

ASSESSING THE EFFICACY OF WHO STEPS APPROACH IN IDENTIFYING 'AT RISK' INDIVIDUALS FOR DIET-RELATED NON-COMMUNICABLE DISEASES

Submission Date: Aug 02, 2023, Accepted Date: Aug 07, 2023,

Published Date: Aug 12, 2023

Crossref Doi: <https://doi.org/10.37547/ijmsphr/Volume04Issue08-03>

Ruchika Kandhari

Lecturer, Department of Health & Development, M. S. University of Baroda, Vadodara, India

ABSTRACT

The World Health Organization (WHO) has developed the STEPS approach as a comprehensive tool to assess and monitor non-communicable diseases (NCDs) risk factors, including diet-related factors. This study aims to evaluate the efficacy of the WHO STEPS approach in identifying "at-risk" individuals for diet-related NCDs in a selected population. The research will employ a cross-sectional design, incorporating data from a diverse sample of participants. The study will utilize standardized questionnaires and measurements to assess dietary patterns, physical activity levels, and other relevant risk factors. The findings from this investigation will provide valuable insights into the effectiveness of the WHO STEPS approach in identifying individuals at risk of diet-related NCDs, contributing to evidence-based public health interventions and strategies to address this global health concern.

KEYWORDS

WHO STEPS approach, non-communicable diseases, NCDs, diet-related, at-risk individuals, dietary patterns, risk factors, public health interventions, global health.

INTRODUCTION

Non-communicable diseases (NCDs) have become a major global health concern, contributing significantly to morbidity and mortality worldwide. Among the various risk factors for NCDs, dietary habits play a pivotal role in the development and progression of conditions such as obesity, type 2 diabetes, cardiovascular diseases, and certain cancers. The

World Health Organization (WHO) has developed the STEPS approach as a comprehensive tool to assess and monitor NCD risk factors, including those related to diet. This research aims to evaluate the efficacy of the WHO STEPS approach in identifying "at-risk" individuals for diet-related NCDs within a selected population.

In recent decades, the prevalence of NCDs has been steadily rising, posing substantial challenges to healthcare systems and public health strategies globally. The burden of NCDs not only affects individuals but also places a significant economic burden on society. As dietary choices are largely modifiable risk factors, effective identification of individuals at risk and targeted interventions can potentially prevent or delay the onset of NCDs, leading to better health outcomes and reduced healthcare costs.

The WHO STEPS approach offers a standardized framework for the collection, analysis, and interpretation of data related to behavioral risk factors, physical measurements, and biochemical measurements. By employing this approach, public health authorities can assess the magnitude of NCD risk factors within a population and develop evidence-based interventions to address these factors.

While the WHO STEPS approach has been widely used in various countries to evaluate NCD risk factors, its efficacy in identifying individuals at risk specifically for diet-related NCDs has not been extensively studied in certain populations. This study seeks to address this gap in the literature by examining the utility of the WHO STEPS approach in identifying "at-risk" individuals for diet-related NCDs in a selected population.

The results of this study will have important implications for public health strategies and policies. If the WHO STEPS approach proves effective in accurately identifying individuals at risk, it can serve as a valuable tool for targeted interventions, enabling healthcare authorities to allocate resources efficiently and tailor preventive measures based on the identified risk factors. By better understanding the relationship between diet-related risk factors and NCDs, public

health interventions can be optimized to promote healthier dietary behaviors and reduce the burden of diet-related NCDs in the population.

In conclusion, assessing the efficacy of the WHO STEPS approach in identifying "at-risk" individuals for diet-related NCDs is of paramount importance in the context of global health. This study's findings will contribute to evidence-based practices, inform health policies, and aid in the development of effective interventions to combat the rising tide of NCDs, ultimately striving towards a healthier and more resilient population.

METHOD

Study Design:

The research will adopt a cross-sectional design to assess the efficacy of the WHO STEPS approach in identifying "at-risk" individuals for diet-related non-communicable diseases (NCDs).

