrics and Evaluation, 2018). Furthermore, according to estimates from the Institute for Health Metrics and Evaluation(2018), when compared to neurological disorders, mental health issues contributed to the loss of more than 9.6 million healthy life years (and over 100,000 deaths) among women on the continent in 2017.

Key Risk Factors for Non-Communicable Diseases

There are numerous variables that can enhance the likelihood of developing NCDs and they can be categorized in various ways. Risk factors may be categorized as modifiable or non-modifiable factors, depending on whether their conditions are subject to change or not. Age, gender, genetic variables, race, and ethnicity are non-modifiable risk factors, while high blood pressure, smoking, diabetes mellitus, inactivity, obesity, and high blood cholesterol are modifiable risk factors (International Diabetes Federation, 2015). It's interesting to note that while age and gender cannot be changed, the majority of the linked characteristics can. Additionally, the non-modifiable factors can be divided into three categories: biological factors, which include obesity, dyslipidemia, hyper-insulinemia, and hypertension; behavioral factors, which include diet, inactivity, smoking, and

alcohol consumption; and societal factors, which include intricate interplays of socioeconomic, cultural, and environmental factors (World Health Organization, 2003). Because of health behaviors and inequities in access to health care, people living in poverty are particularly sensitive to the hazards of NCDs (Bukhman et al., 2020).

The detrimental effects of NCDs include psychological stress, low self-efficacy, end-organ injury, pre-eclampsia, miscarriage, hemorrhage, cesarean sections, post-natal complications, intrauterine growth restriction, preterm labor, birth injury, neural tube defects, stillbirth, low birth weight, neonatal hypoglycemia, infant respiratory distress syndrome, fetal death, and perinatal death. They can also have long-term effects like increased risks (Ahmed et al., 2018; Mukona et al., 2019).

Prevention and Management of NCDs

The natural green vegetation in a specific area, or neighborhood greenness, is widely recognized as an important health-promoting contextual environmental component. Experts have recommended for more parks and street trees in cities, claiming benefits such as lower temperatures and air pollution, as well as greater space for active transportation (such as bicycling) and exercise (Ezeh, 2016; du Toit, et al., 2018). Cohort studies by Fong, Hart, and James (2018), Twohig-Bennett and Jones (2018), Orioli et al., (2019), Rojas-Rueda et al., (2019), Bratman et al.(2019) and Iyer et al. (2020) in Western countries have found that

green areas promote physical exercise, lower the risk of obesity and diabetes, improve mental health, increase social capital, and reduce all-cause and cardiovascular mortality. People should be encouraged to engage in physical activity by policies that permit the construction of neighborhood parks, bike lanes, playgrounds and lovely village square areas where people can congregate, jog, socialize and have fun during their free time (Adesina et al., 2021). This could be adopted in Nigeria to aid prevention and control of NCDs .

Preconception care is the provision of biomedical, behavioral, and social health interventions to women and couples of childbearing ages before pregnancy occurs in improving health outcomes for women, newborns, and children by reducing risk factors that could result in poor maternal and child health outcomes. (World Health Organization, 2012). The ability to early optimize the health of prospective mothers and couples is crucial for reducing NCDs (Temel et al., 2015). The World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and the International Federation of Gynecology and Obstetrics (FIGO) all urge women to undergo preconception screening for NCDs as this aids in the early diagnosis of the illnesses, their management, and the mitigation of their effects (Jacob et al., 2020). Additionally, there is data supporting the value of preconception care. For example, a systematic review and meta-analysis from Pakistan found that preconception maternal diabetes care

lowers the risk of congenital abnormalities by 70% and perinatal mortality by 69% (Lassi, Imam, Dean &, Bhutta, 2014)

