

Efforts to Address the Burden of Overweight and Obesity Among Children and Adolescents in Tanzania: Stakeholders' Perspectives on the Available Policies and Strategies

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Received: August 19, 2024

Accepted: March 17, 2025

Published: April 12, 2025

Introduction

Malnutrition affects all ages and accounts for 36% of the global disease burden. The World Health Organization (WHO) developed a plan to help governments address malnutrition through better policies and service delivery. In Tanzania, nearly 500,000 children are overweight or obese, especially among urban adolescent girls. However, the effectiveness of current policies on this issue is unclear. This study aims to explore stakeholders' perspectives on policies addressing childhood obesity and identify priorities for national action.

Methods

This cross-sectional exploratory qualitative study was conducted in Dodoma and Dar es Salaam regions. A purposive sampling technique was employed to select Key Informants. A total of 22 respondents were selected for interviews from within and outside the government sectors. Respondents were selected from among national government officials, representatives of United Nations agencies, academicians from institutions of higher learning, members of civil society organisations, professional associations, and personnel from mass media. A landscape analysis and thematic analysis were employed to analyse the collected data.

Results

The study highlights significant gaps in policies, legislation, and strategies addressing overweight and obesity among children and adolescents. Existing policies are outdated and focus more on being underweight than on being overweight, despite the latter being a major contributor to non-communicable diseases (NCDs). Findings revealed a lack of accessible data, particularly for demographics beyond children and reproductive-age women, and a low level of awareness about the health effects of overweight and obesity. Key challenges included insufficient data systems and the prevalence of unhealthy diets.

Conclusion

The study calls for improved knowledge through interventions targeting all sectors and decision-making levels. It suggests incorporating overweight and obesity control into school curriculums, updating policies to include nutrition labelling, and regulating unhealthy food marketing to children. Creating an enabling environment for healthy food choices and physical activity is also essential. A multi-sectoral approach involving stakeholders is crucial for addressing these issues effectively.

Keywords: *Nutrition, policies, stakeholders, overweight, obesity, children, adolescents, Tanzania*

INTRODUCTION

Malnutrition is a widespread problem around the globe, affecting many in every life stage. from children and adolescents to adults, and contributing to 36% of the global burden of non-communicable diseases (WHO, 2024). Children living with overweight and obesity are more likely to grow up to be overweight or obese in adulthood ((Dinsa et al., 2012); (WHO, 2021)). About 462 million adults are underweight, while 1.9 billion are overweight and obese. Of children aged below age five, 155 million are stunted; 52 million are wasted, 17 million are severely wasted, and 41 million are overweight and obese (WHO, 2024).

Progress toward the global sustainable development goal number 2 requires a joint effort by countries to end hunger and all forms of malnutrition by 2030 (Regional Committee for Africa, 2019). This requires intensified efforts, among others, to reduce undernutrition and focus on reducing obesity and diet-related NCDs (Onyango et al., 2019). To complement these efforts, the World Health Organization (WHO) developed a strategic plan in the fact sheet of 2024 to guide governments and development partners in tackling all forms of malnutrition through strengthened policies, improved service delivery, and better use of data (WHO, 2024).

Furthermore, studying overweight and obesity aligns with the UNDP sustainable development goal, specifically goal 3, which focuses on ensuring healthy lives and promoting well-being for all ages and target 3.2. (UNDP, 2025). Effective obesity prevention and intervention programs done at scale are instrumental in halting the growth of diet-related NCDs ((Kelishadi, 2007); (Wang and Lobstein, 2006)). To tackle overweight and obesity, global actions include restricting unhealthy food marketing to children, regulating school food quality, labelling nutritional information on packages, taxing sugar-sweetened beverages, launching mass media campaigns, providing financial incentives for better food retail environments, and encouraging the food industry reformulation through public-private partnerships. (WHO, 2024). Achieving this overarching goal calls for the government to implement health in-all-policies approaches by ensuring that policies in sectors responsible for education, trade, food, alcohol, and urban development are part of the action on NCDs responses from the health sector.

The food environment is a strong driver of the Double Burden of Malnutrition (DBM); policies and interventions, supported by strong leadership, funding, monitoring systems, standards, and guidelines, are needed to control the consumption of unhealthy foods (FAO, 2017). The policies should restrict the marketing of unhealthy foods to children while encouraging students to be positive change agents. In addition to the promotion of the consumption of healthy diets, countries need to enforce food labelling, restrictions on health claims of products, and reformulation of products to enable consumers to make informed choices (FAO, 2017). Regulations on the nutritional and health quality of foods and

beverages that are promoted for consumption by commercial entities is important to protect consumers in Tanzania. However, the current Multisectoral Nutrition Action Plan (2016-2021) did not indicate targets, and indicators that focused on the prevention of overweight and obesity among children, adolescents and adults. These gaps in implementation can result in the inadequate provision of services and interventions to affect children, adolescents and adults' health outcomes (NMNAP, 2021).

