

## Plan to design Policies For Science , Technology and innovation in the field of obesity Prevention and control measures in 20 years national vision.

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**Abstract:** Obesity is an epidemic in a century, and developed and developing countries as a major problem in health care is a serious concern. Prevalence of overweight and obesity between the ages of 50 to 70 percent over twenty years In Tehran, 50% were overweight and 15 to 20 percent are obese. Obesity is directly or indirectly more than 10 percent of the cost of a country it covers. Obesity is also directly both through the development of diabetes, heart disease and various cancers are caused by damage to healthy humans. The increasing prevalence of this disease in children and adolescents countries is a serious concern. In most developed countries and some developing countries, the national program for prevention and control of obesity are defined in which to develop strategies and action plans and the role of all governmental agencies and non-governmental organizations also play a role (NGO) families and society are discussed. Of these countries can the U.S. and other countries like Canada, Australia, Europe and the Association of Southeast Asian Nations, cited. In the industrialized world and developing countries like the United States of America, several states, including Ohio, New Jersey, New York, a program designed to prevent obesity and its implementation are being. Survey accomplished only by acting within the scope of national policies and programs to prevent and control obesity, Obesity Disease Control and Prevention's National Center for Disease Control of the Ministry of Health was developed in 1384, but unfortunately has not been applied.

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### Method:

This study is a comparative analysis which documents the study and analysis of upstream science and technology policy, and national policy documents in ten countries, the World Health Organization, Centers for Disease Control and Prevention and the National Institutes of Health in the area of obesity. This study is a comparative analysis which documents the study and analysis of upstream science and technology policy, and national policy documents in ten countries World Health Organization, Centers for Disease Control and Prevention and the National Institutes of Health in the field of obesity, including twenty-six of the original model's Plan And questionnaire design, content validity and reliability of the model obtained by ten experts in the field of science and technology were reviewed.

### Research objectives

#### The main purpose

**The National Plan of mining policy, science, technology and innovation in the field of obesity prevention and control in 1404**

#### Secondary objectives of the study

Secondary objectives of the study are:

- A - Mining index compilation national document
- B - Mining macroeconomic indices of national documents such as vision and mission
- C - Derived indicators to measure national document

D -Extracting performance indicators, monitoring and evaluation of national documents

### Assumptions

A -General of the national document includes general topics such as members of the policy committee, risk maps, and definitions are used in the document.

B -The national instrument of macroeconomic indicators, including vision and mission and goals are.

C -Direction indicator of the direction of national policy and strategy documents is implementation.

D -The index of implementation, monitoring and evaluation of national document contains index performance, how to monitor and evaluate the national document.

### Review of literature:

Obesity is a disorder of the body's physical composition, which increases the relative or absolute amount of body fat is defined, is very common. The prevalence of obesity in all age groups and in most developing countries is increasing. So that the current epidemic of obesity can be as comprehensive in the world, the growth rate is high, that is. At present, the prevalence of obesity in adults in different countries, between 10 to 40 percent. Prevalence of overweight and obesity in Iranian adults, 23% and 40% respectively have been reported. Obesity is a risk of various diseases, including some types of cancer, type 2 diabetes mellitus and cardiovascular disease and increase life expectancy is reduced. (3, 4, 5 and 9)

**According to the Center for Disease Control and Prevention (CDC), obesity in adults by body mass index (BMI) is calculated**

**Overweight: A person who has a BMI equal to or greater than 25 and less than 30 is overweight.**

Obesity is defined as a person who has a BMI equal to or higher than 30. Another definition of overweight and obesity in children and adolescents are either overweight or at risk for overweight is defined. Also, the amount of body fat in boys and girls at different ages. In children and adolescents 2 to 19 years old, overweight and obesity based on BMI for age than is stated. Overweight: a BMI above the 85th percentile and below the 95th percentile, I am Obesity: BMI equal to or above the 95 th percentile.

#### **Complications of Obesity**

Statistics show that every year 6/2 million people worldwide lose their lives due to weight gain or obesity. Obese individuals are at risk for high blood pressure, elevated lipid diseases, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, respiratory disorders, stroke (CVA), heart disorders, stroke (MI), gout and arthritis it caused, osteoarthritis, sleep apnea, certain types of cancer and courier syndrome (with symptoms of obesity, red face and bloodshot, drowsiness and poor breathing) are. Also, diseases that obese patients are suffering more than ordinary people, including hypertension, type 2 diabetes, angina, cardiac arrest and increased costs resulting from the treatment of osteoarthritis is.