However, as suggested in the World Health Organization's best-buys, strengthening and reorienting the health system through people-centered primary health care is necessary for the effective and practical implementation of NCDs prevention and control strategies in low- and middle-income countries (World Health Organization, 2017). The promotion of good health and wellbeing depends on a healthy diet that meets the nutritional requirements. This diet should include at least five different servings of fruit and vegetables, as well as starchy carbohydrates like potatoes, bread, rice, and pasta that are ideally wholegrain. It should also include some dairy products or dairy substitutes (like soy drinks), as well as lower fat and lower sugar foods. According to Gassner, Zechmeister-Koss, and Reinsperger (2022), the following approaches could be used for NCDs prevention and management through enhancing tobacco and alcohol prevention: primary prevention encompassing behavioral and structural prevention, such as promoting healthy diet and physical activity, and promoting healthy choices, self-management and health literacy through assisting women and girls in learning more about managing their chronic conditions, digital technologies taking into account contemporary technologies to adapt offers in the areas of patient education, self-management, and self-help, support access to telemedicine consultations at the community level, and early detection and screening through

promoting health checks at the community levels (primarily primary health care centers). In order to instill healthy habits NCD awareness needs to be raised (Teyhen, Robbins & Ryan 2018).

Strategies for Management of NCDs

The collaborative strategies for the management of NCDs in Nigeria will involve the government at the three tiers such as the Federal Government of Nigeria, the State Governments in the 36 States of the Federal and their Local Government Areas as well as other key stakeholders and development partners in the sector. The broad-based approaches for managing NCDs are articulated as follows:

The Federal Government of Nigeria (FGN) should develop and implement legislative and regulatory procedures in partnership with other stakeholders, such as those in agriculture, education, health, and others to restrict access to alcohol, tobacco, and items with a lot of trans- and saturated fats, salt, and sugar. To encourage daily physical activity among community women, the State Government, Local Government and women's organizations can conduct physical activity programs and related interventions. The federal government can aid in the prevention and management of NDCs through computerized alert systems that assist primary care professionals in identifying high-risk community women for screening. By linking sports and active lifestyles to health, food, and other policies, the government at all three tiers of governance such as the Federal, State, and Local Government, may launch the healthy living for all campaign and

reduce the burden of NCDs. This can be done with the assistance of health experts and social workers. In addition, the federal government should increase fiscal support for primary health care systems to ensure that everyone in the community, especially women, has access to health services. In order to minimize the intake of total fat, saturated fat, sugars, and salt and to encourage the consumption of fruit and vegetables among women, the government and non-governmental organizations should execute a mass media campaign on healthy diets, including social marketing. As part of a structural cardiovascular preventive program, the local government can encourage the monitoring and follow-up of fasting plasma glucose tests provided every three years in the communities of women.

The provision of health services to every member of the community requires that the three tiers of government should implement improved budgetary allocations to support primary health care systems at all levels. These tiers of government would improve routine checks for NCDs up to a year before, during, and after pregnancy for all women in rural and urban communities. Also, these government tiers should encourage health literacy awareness raising, geared towards the needs of underprivileged women in communities, through social welfare workers and officers. To prevent legislative loopholes in the face of new consumption patterns, the federal government at all levels should support programs to help people stop using tobacco by utilizing eHealth technology and update legislation to cover new tobacco-related items. It is necessary to promote

health and prevent disease through government intervention in raising awareness of the value of regular physical activity for health and wellbeing as well as in the prevention of disease in order to increase the habitual levels of physical activity among all community women. The federal government should increase consumption of nutritious foods (vegetables, fruits, fiber) and decrease consumption of harmful foods (reduced salt, sugar, and fat) through population-based programs, including raising public awareness, and straight forward food labeling by all levels of government. Professionals such as dietitians, coaches for physical activity, psychologists, social welfare officers, and social workers at the community level should conduct lifestyle modification programs like primary care clinicians, such as nurses.

The federal government may need to strengthen primary care by investing in the necessary tools and knowledge, mobilizing various healthcare personnel, and improving early diagnosis of diabetes and other cardiovascular risk factors. The Ministry of Health at the state level of government is responsible for revising laws governing warning labels on alcohol containers, educating women about the risks of drinking while pregnant, helping those who require medical attention, and create detoxification standards for use in healthcare facilities and therapeutic facilities The department of health's internal referral processes and communication with other departments should be improved.

