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Protocol for a scoping review of existing policies on the prevention and control of obesity across countries in Africa

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3 **Protocol for a scoping review of existing policies on the prevention and control of**
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5 **obesity across countries in Africa**
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Abstract

Introduction: The obesity epidemic is a public health challenge for all, including low-income countries. The behavioural patterns known to contribute to the rise in obesity prevalence occur in an environmental context which is not conducive for healthy choices. Policy approach to obesity prevention is a form of public intervention in that it extends beyond individuals to influence entire populations and is a mechanism for creating healthier environments. Little is known about obesity prevention policies in Africa. This scoping review seeks to examine the nature, extent and range of policies covering obesity prevention in Africa to evaluate how they align with the WHO Global Strategy on Diet, Physical Activity and Health and the action plans for the prevention and control of noncommunicable diseases. This will help identify gaps in the approaches adopted in Africa.

Methods and Analysis: Using the Arksey and O'Malley's scoping methodological framework as a guide, a comprehensive search of MEDLINE (PubMed), MEDLINE (EbscoHost) CINAHL (EbscoHost), Academic Search Complete (EbscoHost) and ISI Web of Science (Science Citation Index) databases will be done for peer reviewed journal articles related to obesity prevention policies using the African search filter. A grey literature search for policy documents and reports will also be conducted. There will be no language and date restrictions. Full-texts eligible policy documents and reports will be obtained and screened using the inclusion criteria. Data will be extracted and results analysed using descriptive numerical summary analysis and qualitative thematic analysis.

Ethics and dissemination: No primary data will be collected since all data that will be presented in this review are based on published articles and publicly available documents, and therefore ethics is not a requirement. The findings of this systematic review will be

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3 presented at workshops and conferences; and will be submitted for publication in peer-
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5 reviewed journal.
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8 9 **Strengths and limitations of this study**

- 10 • This review approach will provide a broad overview of obesity prevention policies
11 and describe key concepts and issues across Africa.
12
- 13 • Provide information on how these policies align with WHO objectives and guidelines
14 to further inform future policy direction
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- 16 • Some of these policies may not be available as published documents but all efforts
17 will be made to obtain them through key regional and national representatives
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Introduction

Obesity is a major risk factor for the development of many chronic diseases including coronary heart disease, type II diabetes and many cancers.[1] The obesity epidemic is a public health challenge for all, including low-income countries. Although there are many causes, the behavioural patterns known to contribute significantly to the rise in obesity prevalence include increased consumption of energy-dense foods, low consumption of fruits and vegetables, increased sedentary lifestyle and low level of physical activity.[2] These behaviours occur in an environmental context which does not support healthy choices also known as “obesogenic” environment, such as promotion of high density of fast food outlets and restaurants, promoting cheap but energy dense foods and poor urban planning which does not support active transport.[3]

There is the need to create healthy environments as a way to manage the epidemic; policies and regulations are needed to drive the environment and social changes that would have a sustainable impact on controlling obesity. Policy approach to obesity prevention is a form of public intervention in that it extends beyond individuals’ effects to influence entire populations and is a mechanism for creating healthier environments.[4]

In response to the global burden of noncommunicable diseases (NCDs), the WHO in 2004 adopted the Global Strategy on Diet, Physical Activity and Health (DPAS)[1] with an overall goal to “promote and protect health by guiding the development of an enabling environment for sustainable actions at individual, community, national and global levels, that when taken together, will lead to reduced disease and death rates related to unhealthy diet and physical inactivity”. The DPAS calls on Member States to develop and implement national policies

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2
3 and programmes depending on their national circumstances to improve diets and promote
4 physical activity, two major risk factors of obesity. The DPAS, together with Global Strategy
5 for the Prevention and Control of Noncommunicable Diseases[5] and 2008–2013 Action Plan
6 for the Global Strategy for the Prevention and Control of Noncommunicable Diseases[6] are
7 some of the international efforts to control and prevent NCDs.
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14 The role of national governments is seen in providing leadership as a sign of commitment;
15 developing, implementing and monitoring a set of policy instruments that make environments
16 less obesogenic and more health promoting; and securing increased and continuing funding to
17 create healthy environments and encourage physical activity and healthy eating.[7]
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24 There is considerable evidence in support of policy in obesity intervention and this is based
25 largely on studies from high-income countries such as the US, Australia and Europe.[8, 9, 10]
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28 Some of these policy instruments are laws, regulations, taxes, subsidies and social marketing
29 campaigns that are population-based affecting both children and adults and may target
30 different settings such as schools, health institutions and workplaces. Low- and middle-
31 income countries may have distinct cultures and infrastructure that limit generalization of
32 strategies from high-income countries. Moreover, low-income countries may lack the
33 financial resources to implement policies that have shown considerable results in high-
34 income countries. There is also limited information on obesity prevention policies in Africa.
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45 **Objective**