#### **Complications of obesity in children and adolescents**

We all know that obesity is a complex, multifaceted health outcomes by genetic, metabolic efficiency, level of physical activity, dietary intake, and psychosocial and environmental factors are affected. Kids in the short and long term complications of the disease Overweight adolescents compared with their peers who have a good weight At higher risk of developing hyperlipidemia, hypertension, insulin resistance and type 2 diabetes are This group of adolescents should be screened for secondary level to include information on family history Blood pressure, cholesterol levels and changes in BMI and weight changes may be referred concerns.

The impact of obesity on stress and mental health problems in children and adolescents

In 1381 a study by Hashemi M, et al (1384) on the phenomenon of anxiety in students of 12 to 18 years were overweight or obese. The study shows.

Between parental employment status and student anxiety score is associated .So that students have a mother or father of the employee or of cultural anxiety levels have lower education levels are more favorable Although many studies have been conducted in Western societies show higher anxiety in obese

adolescents The lack of significant of anxiety in the present study may be because In our society, yet obesity is regarded as a measure of health anxiety and therefore teenagers are overweight Obesity is linked to anxiety, depression and weight gain, but the relationship is not seen. The findings also show that there is a direct relationship between obesity and fear of society.

Obesity is associated with cardiovascular disease in children and adolescents.

Studies in Iran (Tehran Lipid and Glucose Study) shows that in obese adolescents, the mean systolic and diastolic blood pressure, BMI and TG and increases with age Levels of HDL - C and LDL - C and serum cholesterol in individuals older than 12 years increased and then decreased with increasing age. Obese girls at greater risk of increased TG, LDL - C, total cholesterol, systolic and diastolic blood pressure and lower HDL - C compared to the other girls are. Thus we can say that the prevalence of cardiovascular disease risk factors in obese girls increased in Tehran (1, 2, 3 and 4).

#### **The cost of obesity**

The latest Ministry of Health research in the field of measuring the burden of disease in 1382, has been published Indirect costs such as the number of days that a person due to illness or disease relapse or even obesity and heart problems, loses his job. Problems as well as deaths due to obesity is estimated to cost £ 4 billion in one year alone can lead to (5).

In a project entitled LIPGENE, the prevalence of obesity in Europe of 15 member states were examined, the results of this project show, in 2002, in both men and women at least half of the 15 member states of Europe, the prevalence of obesity was higher than 20%. Also this year, the total direct and indirect costs of obesity in the state is estimated at EUR 32800106 (5)

Range in 2007 and the results of the economic impact of obesity as an investigation were conducted. The study examined the costs of obesity. One of the complications of obesity, diabetes. Based on this study, 6% incidence of diabetes is directly related to overweight and obesity. Currently, about 1 billion people worldwide are overweight with 850 million people around the world suffer from weight loss. Estimates based on the survey, 175 million people with diabetes worldwide in 2000 will reach 353 million in 2030 to over 24% in India and China by 2050 this figure will have.

Overweight fees are 3 levels:

1. Individual level, obesity causes a person is restricted in many ways, some of these can be measured.
2. At work, many people look fatter because the cost of insurance, low levels of

functional. The total cost is high, they are not hiring.

- Obesity costs the state and national programs and ... Increases, because the personal cost of illness and unemployment cover individuals (5). Studies by the World Health Organization, the economic costs of

obesity are extracted are shown in the table below (25).

Table 1 shows the estimated economic costs of obesity in the country, according to World Health Organization (25) The following chart spending in Britain for against obesity drugs have been shown (25) (Figure 1).