In some health facilities, such as those for people with Human Immunodeficiency Virus (HIV), tuberculosis, trauma units, antenatal clinics, and psychiatric care, alcohol use is screened and brief therapies are given. Partnerships between the government and Civil Society Organizations (CSOs) can make a significant difference on the health of the population. Wherever possible, coordinated campaigns can be launched, but for effective advocacy, CSOs' independence should be upheld. CSOs can help to make sure that public policies and procedures are in the best interests of the general public. The risk factors of NCDs must be addressed through social mobilization. Women must be empowered to accept responsibility for their actions and decisions, and society as a whole needs to be encouraging and conducive to making wise decisions.

There should be a procedure that enables women to exert more control over and enhance the factors that affect their health. CSOs can aid in organizing society and equip women with the information they need to make wise choices. To increase health literacy and keep women informed about safer practices and/or healthier options, awareness campaigns and community education are important. Through their advocacy activities, CSOs collaborate with local governments, healthcare providers, and communities directly. As a result, CSOs are in a unique position to advocate for causes that have the greatest impact on women and girls and speak out on issues that directly affect them. Government should take advantage of this special quality of CSOs by collaborating more closely with them

at every stage, from developing NCD policy to putting it into practice. By increasing knowledge, lowering stigma, and mobilizing community resources with the help of local government, one can improve and mobilize resources for chronic diseases.

The creation of primary health care outreach teams in each community ward in Nigeria would be a crucial part in re-engineering primary healthcare: prevention. Community health workers, social welfare officials, and medical social workers should personally visit households to educate residents about the value of leading healthy lifestyles and what that entails. Women who are deemed to be at high risk should be referred to their neighborhood clinic or health center for a thorough evaluation. Community health professionals should assist the families of chronic disease patients who have been diagnosed in supporting good health through dietary changes and medication compliance. To assist community health professionals and carry out health promotion initiatives in communities, a health promoter should be a member of the ward team. Palliative care, including home care, should be provided to women with severe, progressive illnesses in the appropriate setting. The bare minimum of tools and technologies needed for basic healthcare, such as a height meter, a weighing scale, and blood pressure monitors that are regularly maintained, should be made available to community primary health care centers. Additionally, instruments for measuring blood sugar, blood

cholesterol, and urinary albumin must be provided, along with the required strips or lab services.

Rehabilitation is a crucial aspect of the continuum of care for women who have sensory, cognitive, or physical functioning issues as a result of non-communicable diseases, particularly strokes, diabetes, and cardiovascular conditions. To get the most out of therapeutic interventions, patients/clients who need rehabilitation should be identified and referred as soon as possible. Primary health care may develop and deliver healthcare strategies to manage NCDs in each community and to detect diseases at an early stage. In order to help community women with cardiovascular diseases have access to high-quality treatment and care, including self-management education and support, more primary health care centers need to be established in various rural and urban communities to provide preventative care, general health, and childcare at a low cost. To preserve lives and avoid long-term disability in the event of an acute incident, primary care, hospital care, and acute care services must be aligned and coordinated. Community women receiving long-term care need adherence education and counseling to promote self-management through support groups, home-based services, reminders to take their medications, reminders to go in for reviews, assistance with nourishing foods, and counseling to reduce smoking and alcohol consumption. Long-term care also needs the proper medications, medical supplies, tools, and equipment (technologies). Patients with chronic NCDs should

ideally be able to take care of themselves. The Primary Health Center outreach staff should offer assisted self-management, albeit, due to financial limitations.