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47 This scoping review seeks to examine the nature, extent and range of policies covering
48 obesity prevention in Africa to evaluate how they align with the WHO DPAS[1] and the
49 action plans for the prevention and control of noncommunicable diseases.[5] This will help
50 identify gaps in the approaches that are adopted in Africa.
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55 **Methods**

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The methods for this review will follow a scoping review methodological framework.[11] This describes a 6-stage approach to the review process, the sixth stage being optional. Unlike systematic reviews which answer specific research questions by collating all empirical evidence with pre-defined eligibility criteria, scoping reviews tend to cover broader topics in the research area of interest to map relevant literature, key concepts and identify research gaps.[11, 12] Scoping reviews have unclear boundaries at the outset; pre-specified eligibility criteria are therefore provisional and may be refined and applied iteratively during the review with emerging knowledge of the existing literature.

Stage 1: Identifying the research questions

Based on the literature and the WHO documents,[1, 5] key research questions were derived (Table 1). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)-Equity 2012 Extension[13] will be used to identify equity-focused question and operational definitions to be addressed in this review.

Table 1: Research questions and operational definitions

Research question
<p>1. Which obesity prevention policies are being addressed in the documents?</p> <ul style="list-style-type: none"> • Marketing and advertising • Consumer information including nutrition labelling • Food taxes and subsidies • Other food policies • Physical activity promotion • Policies that reduce barriers to physical activity • Transport policies • Policies to increase space for recreational activity • Promotion (social media campaigns)
<p>2. Who are the target populations being addressed?</p> <ul style="list-style-type: none"> • Individuals (children, adolescents, adults)

- Family
 - Sub-populations (age groups)
 - Settings (home, schools, health institutions, workplaces)
 - Society (industry, general public)
3. How is equity addressed in the obesity prevention literature?
- Equity is explicitly stated in the objective or in the analysis
 - Population characteristics such as gender and socioeconomic status
4. What are the barriers and/or facilitators to the implementation of these policies?
- Barriers and facilitators as identified by authors
5. Is there evidence of effectiveness of interventions?
- Effectiveness as identified by authors

Inclusion criteria

1. Policy documents, reports and literature produced or published that aim at reducing the risk factors of NCDs, or that form part of larger chronic diseases prevention strategies, or to prevent and control obesity at the national, sub-national and school levels.
2. No language and date restrictions are set.

Exclusion criteria

1. Policies that are being implemented in other countries outside Africa

Stage 2: Identifying relevant studies

Two researchers will independently conduct a comprehensive and broad search of the following electronic databases of peer reviewed journal articles and online search registers related to obesity prevention policies using the African search filter[14]: MEDLINE (PubMed), MEDLINE (EbscoHost) CINAHL (EbscoHost), Academic Search Complete (EbscoHost) and ISI Web of Science (Science Citation Index). Search terms will include keywords developed from Medical Subject Headings (MeSH) and “nutrition”, “food”,

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3 “physical activity” in combination with “policy”, “guideline”, “action plan”, “strategy,”
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5 “regulation”, “law”, relating to “overweight”, “obesity”, “noncommunicable diseases”. Hand-
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7 searching of reference lists of relevant documents, and systematic reviews and meta-analyses
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9 will be done to identify additional studies that will not be captured by the electronic database
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11 search. A grey literature search for unpublished policy documents and reports will be
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13 undertaken from google scholar, relevant websites such as WHO, UNICEF, Ministries of
14
15 Health and Departments of Health in different countries, OPENGREY, African Index
16
17 Medicus (AIM), AFROLIB (WHO Regional Office Database for Africa), workshops and
18
19 conference proceedings. Key persons at the health and education ministries of the countries
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21 will be contacted (at the WHO NCD offices) about existing policy documents and reports and
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23 copies obtained where these are available. A search strategy for PubMed database is attached
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25 (Appendix 1). References will be exported and duplicates removed using a citation
26
27 management software.
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32 33 **Stage 3: Study selection**