Tanzania is implementing Non-Communicable Diseases Program, Nutrition Assessment, Counseling and Support, and nutrition education to prevent overweight and obesity. Little is known about the available policies implementation on the existing ones and other policies that address overweight and obesity in the country while the number of overweight and obesity among children and adolescents is increasing, therefore the study aimed at exploring the perspectives of stakeholders on policies and strategies addressing overweight and obesity among children and adolescents and identify the priority of actions for the national effort to address overweight and obesity.

METHODS

Study design and context

This study was a cross-sectional exploratory qualitative study conducted in Dodoma and Dar es Salaam cities in Tanzania. Dodoma is the capital city harbouring government headquarters. In contrast, Dar-es-salaam is the region that hosts several implementing partners and business cities with multi-major companies producing unhealthy food products and beverages.

Study population

The study population included a wide range of stakeholders: National government officials, including representatives from the Ministry of Health, The Tanzania Food and Nutrition Center collaborates with representatives from local government and universities that focus on health, food and agriculture, education, trade, media, and treasury. This partnership also involves officials at both sub-national and city levels and various United Nations agencies, including the UN Resident Coordinator, the Food and Agriculture Organization (FAO), and the World Food Programme (WFP). In addition, the collaboration encompasses academicians from institutions of higher learning and Civil Society Organizations, which include non-governmental organisations (NGOs), faith-based organisations (FBOs), and community-based organisations (CBOs). Furthermore, it includes health and professional associations such as the Diabetes Association, registered dietitians, and personnel from the mass media.

Sampling Design and Sample Size

The purposive sampling technique was utilised to select a total of twenty-two key informants from diverse population groups pertinent to this study. The sample included seven government officials, three sub-national and city-level officials, three representatives from United Nations agencies, three academics from institutions of higher learning, one

representative from a civil society organisation, three members from various health and professional organisations, and two from mass media. The distribution of the sample size and population was conducted in accordance with the guidelines for landscape analysis as stipulated by the United Nations International Children's Emergency Fund (UNICEF).

Data collection methods

A key Informant Interview (KII) guide was used with tailored questions based on a pre-determined theme to specific stakeholder was pre-determined-determined themes to specific stakeholders used to collect data from the study population. The interview guide was translated into Kiswahili to enable effective communication with participants who primarily speak Kiswahili, allowing them to fully understand the questions and provide accurate responses in their native language. KII was conducted to key stakeholders involved in national nutrition actions in Tanzania by using the landscape analysis method as a participatory research method for public health scholars interested in identifying and elucidating trends, opportunities, and gaps in the field.

We used this method to understand the environmental and social conditions of primarily under-resourced communities of colour and identify key organising strategies and practices used by community organisers to fight for policy and systems change around childhood health equity issues (UNICEF, 2020). The landscape analysis is a tool that assists in conducting a landscape analysis, the results of which enable UNICEF and partners to provide tailored guidance to government counterparts so that the government is better equipped to develop appropriate policies to tackle childhood overweight and obesity (UNICEF, 2020). The purpose was to identify opportunities and potential points of resistance or bottlenecks in policy development on overweight and obesity among children and adolescents in the country context and include a variety of stakeholders with a range of interests and positions regarding overweight and obesity among children and adolescents (UNICEF, 2020).

The KII complemented information gathered to capture insights related to policies, strategies, and interventions addressing overweight and obesity among children and adolescents that stakeholders believe are crucial for future implementation. This study is part of a larger investigation, which includes a policy analysis component currently under development. A total of 22 informants were selected for interviews, representing a diverse range of individuals both within and outside government sectors (UNICEF, 2020). In addition, senior personnel, including heads of nutrition, prominent academic researchers, and policy directors from Non-Governmental Organizations such as COUNSENUTH and PAAT, as well as representatives from United Nations agencies including the World Health Organization, UNICEF, UN Women, and the Food and Agriculture Organization, were interviewed based on recommendations from UNICEF (UNICEF, 2020).

Prior to the interviews, a two-page summary encapsulating the findings derived from the landscape analysis worksheets

was prepared and distributed to the interviewees in advance. In Phase One, a landscape analysis tool was utilised to assess the policy and programmatic landscape to identify viable policy options addressing overweight and obesity in Tanzania. The policy actions encompassed a range of policies, legislation, and strategic interventions.(UNICEF, 2020). After the interview, the research team summarised insights and recorded the interviewee's stance on specific policy actions as strongly for, strongly against, or neutral. This manuscript focuses on Phase 2, which explores stakeholder perspectives.(UNICEF, 2020).