Collaboration between governments and several non-governmental groups, schools, and colleges is highly desired in order to make significant progress, advise people on lifestyle changes, and alert them to the dangers of NCDs. Collaboration between governments and various non-governmental organizations, secondary school (K-12) settings, finance, health, and colleges/universities, to offer guidance on lifestyle adjustments and warn people about the hazards of NCDs, is highly desired in order to achieve significant progress. Women who drink alcohol while pregnant run the risk of their unborn children developing Fetal Alcohol Spectrum Disorders (FASD) (that is a lifelong physical, mental and behavioral disorder). Since FASD is a lifelong condition, prevention is crucial and should focus on not only women but also their social environments. The government, Ministry of Health, and Ministry of Women's Affairs, which oversees social welfare services, can raise public awareness of the risks associated with alcohol use during pregnancy. The Ministry of Women's Affairs, which is in charge of social welfare services, can work with local government to improve screening activities by implementing them as public health programs. It can also improve information provided to community women about screening programs so that they can comprehend their significance and make decisions about participating in them with knowledge. The government

should develop successful mass-media campaigns that inform the public about the dangers of smoking, tobacco usage, and second-hand smoke. The Ministry of Women Affairs is responsible for social welfare programs should take it as priority.

Health practitioners should promote the use of digital tools including web portals, telemedicine, and digital services to assist women's autonomy, self-management, and empowerment. Technology may help many women in the diabetic community self-monitor their blood sugar levels, assist dietary and medication adherence, and/or self-administer insulin. Since digital tools, like mobile health apps that track heart rhythm, weight, and blood pressure, are helpful for early detection of cardiovascular diseases and for monitoring heart failure patients, the government, along with health care professionals, social welfare officers, and medical social workers, should promote their use among community women. At primary health care centers and hospitals, the government and ministry of health should increase the accessibility, cost, and proper use of diagnostics and nonpharmacological therapy. To test lung function and allergenicity, basic tele-health and more sophisticated tele-monitoring employing digital tools and devices should be taken into consideration. Mental health experts should encourage the promotion of positive mental health, reducing stigma associated with mental illness among women, and increasing public awareness within the context of health services, including primary care through a focus on service users' mental health and wellbeing as part of routine primary health care.

Women's groups, women leaders, and members of the medical profession, such as nurses, psychiatrists, radiologists, or cardiologists, can launch mass media campaigns using social media and new technologies (for instance, by offering recipes and advice for healthier eating through a dedicated website, mobile apps, and online tools) for women and children. Social workers and health experts can promote the use of telehome care, telemonitoring, teleconsultation, and telecare projects in communities for women with diabetes, chronic obstructive pulmonary disease, and heart failure.

Women's organizations should support empowering women and children through education, training, research, advocacy, lobbying, mobilization, and networking in semi-urban and rural areas in order to encourage women to play sports for physical activity. This is the most effective factor that can easily influence the prevention of NCDs, and it is also time and cost-effective. Women-led organizations working on NCDs should continue rigorous sensitization by educating the public about how to prevent NCDs and known risk factors, promoting healthy eating habits, influencing attitudes and behavior through campaigns, and providing information about disease detection and where to access screening and medical support. Primary care, chronic illness, and maternal health providers all working together should expand access to and the standard of care at all levels, with an emphasis on providing women with respectful and equitable care. Midwives, nurses, and social workers in particular provide women

with respectful and equitable care, as well as supporting and investing in the maternal health workforce. Health care professionals may find health coaching to be a useful tool in promoting preventative care. Health coaches can be doctors, but they can also be health educators, nurses, or social workers who act as a liaison between the patient and the doctor. A multi-sectoral response is necessary to address the burden of NCDs. Therefore, it is crucial that professional organizations outside of the health industry get involved, such as the Association of Medical Social Workers of Nigeria, the Nigerian Association of Social Workers (NASoW), Farmers Organizations, Community Development Association, and Women's associations

Conclusion

The strategies outlined in this study for the prevention and management of non-communicable diseases (NCDs) among community women in Nigeria emphasize the vital importance of health promotion in achieving the Sustainable Development Goals (SDGs). The ninth international conference in Shanghai highlighted the interconnectedness of health promotion and sustainable development, emphasizing the need for Nigeria to integrate health promotion into its national strategies. By doing so, the government can leverage the potential of health promotion to enhance governance, foster healthy communities, and improve health literacy. Addressing the growing burden of NCDs necessitates a multi-faceted approach that prioritizes the health of women, who play a crucial

role in the health of their families and communities. The management of NCDs requires not only individual commitment to healthy lifestyles but also comprehensive educational initiatives that empower women with knowledge about nutrition and its positive impact on health. By focusing on prevention, we can enhance longevity, reduce healthcare costs, and increase employability, thus contributing to economic growth.