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35 Two-step approach will be used to select relevant literature. Two independent researchers
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37 will screen the titles, abstracts and executive summaries. Potentially relevant literature will be
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39 obtained and inclusion and exclusion criteria applied to check the eligibility. Documents that
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41 meet the criteria will be assessed for inclusion in the review. Any disagreement about the
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43 eligibility will be resolved through consensus. Regular discussions will be held by team
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45 members to assess the progress of the process.[12]
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50 51 **Stage 4: Charting the data**

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53 Standardised data charting forms will be developed and used to extract data from included
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55 research. Data will be charted and sorted according to key issues and themes. The data
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57 extraction categories will be derived from the WHO documents.[1, 5] Two researchers will
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3 independently abstract the data and will be compared. The data extracted will include:
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5 geographical location, country, author, year of publication, development of document
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7 (multisectoral and/private sector approach), type of document (national health policy, action
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9 plan, strategic plan, and policy document), target populations (individuals, family, and sub-
10
11 populations), target settings (schools, healthcare institutions and industry),
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13 barriers/facilitators to implementation of policies, evidence of intervention effectiveness, if
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15 available. The listed data may be modified as reviewers become more familiar with the
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17 literature.
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20 21 **Stage 5: Collating, summarising and reporting the results**

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24 This purpose of this scoping review is to examine the nature, extent and range of policies
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26 covering obesity prevention in Africa. Extracted data will be analysed using descriptive
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28 numerical summary analysis and qualitative thematic analysis. The WHO strategy documents
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30 will guide the description and presentation of results.
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33 34 **Conclusion**

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36 This scoping review will provide a broad overview of obesity prevention policies and
37
38 describe key concepts and issues across Africa. This will evaluate how these policies align
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40 with WHO objectives and guidelines to further inform future policy direction. The results
41
42 will help identify gaps in the approaches that are adopted in Africa, provide better
43
44 understanding of the progress made and provide needed support for implementation, and the
45
46 effectiveness of these policy interventions by governments across the continent.
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50 51 **Ethics and dissemination**

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53 No primary data will be collected since all data that will be presented in this review are based
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55 on published articles and publicly available documents and therefore ethics is not a
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57 requirement. The findings of this systematic review will be presented at workshops and
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3 conferences; and will be submitted for publication in peer-reviewed journals. This will also
4
5 form a chapter of a PhD thesis to be submitted to the University of Western Cape
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8 9 **Funding**

10 This study has received no external support and funding.
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12 13 14 **Competing interests**

15 The authors declare no competing interests.
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18 19 **Contributors**

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21
22 APK and TA conceived the review approach. APK provided general guidance to the drafting
23
24 of the protocol. TA drafted the manuscript. APK, TA, ADV and TP reviewed and revised the
25
26 manuscripts. All authors have read and approved the final version of the manuscript.
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32 33 **References**

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Appendices

Table 1. PubMed Search Strategy

Search	Search terms	Hits
1	Weight[tw] OR height[tw] OR BMI[tw] OR BMI z-scores[tw] OR weight loss[tw] OR obesity [tw] OR non*communicable disease* [tw] OR NCD* [tw] OR chronic disease*[tw]	
2	Obesity, Overweight, Noncommunicable disease [MeSH Terms]	
3	Public polic*[tw] OR polic*[tw] OR government regulation*[tw] OR regulatory [tw] OR guideline*[tw] OR laws[tw] OR tax*[tw] OR subsid*[tw] OR strateg*[tw] OR action plan*[tw] OR school program*[tw] OR school* intervention[tw] school* study[tw]	
4	Obesity prevention [tw] OR obesity treatment [tw] OR obesity management[tw] OR health promot*[tw] OR health education[tw] OR physical activit*[tw] OR physical education[tw]	