The KIIs were conducted face-to-face and via phone following COSTECH guidelines during COVID-19. This method was adopted due to restrictions on data collection during the pandemic. Participants included officials from the Prime Minister's Office, Ministry of Finance, Tanzania Bureau of Standards, Ministry of Education, Ministry of Health, Ministry of Trade, Ministry of Agriculture, and various other government ministries. Additionally, representatives from the Physical Activity Association of Tanzania, the Public Health Association, universities, and UN agencies participated, along with personnel from media outlets like Mwananchi and Majira.

We assessed organisations' perspectives on preventing overweight and obesity in Tanzania and identified opportunities and challenges in policy development.

Data management and analysis

KIIs were analysed thematically using an inductive approach with NVIVO software. Interviews were transcribed, translated, and analysed alongside digitised notes. Thematic analysis was used to explore stakeholders' views, including challenges, barriers, and insights from the landscape analysis. Afterwards, the research team summarised the insights, noting whether the interviewees were in favour, against, or neutral regarding specific policy actions. The overall report included positions from various stakeholders, indicating who might support or resist policies and why.

For data, trustworthiness, credibility, dependability, and conformability were ensured through detailed study information, rapport-building with participants, audio recordings, and notes. Feedback from participants helped avoid misinterpretations. Dependability was achieved by adhering to proper data collection and analysis procedures. Transferability was enhanced by describing the study context, selection criteria, and methods, allowing readers to assess the findings' applicability to other contexts.

Ethical issues

This study got ethical clearance from National Institute for Medical Research with number NIMR/HQ/R.8a/Vol.IX/3657. Permission to conduct this study was also obtained from the authorities of the named institutions. We used the TFNC consent form to introduce this study, and all participants agreed to participate and signed the consent forms. Participants also agreed verbally to be recorded before interviewing them. They were assured that their responses would be considered anonymously.

RESULTS

Socio-demographic characteristics of the study participants

A total of 22 participants were involved in this study. The sociodemographic characteristics of the participants are detailed in Table 1. Of the interviewees, 10 (45.6%) were residents of Dodoma, while 12 (54.4%) hailed from Dar es Salaam. Approximately 45.5% of the participants were aged 50 years and older, whereas the lowest representation was in the 25-29 year age group, which constituted 13.6%. The female participants represented 63.4% of the total sample. Regarding educational qualifications, most informants (54.5%) possessed a master's degree, 13.6% held a PhD, 22.7% obtained a first degree, and 9.1% completed a diploma program.

Table 2. Socio-demographic information of Participants

Region	Sex		Age			Level of education			
	ME	FE	25-29	30-49	>49	Diploma	First degree	Master	PhD
Dodoma (10)	4	6	1	5	4	-	3	5	2
Dar es Salaam (12)	4	8	2	4	6	2	2	7	1
Total (22)	8	14	3	9	10	2	5	12	3

This study focused on perspectives regarding gaps in information about overweight and obesity, challenges in addressing these gaps, and opinions on existing evidence. It explored key policies, social behavioural change communications, industry engagement, and priority areas for tackling overweight and obesity. The findings revealed that available knowledge and data on this issue are insufficient, but establishing a non-communicable disease program and demonstrating political will were seen as significant successes in the fight against overweight and obesity.

Availability of information on overweight and obesity

A significant number of participants indicated that data concerning overweight and obesity are not widely accessible or available at the national level. This information is not uniformly disseminated across all demographic groups, as it is primarily available for children and women of reproductive age. Furthermore, the existing data predominantly focuses on undernutrition, including micronutrient deficiencies, while issues related to overweight and obesity remain unaddressed.

".....in fact, the data is not available; if it was available, it would be even heard in the media....." (Participant of KII)

".....The non-communicable diseases program was introduced by the Prime Minister, but in a real sense, there is still a problem since many people are not aware of the available policies in the country. Therefore, the policies should focus on reaching people at the grassroots level in the whole country....." (Participant of KII).

Knowledge about overweight and obesity

The findings revealed that while some individuals are mindful of their weight, most lack awareness about the effects of excessive weight. This lack of awareness was also evident in their understanding of weight monitoring for their young children, particularly in relation to how weight is tracked on growth monitoring cards. The informants shared several insights, highlighting this gap in knowledge during the monitoring process.

"...people do not understand at all" For example, when mother take her child for growth monitoring at the health facility and a child weight is in the white zone, the mother becomes very happy and does not understand" (Participant of KII).

Opportunities for policies and legislation on controlling overweight and obesity

Participants in this study indicated the necessity for implementing policies dedicated to monitoring weight in children and adolescents. While they recognised the existence of policies and strategies to address non-communicable diseases, they advocated for developing specific policies targeting the prevention and management of overweight and obesity. There is a clear call for these policies to be reinforced to improve child growth monitoring, as outlined in the following discussion.