It should be stressed that the success of these preventive strategies hinges on the population's willingness to embrace and act upon the health information provided. It is imperative to integrate health education into the secondary school education (K-12) curricula, emphasizing the distinction between healthy and unhealthy eating and highlighting the short- and long-term health consequences of dietary choices to foster a cultural shift towards better health practices. Early education can cultivate lifelong habits, enhancing compliance with health recommendations and promoting a culture of health. Ultimately, the inclusion of prevention components in healthcare, coupled with robust educational initiatives, represents a strategic opportunity to improve the health and economic well-being of women in Nigeria. By prioritizing these strategies, Nigeria can create a healthier, more resilient society that not only addresses the challenges of NCDs, but also supports the broader goals of sustainable development.

References

- Adeloye D., Basquill C., Aderemi A,V, Thompson J.Y., & Obi, F. A (2015). An estimate of the prevalence of hypertension in Nigeria: a systematic review and meta-analysis. *Journal of Hypertension*; 33(2), 230–42.doi: 10.1097/HJH.0000000000000413.
- Adesina, M.A., Oladele, R.I., Olufadewa, I.I., Onothoja, O.F., Oladipo, D.R., Iyiola, O.P., Ekott, M.B., Nwachukwu, P.C., Baru, A., & Akinloye, S.J. (2021). Addressing the high burden of non-communicable diseases in Nigeria: a commentary, *Journal of Health Research*, 35(5), 457-462. <https://doi.org/10.1108/JHR-02-2020-0039>
- Ahmed I, Ali SM, Amenga-Etego S, Ariff S, Bahl R, Baqui AH, Begum N, Bhandari N, Bhatia K, Bhutta ZA, Biemba G, Deb S, Dhingra U, Dube B, Dutta A, Edmond K, Esamai F, Fawzi W, Ghosh AK, & Zaidi A. (2018) Population-based rates, timing, and causes of maternal deaths, stillbirths,

and neonatal deaths in south Asia and sub-Saharan Africa: a multi-country prospective cohort study. *The Lancet Global Health*.6 (12):e1297–e1308[https://doi.org/10.1016/S2214-109X\(18\)30385-1](https://doi.org/10.1016/S2214-109X(18)30385-1)

Bhattacharya, S., Heidler, P., & Varshney, S. (2023). Incorporating neglected non-communicable diseases into the national health program-A review. *Frontiers in public health*, 10, 1093170. <https://doi.org/10.3389/fpubh.2022.1093170>

Bratman, G.N., Anderson, C.B., Berman, M.G., Cochran, B., de Vries, S., Flanders, J., Folke, C., Frumkin, H., Gross, J.J., Hartig, T., Kahn, P.H. Jr, Kuo, M., Lawler, J.J., Levin, P.S., Lindahl, T., Meyer-Lindenberg, A., Mitchell, R., Ouyang, Z., Roe, J., Scarlett, L., Smith, J.R., van den Bosch, M., Wheeler, B.W., White, M.P., Zheng, H., & Daily, G.C. (2019). Nature and mental health: An ecosystem service perspective. *Science Advance*.;5(7): eaax0903. doi:10.1126/ sciadv.aax0903. PMID: 31355340; PMCID: PMC6656547.

Budreviciute A., Damiati S., Sabir D.K., Onder K., Schuller-Goetzburg P., Plakys G., Katileviciute A., Khoja, S., & Kodzius, R. (2020) Management and Prevention Strategies for Non -communicable Diseases (NCDs) and Their Risk Factors. *Frontier in Public Health*. 26,8:574111.doi: 10.3389/fpubh.2020.574111. PMID: 33324597; PMCID: PMC7726193