Table 3.1. Estimated economic costs of obesity according to available studies

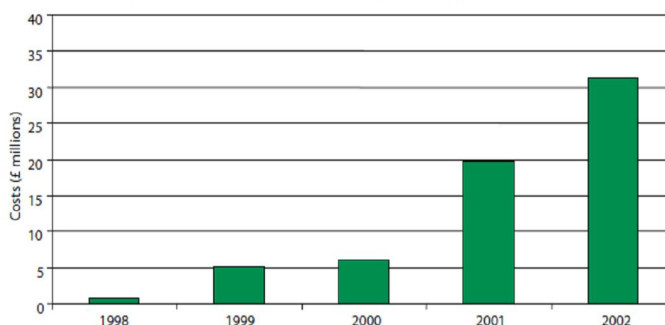
Country (study)	Year of estimate	BMI criterion (kg/m <sup>2</sup> )	Cost			
			Type	Per capita (in US\$ at PPP <sup>a</sup> )	Share of total current expenditure on health (%)	Share of GDP <sup>b</sup> (%)
In the WHO European Region						
Belgium (1)	1999	≥30	Direct	69	3	–
France (range) (2)	1992	≥30	Direct	71–148	0.6–1.3	–
France (3)	1992	≥27	Direct	202	1.8	0.9
Germany (range) (4)	2001	≥30	Direct	17–35	1.2–2.6	0.1–0.3
			Indirect	17–38	–	
Netherlands (5,6)	1993	≥30	Direct	32	1.7	
Sweden (7)	2003	≥30	Direct	45	1.8	0.7
			Indirect	157	–	
Switzerland (4)	2001	≥25	Direct + indirect	186	–	0.6
United Kingdom (England, range) (8)	2002	≥30	Direct	NA <sup>c</sup>	2.3–2.6	
EU (15 countries) (9)	2002	≥30	Direct + indirect	NA	NA	0.3
Outside the WHO European Region						
Australia (range) (10)	1995–1996	≥30	Direct	28–51	1.7–3.2	–
Canada (11)	1997	≥27	Direct	49	2.4	–
Canada (12)	2001	≥30	Direct	41	1.6	0.4
			Indirect	70	–	
Japan (13)	1995–1998	≥30	Direct	55	0.2	–
New Zealand (14)	1991	≥30	Direct	26	NA	–
United States (15)	1994	≥30	Direct	92	2.7	–
United States (16)	1995	≥30	Direct	263	7.3	–
United States (17)	1995	≥29	Direct	194	5.4	–
			Direct + indirect	371	–	1.4
United States (18)	1998	≥25	Direct	285	7.1	–
United States (19)	2000	≥30	Direct	199	4.8	1.2
			Indirect	183	–	

<sup>a</sup> PPP = purchasing power parity. PPP controls for differences in purchasing power, which means that a dollar may have more value in terms of consumption in one country than in another.

<sup>b</sup> When both direct and indirect costs have been calculated in the same study, the total cost as percentage of gross domestic product (GDP) is the sum of both direct and indirect costs.

<sup>c</sup> NA = not available.

Fig 3.1. Costs of prescriptions for anti-obesity drugs in England, 1998–2002



Source: adapted from House of Commons Health Committee (8).

Figure 1 - The cost to purchase the anti-obesity drugs in Britain

## Variables

Twenty-six variables in this study are:

- Code1-Introduction to obesity prevention and control of science and technology policy committee
- Code2-Definitions of terms used in the policy document, the National Science, Technology and Innovation in 1404 to prevent and control obesity.
- Code3-The need for the formulation of national policy document Science, Technology and Innovation in 1404 to prevent and control obesity. Code4- A looks at the current status of overweight and obesity in the country. Code5- A looks at the science, technology and innovation in the field of obesity prevention and control
- Code 6 - the formulation of a national policy document Science, Technology and Innovation in 1404 to prevent and control obesity.
- Code 7 - Audience of the document
- Code 8 - A national perspective on science, technology and innovation in the field of obesity prevention and control in 1404
- Code 9 - The mission of the National System of Science, Technology and Innovation in the area of prevention and control of obesity in 1404
- Code 10 - implications for national development of science, technology and innovation in the field of obesity prevention and control in 1404
- Code 11 - the fundamental values of science, technology and innovation in the field of obesity prevention and control in 1404
- Code 12 - the major goals of science, technology and innovation in the field of obesity prevention and control in 1404
- Code 13 - Development of science and technology innovation system in the constitution to prevent and control obesity.
- Code 14 - for policy-making, management and legislation
- Code 15 - For making the allocation of financial resources, facilitating increased investment
- Code 16 - for the production of knowledge
- Code 17 - for the dissemination and sharing of knowledge produced
- Code 18 - HR Orientation
- Code 19 - directed by facilitating increased production of goods and services
- Code 20 - entrepreneurial orientation

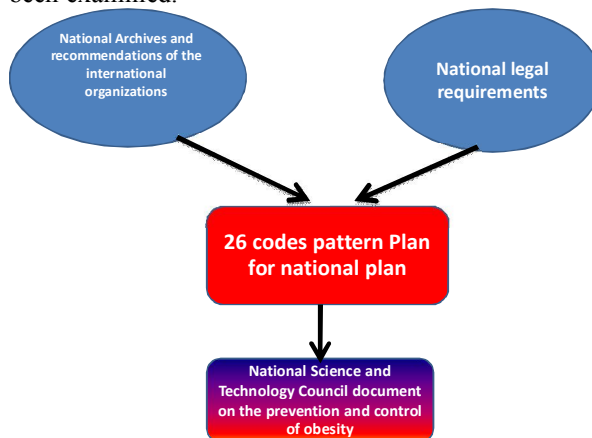
- Code 21 - To promote the norms and culture
- Code 22 - for making connections
- Code 23 - the custodian of the document
- Code 24 - the duties of National Committee of Science and Technology Policy to prevent and control obesity Code