	OR exerci*[tw] OR fitness[tw] OR nutrition* intervention[tw] OR diet* intervention[tw] OR nutrition polic* OR [tw] school food polic*[tw]	
5	# 1 OR # 2 OR # 3 OR # 4	
6	# 4 AND # 5	
7	(((("Africa"[MeSH] OR Africa*[tw] OR Algeria[tw] OR Angola[tw] OR Benin[tw] OR Botswana[tw] OR "Burkina Faso"[tw] OR Burundi[tw] OR Cameroon[tw] OR "Canary Islands"[tw] OR "Cape Verde"[tw] OR "Central African Republic"[tw] OR Chad[tw] OR Comoros[tw] OR Congo[tw] OR "Democratic Republic of Congo"[tw] OR Djibouti[tw] OR Egypt[tw] OR "Equatorial Guinea"[tw] OR Eritrea[tw] OR Ethiopia[tw] OR Gabon[tw] OR Gambia[tw] OR Ghana[tw] OR Guinea[tw] OR "Guinea Bissau"[tw] OR "Ivory Coast"[tw] OR "Cote d'Ivoire"[tw] OR Jamahiriya[tw] OR Jamahirya[tw] OR Kenya[tw] OR Lesotho[tw] OR Liberia[tw] OR Libya[tw] OR Libia[tw] OR Madagascar[tw] OR Malawi[tw] OR Mali[tw] OR Mauritania[tw] OR Mauritius[tw] OR Mayote[tw] OR Morocco[tw] OR Mozambique[tw] OR Mocambique[tw] OR Namibia[tw] OR Niger[tw] OR Nigeria[tw] OR Principe[tw] OR Reunion[tw] OR Rwanda[tw] OR "Sao Tome"[tw] OR Senegal[tw] OR Seychelles[tw] OR "Sierra Leone"[tw] OR Somalia[tw] OR "South Africa"[tw] OR "St Helena"[tw] OR Sudan[tw] OR Swaziland[tw] OR Tanzania[tw] OR Togo[tw] OR Tunisia[tw] OR Uganda[tw] OR "Western Sahara"[tw] OR Zaire[tw] OR Zambia[tw] OR Zimbabwe[tw]	

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	<p>OR "Central Africa"[tw] OR "Central African"[tw] OR "West Africa"[tw] OR "West African"[tw] OR "Western Africa"[tw] OR "Western African"[tw] OR "East Africa"[tw] OR "East African"[tw] OR "Eastern Africa"[tw] OR "Eastern African"[tw] OR "North Africa"[tw] OR "North African"[tw] OR "Northern Africa"[tw] OR "Northern African"[tw] OR "South African"[tw] OR "Southern Africa"[tw] OR "Southern African"[tw] OR "sub Saharan Africa"[tw] OR "sub Saharan African"[tw] OR "subSaharan Africa"[tw] OR "subSaharan African"[tw]) NOT ("guinea pig"[tw] OR "guinea pigs"[tw] OR "aspergillus niger"[tw])))</p>	
8	<u># 6 AND # 7</u>	

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Abstract

Introduction: The obesity epidemic is a public health challenge for all, including low-income countries. The behavioural patterns known to contribute to the rise in obesity prevalence occur in an environmental context which is not conducive for healthy choices. A policy approach to obesity prevention constitutes a form of public intervention in that it extends beyond individuals to influence entire populations and is a mechanism for creating healthier environments. Little is known about obesity prevention policies in Africa. This scoping review seeks to examine the nature, extent and range of policies covering obesity prevention in Africa in order to assess how they align with international efforts in creating less obesogenic environments. This will help identify gaps in the approaches that are adopted in Africa.

Methods and Analysis: Using the Arksey and O'Malley's scoping methodological framework as a guide, a comprehensive search of MEDLINE (PubMed), MEDLINE (EbscoHost) CINAHL (EbscoHost), Academic Search Complete (EbscoHost) and ISI Web of Science (Science Citation Index) databases will be done for peer reviewed journal articles related to obesity prevention policies using the African search filter. A grey literature search for policy documents and reports will also be conducted. There will be no language and date restrictions. Eligible policy documents and reports will be obtained and screened using the inclusion criteria. Data will be extracted and results analysed using descriptive numerical summary analysis and qualitative thematic analysis.