- Bukhman, G., Mocumbi, A. O., Atun, R., Becker, A. E., Bhutta, Z., Binagwaho, A., Clinton, C., Coates, M. M., Dain, K., Ezzati, M., Gottlieb, G., Gupta, I., Gupta, N., Hyder, A. A., Jain, Y., Kruk, M. E., Makani, J., Marx, A., Miranda, J. J., & Wroe, E. B. (2020). The lancet NCDI poverty commission: Bridging a gap in universal health coverage for the poorest billion. *The Lancet*, 396(10256), 991-1044. [https://doi.org/10.1016/s0140-6736\(20\)31907-3](https://doi.org/10.1016/s0140-6736(20)31907-3).
- du Toit, M. J., Cilliers, S. S., Dallimer, M., Gaddard, M., Guenatb, S., & Cornelius, S. F. (2018). Urban green infrastructure and ecosystem services in Sub-Saharan Africa: *Landscape and Urban Planning*, 180, 249-261. <https://doi.org/10.1016/j.landurbplan.2018.06.001>
- Ememe, P. I. & Fajimi, B. A. (2024). Rural Women's Resilience to Climate Change in Coastal Communities in Lagos State, Nigeria. *Rivers State University Journal of Education*, 27(1). 1-15. <https://rsujoe.com.ng/index.php/joe/article/view/197>
- Ezeh, A. ,(2016). Addressing planetary health challenges in Africa. *Public Health Reviews* 37, 27 <https://doi.org/10.1186/s40985-016-0046-z>
- Federal Ministry of Health (2019). National Multi-Sectoral Action Plan for the Prevention and Control of Non-communicable Diseases (2019–2025) Abuja, Nigeria. https://arua-ncd.org/wp-content/uploads/2022/10/NCDs_Multisectoral_Action_Plan.pdf

- Fong, K.C., Hart, J.E., & James, P. A (2018). Review of Epidemiologic Studies on Greenness and Health: Updated Literature Through 2017. *Current Environmental Health Reports*; 5(1):77-87. doi: 10.1007/s40572-018-0179-y. PMID: 29392643; PMCID: PMC5878143.
- Gassner, L., Zechmeister-Koss, I., & Reinsperger, I. (2022). National Strategies for preventing and managing non-communicable diseases in selected countries *Frontier in Public Health*.10:838051. doi: 10.3389/fpubh.2022.838051.
- Godfrey, K.M., Reynolds, R.M., Prescott, S.L., Nyirenda, M., Jaddoe, V.W., Eriksson, J.G., & Broekman, B.F. (2017). Influence of maternal obesity on the long-term health of offspring. *The Lancet Diabetes & endocrinology*. 5(1):53-64. doi: 10.1016/S2213-8587(16)30107-3. Epub 2016 Oct 12. PMID: 27743978; PMCID: PMC5245733.
- Goedecke, J.H., Mtintsilana, A., Dlamini, S.N., & Kengne, A.P. (2017). Type 2 diabetes mellitus in African women. *Diabetes Research and Clinical Practice* 123: 87–96.doi: 10.1016/j.diabres.2016.11.017. Epub 2016 Dec 5. PMID: 28006698.
- Institute for Health Metrics and Evaluation (IHME). (2018). Findings from the Global Burden of Disease Study 2017.Seattle, WA https://www.healthdata.org/sites/default/files/files/policy_report/2019/GBD_2017_Booklet_Issuu_2.pdf

International Diabetes Federation IDF (2017). Diabetes Atlas 8th Edition. Country Summary. International Diabetes Federation, Brussels.
<http://www.diabetesatlas.org/resources/2017-atlas.html>

International Diabetes Federation. IDF (2015). Diabetes Atlas. 7th Edition.: International Diabetes Federation Brussels, Belgium.
<http://www.diabetesatlas.org>

Irani, F., Coquoz, E., von Wolff, M., Bitterlich, N., & Stute, P. (2022). Awareness of non-communicable diseases in women: a cross-sectional study. *Archives of gynecology and obstetrics*, 306(3), 801–810.
<https://doi.org/10.1007/s00404-022-06546-9>

Iyer, H.S., Valeri, L., James, P., Chen, J.T., Hart, J.E., Laden, F., Holmes, M.D., & Rebbeck, T.R. (2020). The contribution of residential greenness to mortality among men with prostate cancer: a registry-based cohort study of Black and White men. *Environmental Epidemiology* 9.;4(2):e087.
doi: 10.1097/EE9.0000000000000087.