25 - System of Evaluation Code

26 - Graduate Studies

## Analytical framework and research model

This study is a comparative analysis which documents the study and analysis of upstream science and technology policy, and national policy documents in ten countries, the World Health Organization, Centers for Disease Control and National Institutes of Health, Prevention and Control of Obesity. The initial model consists of twenty-six index Plan reached, then questionnaires designed pattern obtained in terms of content validity and its reliability has been examined.



## Methods of research and data analysis

Twenty-six of the code pattern obtained was tested for validity and repeatability. To investigate the validity (validity) of validity (content validity) were used.

## Validity

The purpose of the narrative proper, meaningful and special benefits derived from the tales of an index or scale a model to follow.(30). Content validity (Content validity) The content of the questionnaire by experts as one of the best ways to assess the validity of a measuring instrument. In order to ensure that the content validity of the test content represents structures or structures that can be claimed that the measures, the test content is considered (30). The content validity of an instrument definitions are:

1. Degree of fit index is a tool to measure the structure.

2. Developing indicators in whether a tool for representing content measurements are adequate or not?

To assess content validity, face validity as well, there are two proven methods of qualitative and quantitative.

The content validity of qualitative interviews conducted with a number of experts and asked them to study the exact tool to detail in the views of the experts and their writing. Quantitative methods used in the formula, the validity are calculated. (30) Validity of quantitative

To investigate the validity of the quantitative indicators, the validity (CVR) and the content validity index (CVI) there. CVR index requires an index of statements and CVI, relevance, clarity and relevance of the research to see items experts suggest.

#### **Calculate the relative validity (CVR)**

Calculation of the CVR is to select the most important research content to ensure statistically.

1 - is essential. 2 - It is helpful, but not necessary. 3 - not necessary.

National policy document proposed five indicators of science, technology and innovation in the field of prevention, the overall appeal were:

- Code 5 - A look at the science, technology and innovation in the field of obesity prevention and control
- Code 9 - The mission of the National System of Science, Technology and Innovation in the area of prevention and control of obesity in 1404
- Code 11 - the fundamental values of science, technology and innovation in the field of obesity prevention and control in 1404
- Code 17 - for the dissemination and sharing of knowledge produced
- Code 20 - entrepreneurial orientation
- Eleven indicators that require further explanation or document with minor changes:
- Code 1 - Introduction and Plenipotentiary Representative to the Strategic Committee
- Code 4 - A look at the current status of overweight and obesity in the country.
- Code 6 - the formulation of a national policy document Science, Technology and Innovation in 1404 to prevent and control obesity.
- Code 7 - Audience of the document
- Code 8 - The prospect of a national system of science, technology and innovation in the

field of obesity prevention and control in 1404.

- Code 10 - implications for national development of science, technology and innovation in the field of obesity prevention and control in 1404
- Code 16 - for the production of knowledge
- Code 19 - directed by facilitating increased production of goods and services
  - Code 21 - To promote the norms and culture
- Code 22 - for making connections
- Code 26 - Graduate Studies

#### **Suggestions**

A. Before the implementation of the third stage, the content validity of the model proposed in this paper after changes, once again, by experts from the fields of health management and policy committee members is stipulated in the code of a template.

- B - track the administrative process for the third and fourth stages of the implementation of the National Plan
- First, to identify requirements indisputable, policies twenty-two countries and international organizations in the field of science and technology to prevent and control obesity
- Second stage: the design of national policy document editing paradigm of science, technology and innovation in the field of prevention and control of obesity in the country in 1404
- Second stage: the design of national policy document editing paradigm of science, technology and innovation in the field of prevention and control of obesity in the country in 1404
- Step Four: Review draft document and editing the final document

#### **The results:**

As a result of the 26 indicators presented as a model for a national document, the five index points to the importance of the acquisition were not, and revise. Eleven indicators of relevance, simplicity and clarity of the problem and should be clarification on the model. The two main recommendations from the study include:

- A. Before entering the third phase of the project, patterned after the content validity of the proposed changes in the research By experts from the fields of health management and policy committee members outside of other health indicators included in a model to study.