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Introduction

Obesity/overweight is a major modifiable risk factor for non-communicable diseases (NCDs) including coronary heart disease, type II diabetes and many cancers.[1]. According to the World Health Organisation, nearly 80% of NCD deaths occur in low- and middle-income countries except Africa. Current projections however indicate that by 2020 the largest increases in NCD-related deaths will occur in Africa and by 2030, these deaths are projected to exceed the combined deaths from communicable and nutritional diseases, and maternal and perinatal deaths.[2]

Although there are many causes, the behavioural patterns known to contribute significantly to the rise in obesity prevalence include increased consumption of energy-dense foods, low consumption of fruits and vegetables, increased sedentary lifestyle and low level of physical activity.[3] These behaviours occur in an environmental context which does not support healthy choices also known as “obesogenic” environment, such as promotion of high density of fast food outlets and restaurants, promoting cheap but energy dense foods and poor urban planning which does not support active transport.[4]

There is the need to create healthy environments as a way to manage the epidemic; policies and regulations are needed to drive the environment and social changes that would have a sustainable impact on controlling obesity. A policy approach to obesity prevention constitutes a form of public intervention in that it extends beyond individuals’ effects to influence entire populations and is a mechanism for creating healthier environments.[5]

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4 adopted the Global Strategy on Diet, Physical Activity and Health (DPAS)[1] with an overall
5 goal to “promote and protect health by guiding the development of an enabling environment
6 for sustainable actions at individual, community, national and global levels, that when taken
7 together, will lead to reduced disease and death rates related to unhealthy diet and physical
8 inactivity”. The DPAS calls on Member States to develop and implement national policies
9 and programmes depending on their national circumstances to improve diets and promote
10 physical activity, two major risk factors of obesity. The DPAS, together with Global Strategy
11 for the Prevention and Control of Non-communicable Diseases[6] and 2008–2013 Action
12 Plan for the Global Strategy for the Prevention and Control of Non-communicable
13 Diseases[7] are some of the international efforts to control and prevent NCDs.
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28 The role of national governments is seen in providing leadership as a sign of commitment;
29 developing, implementing and monitoring a set of policy instruments that make environments
30 less obesogenic and more health promoting; and securing increased and continuing funding to
31 create healthy environments and encourage physical activity and healthy eating.[8]
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37 There is considerable evidence in support of policy in obesity intervention and this is based
38 largely on studies from high-income countries such as the US, Australia and Europe.[9, 10,
39 11] Some of these policy instruments are laws, regulations, taxes, subsidies and social
40 marketing campaigns that are population-based affecting both children and adults and may
41 target different settings such as schools, health institutions and workplaces. Low- and middle-
42 income countries may have distinct cultures and infrastructure that limit generalization of
43 strategies from high-income countries. Moreover, low-income countries may lack the
44 financial resources to implement policies that have shown considerable results in high-
45 income countries. There is also limited information on obesity prevention policies in Africa.
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Objective

This scoping review seeks to examine the nature, extent and range of policies covering obesity prevention in Africa in order to assess how they align with international efforts in creating less obesogenic environments. This will help identify gaps in the approaches that are adopted in Africa.

Methods

The methods for this review will follow a scoping review methodological framework.[12] This describes a 6-stage approach to the review process, the sixth stage being optional. Unlike systematic reviews which answer specific research questions by collating all empirical evidence with pre-defined eligibility criteria, scoping reviews tend to cover broader topics in the research area of interest to map relevant literature, key concepts and identify research gaps.[12, 13] Scoping reviews have unclear boundaries at the outset; pre-specified eligibility criteria are therefore provisional and may be refined and applied iteratively during the review with emerging knowledge of the existing literature.

Stage 1: Identifying the research questions

Based on the literature and the WHO documents,[1, 6] key research questions were derived (Table 1). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)-Equity 2012 Extension [14] will be used to identify equity-focused question and operational definitions to be addressed in this review.

Table 1: Research questions and operational definitions

Research question
<p>1. Which obesity prevention policies are being addressed in the documents?</p> <ul style="list-style-type: none"> • Individual-targeted (consumer information and labelling) • Physical environments • Economic environments • Political environments • Sociocultural environments • Promotions or educational campaigns <p>2. Who are the target populations being addressed?</p> <ul style="list-style-type: none"> • Individuals (children, adolescents, adults) • Family • Sub-populations (age groups) • Settings (home, schools, health institutions, workplaces) • Society (industry, general public) <p>3. How is equity addressed in the obesity prevention literature?</p> <ul style="list-style-type: none"> • Equity is explicitly stated in the objective or in the analysis • Population characteristics such as gender and socioeconomic status <p>4. What are the barriers and/or facilitators to the implementation of these policies?</p> <ul style="list-style-type: none"> • Barriers and facilitators as identified by authors <p>5. Is there evidence of effectiveness of interventions?</p> <ul style="list-style-type: none"> • Effectiveness as identified by authors