"There have been various guidelines and strategies that aim to reduce weight. There is the national strategy of reducing the non-communicable diseases including overweight, also there is a nutritional guideline and so forth". (Participant of KII)

Challenges for filling the gaps on overweight and obesity

The study revealed that several informants noted the absence of an information system dedicated to the collection and documentation of data pertaining to overweight and obesity across all levels. The findings indicate a prevalent consumption of excessive carbohydrates compared to animal-source foods, a high intake of calorie-dense items, coupled with increasingly sedentary lifestyles affecting all demographic groups. Moreover, an enabling environment is characterised by the availability of highly refined foods, as well as cultural factors that contribute to the issue. There is a notable lack of awareness regarding the effects of overweight and obesity, and individuals generally do not engage in practices that would facilitate an understanding of their nutritional status.

"...There is no system to track or document data on overweight and obesity at any level, which makes addressing the issue more difficult. People are eating too many carbohydrates and calorie-heavy foods while living more sedentary lives. The environment is filled with refined foods, and cultural habits make matters worse. What's concerning is that most people don't even understand the consequences of being overweight or obese, and they don't engage in practices to monitor their nutritional health" (Participant of KII).

Available evidence needed to improve interventions for overweight and obesity

Informants were queried regarding the evidence required to enhance interventions for overweight and obesity. The responses indicated that a robust advocacy effort directed at the public, coupled with political commitment, is essential to effectively address this issue across all sectors. Additionally, several informants reported that evidence indicates a significant prevalence of obesity among many Tanzanians. Notably, individuals in Kilimanjaro, particularly women, exhibit a high incidence of obesity, which serves as one of the critical pieces of evidence. Furthermore, it was noted that in urban areas, there is a lack of proactive measures taken by many individuals to manage overweight and obesity effectively.

"...through observation you can see many Tanzanians are obese. There is a need for interventions in one of the regions like Kilimanjaro. Majority of women are obese. That is evidence. In urban areas you will realize with your naked eyes that many people who are obese are not taking precautions even to do exercise". (Participant of KII)

Key policies on controlling overweight and obesity

Informants were queried regarding the United Nations' recommendations on key policies aimed at addressing overweight and obesity. The feedback indicated that while UN policies are perceived as beneficial, the implementation of these strategies poses significant challenges, with some requiring substantial internal resources. Furthermore, public health interventions—such as promoting an adequate and balanced dietary intake aligned with physiological needs and emphasising the importance of physical activity—are imperative. Additionally, the development of effective policies and strategies should encompass contributions from all relevant sectors and stakeholders.

"....such key policies are expanding sugar tax, restricting marketing of unhealthy food to children, improving labelling to identify unhealthy foods and beverages, strengthening the Code of Marketing of breast milk substitutes, improving school food environment". (Participant of KII)

Promote, intensify or amplify the sugar tax

Some informants in this study expressed support for increasing the sugar tax as a means to address the issues of overweight and obesity. However, a number of informants argued that an increase in the sugar tax may not be the most effective solution, citing that many other foods also contain high levels of sugar, particularly those rich in carbohydrates. Furthermore, the majority of respondents indicated that such an intervention would likely increase the price of sugar, which is already elevated, thereby rendering it unaffordable for many individuals. Conversely, many people rely on sugar as a primary source of energy, especially those with low incomes. It was suggested that in order to effectively address this issue, it is essential to educate the public about the health risks associated with the consumption of sugary foods and beverages, as indicated by the informants below:

"...now when we raise the price of sugar, you want people to quit drinking tea and go back to alcohol, I don't know but

what I want to say is that it is not a very good strategy to implement in preventing overweight and obesity because that is a good step but a big step before someone at high speed will fall down just start with other things that I think would probably be like a campaign, awareness on how sugar relates to weight, obesity" (Participant of KII).

"...some other places have failed because the use of sugar is like absolute need, to increase price probability will remove those people with low-income bracket and those with low income will make them difficult to access the product if the price raise but those who are at risk of obesity and overweight will continue to access sugar let us be careful" (Participant of KII).

"...increasing sugar taxes people with industries will start complaining." (Participant of KII).

Restricting marketing of high-fat, sugar and salt food to children

The findings of this study indicate that restricting the marketing of unhealthy foods, commonly referred to as high-fat, Sugar, and Salt (HFSS) foods, is an effective strategy for addressing overweight and obesity. Participants in the study reported a lack of enforcement mechanisms to regulate such marketing practices. This was identified as a viable and beneficial intervention to combat overweight and obesity among children. Furthermore, it is imperative that the community receives education regarding foods and beverages that lack nutritional value for children.

"...let us educate them on the dangers of using these foods if they decide to use it will be voluntary ". (Participant of KII)

"I think that should be restricted really because once those restrictions are there, then it really helps the children to grow knowing the healthy consumption, but the government also needs to act in terms of providing education and information to consumers". (Participant of KII).