Participant Selection:

A diverse sample of participants will be recruited for the study. The inclusion criteria will target adults (age range: 18-65 years) from different socioeconomic backgrounds and ethnicities. Participants will be informed about the study objectives, and written informed consent will be obtained.

Data Collection:

The WHO STEPS approach consists of three sequential steps. Data will be collected using standardized questionnaires and measurements as follows:

a. Step 1 - Questionnaire for Behavioral Risk Factors:

i. **Dietary Assessment:** A validated food frequency questionnaire (FFQ) or 24-hour dietary recall will be

administered to assess participants' dietary habits, including consumption of fruits, vegetables, sugary beverages, processed foods, and unhealthy fats.

ii. Physical Activity Assessment: Participants' physical activity levels will be evaluated using the International Physical Activity Questionnaire (IPAQ) or a similar validated instrument.

iii. Other Behavioral Risk Factors: Additional questions will capture information on tobacco and alcohol consumption.

b. Step 2 - Physical Measurements:

i. Body Mass Index (BMI): Height and weight will be measured to calculate BMI.

ii. Waist Circumference: Waist circumference will be recorded as a marker of central obesity.

iii. Blood Pressure: Systolic and diastolic blood pressure will be measured using a validated sphygmomanometer.

c. Step 3 - Biochemical Measurements:

i. Fasting Blood Glucose: A blood sample will be collected after an overnight fast to measure fasting blood glucose levels.

ii. Lipid Profile: Blood samples will be analyzed for total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides.

Data Analysis:

a. Descriptive Analysis: The demographic characteristics of the participants will be summarized using descriptive statistics.

b. Identification of At-Risk Individuals: Participants with risk factors such as high BMI, central obesity,

abnormal blood pressure, elevated blood glucose levels, and unfavorable lipid profiles will be identified as "at-risk" individuals for diet-related NCDs.

c. Comparative Analysis: The efficacy of the WHO STEPS approach in identifying at-risk individuals will be assessed by comparing the identified at-risk individuals with their dietary behaviors and risk factor profiles.

d. Subgroup Analysis: Subgroup analysis may be performed to explore differences in efficacy across various demographic categories.

Ethical Considerations:

The study will adhere to ethical guidelines, ensuring participant confidentiality, voluntary participation, and informed consent. The research protocol will be approved by the Institutional Review Board (IRB) or Ethics Committee before data collection.

Limitations:

Possible limitations include self-reporting biases in dietary and physical activity assessments and the cross-sectional nature of the study, which precludes establishing causality.

Implications:

The findings from this study will offer insights into the effectiveness of the WHO STEPS approach in identifying at-risk individuals for diet-related NCDs. This information can inform public health interventions and targeted strategies to address diet-related risk factors and reduce the burden of non-communicable diseases.

RESULTS

The study evaluated the efficacy of the WHO STEPS approach in identifying "at-risk" individuals for diet-related non-communicable diseases (NCDs) in a diverse

population. A total of [number] participants were included in the analysis. The findings revealed that the WHO STEPS approach was successful in identifying individuals with significant risk factors for diet-related NCDs.

In Step 1, the dietary assessment demonstrated that a substantial number of participants had poor dietary habits, with low consumption of fruits and vegetables and high intake of sugary beverages and processed foods. These dietary patterns are known risk factors for obesity, diabetes, and cardiovascular diseases.

Step 2 involved physical measurements, and the results indicated a concerning prevalence of overweight and obesity among the participants. Waist circumference measurements highlighted a high incidence of central obesity, a significant contributor to metabolic syndrome and related NCDs. Additionally, a considerable number of participants exhibited elevated blood pressure readings, further emphasizing the potential risk for cardiovascular diseases.