- B. The first and second stages of this study establish a national document, the document following the third and fourth stages of the National (third stage involves the formation of a panel of executives obesity prevention and control, and develop a draft document and the fourth stage document review and editing of the draft final document) should be performed. Proportion, simplicity and clarity, difficulty and need more explanation about the pattern can be.

#### References:

1. Azizi F, Cardiovascular risk factors in an Iranian urban population: Tehran lipid and glucose study (phase 1), J Cardiovasc Risk. 2003
2. Firoozeh Hosseini-Esfahani, Trends in Risk Factors for Cardiovascular Disease Among Iranian Adolescents: The Tehran Lipid and Glucose Study, 1999–2008, J Epidemiol 2011
3. Farhad Hosseini-panah, Trends of obesity and abdominal obesity in Tehranian adults: a cohort study, BMC Public Health 2009, 9:426
4. [Azizi F](#), Trends in overweight, obesity and central fat accumulation among Tehranian adults between 1998-1999 and 2001-2002: Tehran lipid and glucose study, [Ann Nutr Metab](#), 2005 Jan-Feb;49(1):3-8
5. Good health institute researchers to evaluate the impact of government policies on small and large scale state of obesity, prevention and treatment of obesity research center in order to Endocrinology and Metabolism Research Institute and the Association of obesity prevention and treatment, 1389
6. Parliament, the fifth development plan of the Islamic Republic of Iran, 1389
7. Feyz, Davood, strategic management success in highly competitive markets, Semnan University, 1389
8. Hassan Beigi, E., Strategic Management, The, 1390
9. Farhad Hossein panah, Population attributable risk for diabetes associated with excess weight in Tehranian adults: a population-based cohort study. BMC Public Health 2007, 7:328 doi:10.1186/1471-2458-7-328
10. Ohio obesity prevention plan, Ohio Department of Health, March 2009 CDC's Recommended Strategies for Obesity Prevention, 2009
11. National action plan against obesity, 2009
12. The Asia-Pacific perspective redefining obesity and treatment, WHO, 2000
13. Strategic plan for the prevention of obesity in Nevada, 2006
14. NIH Strategic Plan for Obesity Research *Comments on the Strategic Plan for Obesity Research, Prepared by the Convergence Partnership for the National Institutes of Health*, October 2010
15. Acting on Australia's weight, A strategic plan for the prevention of overweight and obesity, 1997
16. Strategic plan for the prevention of obesity in Texas, 2005-2010
17. Hossain P, Kavar B, El Nahas M. Obesity and diabetes in the developing world--a growing challenge. *N Engl J Med* 2007; 356: pp.213-215
18. Yves Jalbert et Lyne Mongeau, Institut national de santé publique du Québec, Preventing obesity: An overview of programs, action plans, strategies and policies on food and nutritio, 2010
19. Comprehensive map of the country, SCCR, 1389
20. Map of Comprehensive Health, Ministry of Health and Medical Education, Health Policy Council, 1389
21. Health reform plan, the Ministry of Health and Medical Education, Health Policy Council, 1390
22. Doctor celestial and partners, the country Obesity Disease Prevention and Control, Ministry of Health and Medical Education, Department of Health, Center for Disease Control 1384.
23. Document policies for science, technology and innovation vaccine in 1404, the Supreme Council for Science, Research and Technology (Tf), the Commission's health, food security, social welfare, Persian date Bahman 1390
24. The Ohio obesity prevention plan, Ohio Department of Health, 2009
25. The challenge of obesity in the WHO European region, strategies for response, 2007
26. Recommended community strategies and measurements to prevent obesity in the united states, implementation and measurement guide, 2009
27. NIH, strategic plan for obesity research, 2011
28. [Huang TT](#), Trends in childhood obesity research: a brief analysis of NIH-supported efforts, journal of law, medicine & ethics, 2007
29. Devon HA, Block ME, Moyle-Wright P, Ernst DM, Hayden SJ, Lazzara DJ, Savoy SM, Kostas-Polston E. A psychometric toolbox for testing validity and reliability. *J Nurs Sch* 2007; 39(2): 155-164.
30. Cohen J. Statistical power analysis for the behavioral sciences, 2nd ed. Hillsdale, NJ: Erlbaum. 1988.
31. Tepper K, Hoyle R H. Latent variable models of need for uniqueness. *Multivariate Behavioral Research* 1996; 31: 467-494.
32. Bollen KA, Barb KH. Pearson's r and coarsely categorized measures. *Am Social Rev* 1981; 46: 232-239.

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