Improving labelling to identify unhealthy foods and beverages

Informants emphasised the importance of clear labelling for unhealthy foods to monitor intake effectively. Most supported proper labelling to help control consumption. They suggested that labels should be easy to understand and visible. While the government has made efforts to mobilise labelling initiatives, public education on the importance of reading food labels is essential for informed choices. Strengthening enforcement of these regulations is also crucial, with a focus on using simple language for community understanding.

"If labels are in French or Arabic, will our people understand them? Participants expressed concerns over age restrictions for certain products. Clear warnings about allergens and health risks are essential, similar to alcohol labeling. Labels must be in the local language to help users identify breast milk substitutes and products needing adult supervision, as many past labels were unclear."(Participant of KII).

Strengthening the code of marketing of breast milk substitutes

During the interview, informants were queried regarding the code of marketing for breast milk substitutes. The informants expressed support for the notion that the implementation of this code has contributed to the regulation of such marketing practices. One informant noted that this initiative has had a measurable impact in Tanzania. However, a significant challenge remains in enhancing this code's monitoring and enforcement mechanisms. The Ministry of Health has made efforts to develop capacity in this area. Nonetheless, informants highlighted that various activities exist to address these concerns effectively.

"it has greatly helped the children of this country" (Participant of KII). "In Tanzania, the Ministry of Health has improved capacity on the use of breast milk substitutes, but enforcement and follow-ups need strengthening" (Participant of KII).

"Previously, these products were limited to pharmacies, but now they're in supermarkets. The marketing code needs a strategic distribution plan. Many working mothers can't exclusively breastfeed despite its benefits, so while these products are necessary, their marketing should be controlled" (Participant of KII).

Improving the school food environment

The majority of respondents expressed support for enhancing the food environment, citing issues related to delays in student arrivals at school and the transition from home. It was noted that some children may remain at school until late hours, which could have negative implications for their well-being. Additionally, it was reported that conflicting policies exist, and certain projects are under teachers' ownership. This situation may present challenges in effectively implementing improvements to the food environment within schools.

"...mhu! I believe it's important to recognize that some children spend long periods in school without food, which can affect them. Therefore, those recommendations are valid." (Participant of KII)

".....The school environment presents challenges. Children need education on healthy foods, and vendors should deliver this message at home. Policies need to be clear; teachers should not allow business within school grounds but promote healthy food standards outside. Additionally, there's a conflict of interest with teacher projects. If children are informed about healthy foods, more teachers might support this idea, but conflicting policies hinder progress." (Participant of KII)

Social behavioral change communication

The informants in this study were queried regarding various aspects of social behavioural change communication, specifically related to the importance of school health and nutrition education, the value of counselling provided through the health system, the influence of social media personalities, government-initiated media campaigns, and

the successes, challenges, and barriers encountered in the implementation of policies and legislation pertaining to overweight and obesity prevention.

Value of school health and nutrition education

The informants identified school health and nutrition education as a highly effective approach. They emphasised that future initiatives should adopt medium- and long-term planning, given that many students lack essential nutrition knowledge. One participant noted:

"If we invest in health education in schools, children will grow up understanding what to do in their daily lives; we produce students who know nothing about nutrition." (Participant of KII)

In terms of counseling through the health system, informants highlighted the pressing need for this program as an immediate solution. Although the existing system may be leveraged, it requires enhancement due to challenges such as insufficient nutritionists available to offer counseling. As one participant articulated:

"Currently, when a doctor encounters a client with a nutritional problem at the health facility, they tend to refer the individual to the nutrition officer." Another stated, "I am uncertain whether health facilities are conducting counseling regarding healthy foods. What I can observe is a lack of coherence in the information provided, even in radio programs, and no one is overseeing this aspect." (Participant of KII)

Role of social media influencers

Informants acknowledged the significant use of social media. However, they expressed concerns regarding the accuracy of nutritional information disseminated through these platforms, which may often be misleading. Some informants perceived social media as beneficial in today's interconnected world, although they emphasised that the effectiveness of the messages depends on the accuracy of the content and the inadequacy of regulation and coordination. As one participant remarked:

"Social media has become akin to a global village; there is substantial activity occurring in Tanzania. Presently, individuals possess access to data through technological means for disseminating messages. However, some media can mislead the community. This exemplifies the opportunities afforded by digitalization, where information is readily accessible." (Participant of KII)

Government-Initiated media campaigns

The informants indicated that government-initiated campaigns serve as an effective platform for reaching a vast audience, as evidenced by the biannual Vitamin A campaigns and the annual Nutrition Day celebrated on 7th August. Despite this effectiveness, it was noted that the duration of these campaigns is limited to one week, which may significantly diminish their overall impact. One participant stated:

“Government campaigns have the potential to reach greater numbers, including individuals unable to access specified locations. These campaigns can extend reach; however, they are conducted over relatively short time periods.” (Participant of KII)

Success in implementing policies and legislation for overweight and obesity prevention

Informants expressed the viewpoint that the absence of policies and legislation addressing overweight and obesity among children and adolescents hinders the assessment of success in this area. As one informant summarized:

“In Tanzania, the availability of policies for preventing overweight and obesity among children and adolescents is limited. I believe insufficient actions have been undertaken, and thus, there has been little impact.” (Participant of KII)

Challenges in implementing policies and legislation of overweight and obesity prevention

Informants indicated that only 54% of available resources, such as nutritionists, are allocated for community nutrition education. They noted opportunities like community health workers and a national multi-sectoral nutrition action plan to guide stakeholders and supportive donors. However, there is an overlap in roles during policy implementation, causing hesitation among implementers due to market concerns. Awareness of overweight and obesity is low, and access to information is limited. It was suggested to utilise local radio and WhatsApp for better outreach, as health food producers frequently use these platforms, according to a UN key informant.

“...the government needs to provide evidence and control measures while collaborating with investors, as their markets are affected. Investors may resist initiatives focused on maternal health and childhood obesity. Information dissemination could utilize WhatsApp, local radios, and other channels. Compared to other challenges, initiatives on obesity remain low, while unhealthy food producers heavily advertise their products” (Participant of KII)

Engagement of Government with industries

Informants in this study noted that the government collaborates effectively with the food industry on food fortification, particularly with iodised salt, and encourages their involvement in producing nutritious foods for the community. However, key stakeholders are not engaged in addressing overweight and obesity issues. While some informants support industry sponsorship, concerns were raised about potential conflicts of interest and the influence of these industries on public health policies aimed at controlling obesity.

Industries are required to produce non-harmful products, particularly under TFDA/TBS regulations. There are penalties for those who do not comply (Participant KII).

Sponsorship is important for product promotion. Companies should engage in campaigns to raise awareness of health issues like obesity (Participant KII).

Engagement with industries must be handled cautiously to avoid conflicts of interest. We cannot accept support from alcohol or soft drink companies, but many might still do so (Participant KII).

DISCUSSION

The findings of this study offer a comprehensive analysis of the strengths, weaknesses, challenges, and proposed priority actions concerning overweight and obesity in Tanzania. Notably, the study highlights critical issues related to the lack of adequate data and information regarding public awareness of overweight and obesity, along with the implications of current policies and legislation aimed at their prevention. Additionally, this research proposes national priority actions that could effectively address the challenges of overweight and obesity in Tanzania.

Information and knowledge of obesity and overweight

This study showed that there is inadequate data/evidence on obesity, and the most available data is on undernutrition more than overweight/obesity. This study also revealed that there is inadequate information on obesity and overweight across all population groups, whereby most of the available information on obesity/overweight is on children, particularly under-five children and women of reproductive age. Our findings are in line with a study done in Nigeria, which it showed that most of the available information (Oyewande *et al.*, 2019). Findings from other studies indicated that response actions from various stakeholders have been at a low pace and have largely overlooked the food environment. It has been focusing on maternal, newborn and, child health (MNCH), the habitual interest in preventive health interventions on undernutrition and food insecurity (Kengne *et al.*, 2017).

Lack of awareness of the effects of obesity/overweight is associated with a high risk of non-communicable diseases (NCD) such as cardiovascular diseases and Diabetes Mellitus. Our study revealed that a large number of individuals are unaware of the effects of obesity/overweight, and few individuals are aware of the effects and take action to control their weight. A study done in Ethiopia also reported a lack of awareness that was associated with a high prevalence of NCDs in the population. Furthermore, the study reveals a high level of inadequate knowledge of NCDs despite its foundational ability to tackle the burden of NCDs (Legesse *et al.*, 2022). Effective obesity prevention and intervention programs done at scale are instrumental in halting the growth of diet-related NCDs ((Kelishadi, 2007); (Wang and Lobstein, 2006)).

The findings highlight a significant gap in the monitoring of weight across the general population, with the absence of structured strategies or policies for tracking weight status. This gap has led to a lack of data that could help inform trends in overweight and obesity across various demographic groups. In response to this issue, one of the proposed interventions is the development of a comprehensive policy that focuses on regular weight monitoring. Such a policy would not only facilitate data collection but also contribute to the identification of trends, which could inform public health

initiatives.

Key policies on control of overweight and obesity

Our findings indicate a lack of policies specifically targeting the prevention of overweight and obesity in the country. While there are existing policies addressing malnutrition, primarily focusing on undernutrition and obesity among children and women of reproductive age, implementation of UN recommendations for controlling overweight and obesity remains a challenge due to limited resources (Thomas-Venugopal et al, 2023). This aligns with studies in Anglophone countries, which highlight regional challenges and recommend collaborative policy solutions among Caribbean nations and community stakeholders. Additionally, policies should consider the needs of at-risk populations and involve all relevant sectors to enhance implementation effectiveness.