Jacob, C.M., Killeen, S.L., McAuliffe, F.M., Stephenson, J., Hod, M., Diaz Yamal, I., Malhotra, J, Mocanu, E., McIntyre, H.D., Kihara, A.B., Ma, R.C. Divakar H, Kapur A, Ferriani R, Ng E, Henry L, Van Der Spuy Z, Rosenwaks Z, & Hanson MA (2020) Prevention of non-communicable diseases by interventions in the preconception period: A FIGO position paper for action by healthcare practitioners. *International Journal of Gynecology and*

Obstetrician.;151:6–15. doi: 10.1002/ijgo.13331. PMID: 32894587;
PMCID

Jobarteh, M. (2023). Lower middle-income Africa: Current Path.*African Futures*.<https://futures.issafrika.org/geographic/income-groups/lower-middle-income-africa/>.

Kebede C, Geta T, Ayidiko E, Nigussie G, Bikamo E, Elfios E, Elfios, E & Guye, B (2024) Knowledge level of non -communicable disease and associated factors among high school students in the Wolaita zone, Southern Ethiopia, Southern Ethiopia, 2023. *International Journal of Non communicable Diseases* 9(2):p 51-57,. | DOI: 10.4103/jncd.jncd_99_23

Koch, U., de Falco, A.A., von Greyerz, S., Leutwyler, S., & Abel, B. (2016). Nationale Strategie Prävention nichtübertragbarer Krankheiten (NCD Strategie) 2017–2024: Bundesamt für Gesundheit und Schweizerische Konferenz der kantonalen Gesundheitsdirektorinnen-und – direktoren

Lassi, Z.S., Imam, A.M., Dean, S.V., & Bhutta, Z.A. (2014). Preconception care: screening and management of chronic disease and promoting psychological health. *Reproductive Health.*;11(S3):S5; doi: 10.1186/1742-4755-11-S3-S5. PMID: 25415675; PMCID: PMC4196564.

Mukona, D.M., Munjanja, S.P., Zvinavashe, M., Dodzo, L.G., & Chituku, S (2019). The Subjective Impact of Diabetes in Pregnancy: A Quantitative

Study. *EC Diabetes and Metabolic Research*, 3 (3): 76. 82.

<https://ecronicon.net/assets/ecdmr/pdf/ECDMR-02-00048.pdf>

Oloruntoba, J. A. (2020) Knowledge of the modifiable risk factors of non-communicable diseases among staff of tertiary institutions in Ondo State, Nigeria *International Journal of Medicine, Nursing & Health Sciences* (1), 1 22 -32 <https://www.ijmnhs.com/wp-content/uploads/2020/11/IJMNHS.com-1.1-3-2020->

Olajide, O. E. & Omokhabi, A. A. (2014) Perception, knowledge level and barriers to reproductive health behaviour among community women in Local Government Area (LGAs) of Oyo State, Nigeria. *African Journal of Sustainable Development*. 4.(2): 29-47 <https://www.ajol.info/index.php/ajsd/article/view/107755>.

Orioli, R., Antonucci, C., Scortichini, M., Cerza, F., Marando, F., Ancona, C., Manes, F., Davoli, M., Michelozzi P., Forastiere, F., & Cesaroni, G (2019). Exposure to residential greenness as a predictor of cause-specific mortality and stroke incidence in the Rome Longitudinal Study. *Environmental Health Perspective*. 127(2):27002. doi: 10.1289/EHP2854. PMID: 30775931; PMCID: PMC6752936.

Rojas-Rueda, D., Nieuwenhuijsen, M.J., Gascon, M., Perez-Leon, D., & Mudu, P. (2019). Green spaces and mortality: a systematic review and meta-analysis

of cohort studies. *The Lancet Planetary Health*. (11):e469-e477.
doi:10.1016/S2542-5196(19)30215-3.