Inclusion criteria

- 1
- 2
- 3 1. National policy documents, reports and literature produced or published that aim at
- 4 reducing the risk factors of NCDs such as unhealthy diets, physical inactivity,
- 5 overweight and obesity, or that form part of larger chronic diseases prevention
- 6 strategies, or to prevent and control obesity.
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- 12 2. No language and date restrictions are set.
- 13

14 **Exclusion criteria**

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- 17 1. Policies that are being implemented in other countries outside Africa
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20 **Stage 2: Identifying relevant studies**

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22 Two researchers will independently conduct a comprehensive and broad search of the

23 following electronic databases of peer reviewed journal articles and online search registers

24 related to obesity prevention policies using the African search filter[15]: MEDLINE

25 (PubMed), MEDLINE (EbscoHost) CINAHL (EbscoHost), Academic Search Complete

26 (EbscoHost) and ISI Web of Science (Science Citation Index). Search terms will include

27 keywords developed from Medical Subject Headings (MeSH) and “nutrition”, “food”,

28 “physical activity” in combination with “policy”, “guideline”, “action plan”, “strategy,”

29 “regulation”, “law”, relating to “overweight”, “obesity”, “noncommunicable diseases”. Hand-

30 searching of reference lists of relevant documents, and systematic reviews and meta-analyses

31 will be done to identify additional studies that will not be captured by the electronic database

32 search. A grey literature search for unpublished policy documents and reports will be

33 undertaken from google scholar, relevant websites such as WHO, UNICEF, Ministries of

34 Health and Departments of Health in different countries, OPENGREY, African Index

35 Medicus (AIM), AFROLIB (WHO Regional Office Database for Africa), workshops and

36 conference proceedings. Key persons at the health and education ministries of the countries

37 will be contacted (at the WHO NCD offices) about existing policy documents and reports and

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3 copies obtained where these are available. A search strategy for PubMed database is attached
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5 (Appendix 1). References will be exported and duplicates removed using a citation
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7 management software.
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10 **Stage 3: Study selection**

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12 Two-step approach will be used to select relevant literature. Two independent researchers
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14 will screen the titles, abstracts and executive summaries. Potentially relevant literature will be
15
16 obtained and inclusion and exclusion criteria applied to check the eligibility. Documents that
17
18 meet the criteria will be assessed for inclusion in the review. Any disagreement about the
19
20 eligibility will be resolved by a third reviewer. Regular discussions will be held by team
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22 members to assess the progress of the process.[13]
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28 **Stage 4: Charting the data**

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30 Standardised data charting forms will be developed and used to extract data from included
31
32 documents. Data will be charted and sorted according to these key issues and themes. Two
33
34 researchers will independently extract the data and it will be compared. The data extracted
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36 will include: geographical location, country, author, year of publication, development of
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38 document (multisectoral and/private sector approach), type of document (national health
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40 policy, action plan, strategic plan, and policy document), target populations (individuals,
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42 family, and sub-populations), target settings (schools, healthcare institutions and industry),
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44 barriers/facilitators to implementation of policies, evidence of intervention effectiveness, if
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46 available. The listed data may be modified as reviewers become more familiar with the
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48 literature.
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54 **Stage 5: Collating, summarising and reporting the results**

To guide the assessment of the role of these policies in creating less obesogenic environments, the ANGELO (Analysis Grid for Environments Linked to Obesity) Framework [16, 17] will be used to categorise policies into one of four environments: physical (what is available), economic (what are the costs), political (what are the rules) and sociocultural (what are the attitudes and beliefs); and two settings (macro- and micro-). The ANGELO Framework is a common framework for understanding the obesogenicity of the environment. Data will be analysed and presented using descriptive numerical summary analysis and qualitative thematic analysis.

Conclusion

This scoping review will provide a broad overview of obesity prevention policies and describe key concepts and issues across Africa to further inform future policy direction. The results will help identify gaps in the approaches that are adopted in Africa, provide better understanding of the progress made and provide needed support for implementation, and the effectiveness of these policy interventions by governments across the continent.

Ethics and dissemination

No primary data will be collected since all data that will be presented in this review are based on published articles and publicly available documents and therefore ethics is not a requirement. The findings of this systematic review will be presented at workshops and conferences; and will be submitted for publication in peer-reviewed journals. This will also form a chapter of a PhD thesis.