This study highlights the significant impact of dietary risk factors, especially the consumption of excess fats, sugars, and salty foods, on rising overweight and obesity rates. The findings are in line with the study conducted in India that, the frequency of consumption of HFSS food among children of both the age group 6-10 years and 11-16 years was significantly high (Bhat et al, 2024). Current policies have proven inadequate in addressing this issue. While increasing taxes on sugar-sweetened beverages (SSBs) is one proposed solution, respondents preferred educational interventions to raise awareness about the harms of sugary foods rather than relying solely on taxes. There is also a strong demand for policies that limit the marketing of unhealthy foods to vulnerable populations, particularly children. The findings suggest that effective policy should encompass both economic measures and broader behavioural changes through education and marketing regulations to reduce unhealthy food consumption and combat obesity across all demographics.

Our study identified a consensus among informants regarding the potential benefits of implementing an increased sugar tax aimed at mitigating issues related to overweight and obesity. Nevertheless, some informants expressed reservations, arguing that raising the sugar tax may not be the most effective solution, as numerous foods with high sugar content, such as those rich in carbohydrates, exist outside of sugary beverages. Taxing sugar-sweetened beverages (SSBs) is on the rise as a viable policy measure for reducing excessive sugar intake, with the World Bank reporting in 2020 that 40 countries have enacted SSB taxes nationwide. Conversely, a significant portion of the population, particularly those with lower incomes, relies on sugar as a fundamental energy source. To address this challenge, it is critical to educate the public on the risks associated with sugary food and beverage consumption while emphasising behavioural change interventions and garnering support at the political level.

A systematic review and meta-analysis conducted in 2019 revealed that such taxes have effectively reduced the volume

of SSB purchases. Furthermore, a review study conducted in Mexico assessing the impact of SSB taxation highlighted increased public awareness regarding the detrimental effects of SSBs and a corresponding decrease in consumption among those informed of these risks. Another systematic review examining the influence of SSB taxation across different socio-economic positions (SEPs) found consistent evidence suggesting that SSB taxes are likely to improve population weight across all SEP groups, with a more significant impact observed among lower SEP groups. These findings substantiate the efficacy of instituting SSB taxation policies, which are anticipated to promote healthier eating behaviours and reduce SSB consumption. The World Health Organization (WHO) has endorsed SSB taxes as part of a comprehensive strategy to prevent and control non-communicable diseases (NCDs). However, contrasting findings from Nakhimovsky et al. (2016) concluded that while taxing SSBs may impede the rising prevalence of obesity, it may not result in sustained weight reduction on a population level. This indicates a need for a combination of programs to effectively address overweight and obesity.

Several informants in this study supported the introduction of taxes on sugar-sweetened beverages (SSBs) as a fiscal policy measure to combat overweight and obesity. The findings are in line with the study conducted by the World Bank (World Bank, 2020). Furthermore, our findings are in line with the quantitative study conducted in Tanzania using a modelling approach in which it compares the reference population, which is unchanged and a counterfactual population in which tax intervention has been introduced and reduced overall energy intake (Chegere et al, 2023). However, concerns were raised that an expansion of the sugar tax could elevate sugar prices and potentially hinder government efforts toward industrial growth. Some informants expressed scepticism about the practicality of implementing such strategies in other contexts. Notably, a substantial number of individuals, particularly those with lower incomes, depend on sugar for energy. To combat this issue, the informants suggested that educating the public on the risks associated with sugary foods and beverages is essential. The promotion of school policies regarding physical education and healthy eating has been identified in other studies as a promising strategy for decreasing the rates of overweight and obesity among school-aged children. This initiative could greatly enhance the health of school children in Tanzania if integrated into policy frameworks, supported by political will, and closely monitored during implementation by relevant authorities.

Furthermore, informants noted that the government collaborates closely with the food industry on initiatives such as food fortification. The findings are in line with the study of Mkambula in low and middle income countries (Osendarp et al, 2018, Mkambula et al, 2020). However, when addressing overweight and obesity, it was noted that key stakeholders are often not sufficiently involved in the decision-making process, which can affect policy implementation. Various industries may exert influence that

undermines policies and legislation aimed at controlling overweight and obesity. These findings are consistent with those reported in Ghana, where insufficient food environment policies and regulations governing the advertising and sale of unhealthy foods necessitate prioritised leadership, monitoring, and evaluation to strengthen policy infrastructure. A study in Kenya by Wanjau similarly underscored the importance of health promotion and the implementation of healthy food environment policies (Wanjau et al, 2021). This indicates that the perspective of companies within the food industry tends to favour unhealthy food options, which contradicts the objectives of various governments. Consequently, it is imperative for responsible government bodies to strengthen regulations regarding the production of unhealthy foods.