Sharma, M. G. & Popli, H. (2023). Challenges for Lower-Middle-Income Countries in Achieving Universal Healthcare: An Indian Perspective. *Cureus*;15(1):e33751. doi: 10.7759/cureus.33751. PMID: 36655151; PMCID: PMC9839153.

Temel, S., van Voorst, S.F., de Jong-Potjer, L.C., Waelput A.J., Cornel, M.C., de Weerd, S.R., Denктаş, S., & Steegers, E.A.(2015). The Dutch national summit on preconception care: a summary of definitions, evidence and recommendations. *Journal of Community Genetics*. 6(1):107–115.
<https://doi.org/10.1007/s12687-014-0204-2>

Teyhen DU, Robbins D, & Ryan BU. (2018) Promoting and sustaining positive personal health behaviors - putting the person first. *Military Medicine*; 183(suppl_3): 213-9. doi: 10.1093/milmed/usy212.

Twohig-Bennett, C., & Jones, A (2018).The health benefits of the great outdoors: A systematic review and meta-analysis of green space exposure and health outcomes. *Environmental Research* 166:628-637.doi:10.1016/j.envres..06.030.

Vineis, P. & Wild, C.P (2014). Global cancer patterns: causes and prevention. *Lancet*. ;383(9916):549-57. doi: 10.1016/S0140-6736(13)62224-2.

United Nations (2015). Transforming our world: the 2030 Agenda for Sustainable Development New York: United Nations; <https://sdgs.un.org/2030agenda>
<https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>

World Bank (2024). *The World Bank in Middle Income Countries*.
<https://www.worldbank.org/en/country/mic/overview>

World Health Organization (2012). Meeting to develop a global consensus on preconception care to reduce maternal and childhood mortality and morbidity: World Health Organization Headquarters, Geneva, 6–7
https://iris.who.int/bitstream/handle/10665/78067/9789241505000_eng.pdf?sequence=1

World Health Organization (2013). Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013–2020: World Health Organization; <https://iris.who.int/handle/10665/94384>

World Health Organization (2017a). Promoting Health: Guide to National Implementation of the Shanghai Declaration; 9th global conference on health promotion
<https://iris.who.int/bitstream/handle/10665/260172/WHO-NMH-PND-18.2-eng.pdf>

- World Health Organization (2017b). Tackling NCDs: best buys and other recommended interventions for the prevention and control of non-communicable diseases. World Health Organization. <https://iris.who.int/handle/10665/259232>. License: CC BY-NC-SA 3.0 IGO
- World Health Organization (2018). Non communicable Diseases Country Profiles 2018 Technical document <https://iris.who.int/handle/10665/274512>. License: CC BY-NC-SA 3.0 IGO
- World Health Organization. (2019a). Non communicable Diseases (NCD). https://www.who.int/gho/ncd/mortality_morbidity/en/
- World Health Organization. (2019b): Global Health Estimates: 2000-2019. Geneva: World Health Organization. 2020 <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates>.
- World Health Organization (2021). What are Non-communicable Diseases? <https://www.euro.who.int/en/health-topics/noncommunicable-diseases/ncd-background-information/what-are-noncommunicable-diseases>
- World Health Organization. (2020) Health Promotion. <https://www.who.int/healthpromotion/fact-sheet/en/>.
- Yaya, S., Reddy, K.S., Belizán, J.M. & Pingray, V. (2020). Non-communicable diseases and reproductive health in sub-Saharan Africa: bridging the

policy-implementation gaps. *Reproductive Health*. 17(1):8.

<https://doi.org/10.1186/s12978-020-0857-8>

Yaya, S., Uthman, O.A., Ekholuenetale, M., & Bishwajit, G. (2018).

Socioeconomic inequalities in the risk factors of non-communicable

diseases among women of reproductive age in sub-saharan Africa: a

multi-country analysis of survey data. *Frontiers in Public Health*.;6:307.

doi: 10.3389/fpubh.2018.00307.PMID: 30406072; PMCID: PMC6207690.