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Competing interests

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3 The authors declare no competing interests.
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6 **Contributors**

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9 APK and TA conceived the review approach. APK provided general guidance to the drafting
10 of the protocol. TA drafted the manuscript. APK, TA, ADV and TP reviewed and revised the
11 manuscripts. All authors have read and approved the final version of the manuscript.
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Appendix: PubMed Search Strategy

Search	Search terms	Hits
1	Weight[tw] OR height[tw] OR BMI[tw] OR BMI z-scores[tw] OR weight loss[tw] OR obesity [tw] OR non*communicable disease* [tw] OR NCD* [tw] OR chronic disease*[tw]	
2	Obesity, Overweight, Noncommunicable disease [MeSH Terms]	
3	Public polic*[tw] OR polic*[tw] OR government regulation*[tw] OR regulatory [tw] OR guideline*[tw] OR laws[tw] OR tax*[tw] OR subsid*[tw] OR strateg*[tw] OR action plan*[tw] OR school program*[tw] OR school* intervention[tw] school* study[tw]	
4	Obesity prevention [tw] OR obesity treatment [tw] OR obesity management[tw] OR health promot*[tw] OR health education[tw] OR physical activit*[tw] OR physical education[tw] OR exerci*[tw] OR fitness[tw] OR nutrition* intervention[tw] OR diet* intervention[tw] OR nutrition polic* OR [tw] school food polic*[tw]	
5	# 1 OR # 2 OR # 3 OR # 4	
6	# 4 AND # 5	
7	(((((("Africa"[MeSH] OR Africa*[tw] OR Algeria[tw] OR Angola[tw] OR Benin[tw] OR Botswana[tw] OR "Burkina Faso"[tw] OR Burundi[tw] OR Cameroon[tw] OR "Canary Islands"[tw] OR "Cape Verde"[tw] OR "Central African Republic"[tw] OR Chad[tw] OR Comoros[tw] OR Congo[tw] OR "Democratic Republic of Congo"[tw] OR Djibouti[tw] OR Egypt[tw] OR "Equatorial Guinea"[tw] OR Eritrea[tw] OR Ethiopia[tw] OR Gabon[tw] OR Gambia[tw] OR Ghana[tw] OR Guinea[tw] OR "Guinea Bissau"[tw] OR "Ivory Coast"[tw] OR "Cote d'Ivoire"[tw] OR Jamahiriya[tw] OR Jamahirya[tw] OR Kenya[tw] OR Lesotho[tw] OR Liberia[tw] OR Libya[tw] OR	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	Libia[tw] OR Madagascar[tw] OR Malawi[tw] OR Mali[tw] OR Mauritania[tw] OR Mauritius[tw] OR Mayote[tw] OR Morocco[tw] OR Mozambique[tw] OR Mocambique[tw] OR Namibia[tw] OR Niger[tw] OR Nigeria[tw] OR Principe[tw] OR Reunion[tw] OR Rwanda[tw] OR "Sao Tome"[tw] OR Senegal[tw] OR Seychelles[tw] OR "Sierra Leone"[tw] OR Somalia[tw] OR "South Africa"[tw] OR "St Helena"[tw] OR Sudan[tw] OR Swaziland[tw] OR Tanzania[tw] OR Togo[tw] OR Tunisia[tw] OR Uganda[tw] OR "Western Sahara"[tw] OR Zaire[tw] OR Zambia[tw] OR Zimbabwe[tw] OR "Central Africa"[tw] OR "Central African"[tw] OR "West Africa"[tw] OR "West African"[tw] OR "Western Africa"[tw] OR "Western African"[tw] OR "East Africa"[tw] OR "East African"[tw] OR "Eastern Africa"[tw] OR "Eastern African"[tw] OR "North Africa"[tw] OR "North African"[tw] OR "Northern Africa"[tw] OR "Northern African"[tw] OR "South African"[tw] OR "Southern Africa"[tw] OR "Southern African"[tw] OR "sub Saharan Africa"[tw] OR "sub Saharan African"[tw] OR "subSaharan Africa"[tw] OR "subSaharan African"[tw]) NOT ("guinea pig"[tw] OR "guinea pigs"[tw] OR "aspergillus niger"[tw])	
41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	8 <u># 6 AND # 7</u>	