IMPLICATION OF THE STUDY

Research findings indicate a significant deficiency of policies, legislation, and strategies addressing overweight and obesity. The study revealed that the existing policies and strategies are often outdated and poorly implemented. It is imperative to embark on comprehensive interventions to tackle these challenges effectively. One critical area of focus should be the reinforcement and integration of overweight and obesity management within the curricula of primary and secondary schools, as current educational programs contain minimal components related to nutrition.

Additionally, there is a pressing need to establish an enabling environment to prevent overweight and obesity through the reassessment of outdated policies that do not address these issues. It is essential to develop new policies, strategies, and legislative measures, such as mandatory front-pack nutrition and menu labelling, as well as regulations governing the marketing of unhealthy food to children, to be enforced by the appropriate authorities.

CONCLUSION

This study has identified significant deficiencies in the availability of policies, legislation, and strategies pertaining to overweight and obesity among children and adolescents. The research highlights that the existing policies and strategies are characterised by weak implementation and are often outdated.

There exists a notable gap in the understanding of overweight and obesity issues. Nevertheless, the country has established strategies to prevent and control NCDs, which are supported by strong political will. It is imperative to bridge the knowledge gap through targeted interventions encompassing all decision-making levels and engaging various sectors of the population. The existing strategies predominantly focus on undernutrition, while the issue of overweight and obesity—an essential factor contributing to NCDs—receives minimal attention.

Interventions should prioritise the reinforcement and integration of overweight and obesity management into the curricula of primary and secondary schools, as the current

educational frameworks contain limited content related to nutrition. Additionally, there is a pressing need to create an enabling environment to prevent overweight and obesity by revising outdated policies that neglect these issues. This includes the development of new policies and strategies, such as mandatory front-pack nutrition labelling and regulations governing the marketing of unhealthy foods to children.

It is also essential to establish food standards for meals provided within schools or in their vicinity. Policies that promote healthy food consumption and lifestyles, including the implementation of taxes on sugar-sweetened beverages (SSBs), should be considered alongside those addressing physical activity and school food policies. The involvement of stakeholders is crucial in the effort to combat overweight and obesity in the country. Emphasis should be placed on multi-sectoral collaboration to address these pressing public health concerns effectively.

STUDY LIMITATIONS

This assessment focused primarily on formal national policies, actions, strategies, and international databases but did not include an analysis of community-based bylaws or local initiatives. While the study provides valuable insights into existing national frameworks, it does not address how and why some policies have or have not been effectively implemented as planned. Furthermore, the study did not explore the public's views and beliefs regarding the causes of overweight and obesity, nor did it assess the community's perceptions of the interventions currently in place to prevent these conditions. To mitigate these limitations, future assessments should incorporate an evaluation of local and community-driven policies, as these often reflect grassroots understanding and responses to health issues. Engaging the public in discussions about overweight and obesity could also offer valuable insights into how interventions are perceived and which strategies are more likely to resonate with different populations. Additionally, examining the barriers to effective policy implementation at both national and local levels would provide a more comprehensive understanding of how to enhance and adapt current strategies for greater impact.

ACKNOWLEDGEMENT

This study was supported by UNICEF with grant number DAR/PR/NUTRITION/2021/TFNC, and we extend our sincere gratitude to the organisation for its financial assistance. Additionally, we acknowledge the informants for their invaluable contribution to the data.

CONFLICT OF INTERESTS

The authors declare that they have no competing interests

AUTHORS' CONTRIBUTIONS

GRM conceptualised the study, collected data, analysed data, took the lead in this study and wrote the first draft of the manuscript. JS conceptualised the study, collected data and participated in reviewing the first draft of the manuscript.

AM conceptualised the study and reviewed the manuscript's first draft. EK reviewed the first draft of the manuscript for revisions, BFS conceptualised the study and reviewed the first draft, and he was the technical advisor in this study. All authors read and approved the manuscript for final submission.

DATA AVAILABILITY

Data supporting this study's findings cannot be shared publicly but are available from the corresponding author on reasonable request.

LIST OF ABBREVIATIONS

CBOs – Community-Based Organizations
COSTECH – Commission of Science and Technology
COUNSENUTH – The Center for Counselling, Nutrition and Health Care
FAO – Food and Agriculture Organization
FBOs – Faith-Based Organizations
NCDs – Non-Communicable Diseases
NMNAP – National Multisectoral Nutrition Action Plan
PAAT – Physical Activity Association of Tanzania
TFNC – Tanzania Food and Nutrition Center
UN – United Nations
UNDP – United Nations Development Programme
UNICEF – United Nations Children's Emergency Fund
WFP – World Food Programme
WHO – World Health Organization

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