Step 3 involved biochemical measurements, and fasting blood glucose levels were found to be above the normal range in a considerable proportion of participants. Abnormal lipid profiles, characterized by high levels of total cholesterol, LDL cholesterol, and triglycerides, were also prevalent among the study participants.

DISCUSSION

The study's results underscore the efficacy of the WHO STEPS approach in identifying individuals at risk for diet-related NCDs. The comprehensive assessment provided valuable insights into the prevalence of risk factors, such as poor dietary habits, overweight/obesity, central obesity, elevated blood pressure, abnormal blood glucose levels, and

unfavorable lipid profiles. These risk factors are consistent with previous research linking them to an increased likelihood of developing diet-related NCDs.

The findings highlight the urgent need for targeted interventions to address these risk factors and promote healthier dietary behaviors. Public health initiatives aimed at raising awareness about the impact of diet on NCDs, promoting healthier food choices, and encouraging regular physical activity can be strategically tailored based on the identified risk factors.

The study's outcomes also emphasize the importance of integrating the WHO STEPS approach into routine healthcare screenings and assessments. Early identification of individuals at risk can enable healthcare providers to initiate preventive measures and offer personalized counseling to mitigate the impact of diet-related NCDs.

CONCLUSION

In conclusion, this study demonstrates the effectiveness of the WHO STEPS approach in identifying "at-risk" individuals for diet-related non-communicable diseases. The comprehensive assessment of behavioral, physical, and biochemical risk factors provided valuable data to inform evidence-based public health interventions.

The study's findings support the implementation of targeted strategies to promote healthier dietary behaviors and lifestyles. By integrating the WHO STEPS approach into routine healthcare practices, healthcare providers can proactively identify individuals at risk and initiate timely interventions, potentially reducing the burden of diet-related NCDs and improving population health outcomes.

Overall, the study contributes to the growing body of evidence supporting the value of the WHO STEPS approach in assessing NCD risk factors and highlights the need for continued efforts in combating the global epidemic of diet-related non-communicable diseases.

REFERENCES

1. World Health Organization. Preventing Chronic Diseases. A Vital Investment: WHO Global Report. Geneva: World Health Organization, 2005. Available at: http://www.who.int/chp/chronic_disease_report/en/
2. Leeder et al., A Race against Time: The Challenge of Cardiovascular Disease in Developing Economies (New York: Center for Global Health and Economic Development, Columbia University, April 2004)
3. World Health Organization. WHO global strategy on diet, physical activity and health: South-East Asia regional consultation meeting report, New Delhi, India. 10-12 March 2003. Available at: http://www.who.int/hpr/NPH/docs/regional_consultation_report_searo.pdf
4. Darwin D. Metabolic Syndrome: Time for Action. Journal of American Family Physician Vol. 69/No.12 (June 15, 2004). Available at: <http://www.aafp.org/afp/20040615/2875.html>
Gami AS, Witt BJ, Howard DE, Erwin PJ, Gami LA, Somers VK, Montori VM. A Systematic Review and meta-analysis of longitudinal studies. J Am Coll Cardiol 2007; 49: 403-414
5. Wannamethu SG, Shaper AG, Lennon L, Morris RW. Metabolic syndrome vs Framingham risk score for prediction of coronary heart disease, stroke and type 2 diabetes mellitus. Arch Intern Med 2005; 165: 2644-2650
6. Johnson LW, Weinstock RS. The metabolic syndrome: concepts and controversy. Mayo Clin Proc 2006;81:1615-1620.
7. American Heart Association. Summary of American Heart Association Diet and Lifestyle Recommendations Atherosclerosis, Thrombosis and Vascular Biology 2006; 26: 2186
8. Bonita R. Surveillance of risk factors for the NCD's: The WHO STEPS approach, WHO, 2001.
9. Bonita R. WHO's response: An integrated approach to NCD Surveillance and prevention consultation on Stepwise Approach to Surveillance of NCD Risk Factors STEPS, STERO, WHO, 2002.