



الهيئة العامة للإحصاء  
General Authority for Statistics

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## Methodology and Quality Report of Health Determinants Statistics Publication

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V-3.2

Quality Management



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## 1. Contact

1.1. Contact organization	General Authority for Statistics
1.2. Contact organization unit	Health and Education Statistics Department
1.3. Contact person function	Director of Health and Education Statistics Department
1.4. Contact mail address	P.O. Box: 3735 Riyadh, 11481 Kingdom of Saudi Arabia
1.5. Contact email address	<a href="mailto:info@stats.gov.sa">info@stats.gov.sa</a>
1.6. Contact phone number	199009

## 2. Methodology and Quality Update

2.1. Methodology and Quality last update	25/11/2024
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## 3. Statistical Presentation

3.1. Data description
<p>The Health Determinants Statistics Publication presents data on health determinants in Saudi Arabia.</p> <p><b>It is a survey conducted to collect data on the basic characteristics as follows:</b></p> <ul style="list-style-type: none"><li>• Statistics on obesity and overweight rates.</li><li>• Statistics on tobacco consumption and exposure to second-hand smoke.</li></ul>



- Statistics on nutrition.

**Data is also used to estimate:**

- Daily consumption of five or more servings of fruits and vegetables among adults, by gender
- Tobacco use prevalence among individuals aged 15 and older.
- Prevalence of current tobacco use among adolescents aged 13-15.
- Smoking of tobacco products
- Average tobacco consumption per person in grams
- Average number of cigarettes smoked daily.
- Use of electronic cigarettes
- Exposure to second-hand smoke
- Exposure to second-hand smoke at home
- Exposure to second-hand smoke in indoor public places
- Exposure to second-hand smoke in outdoor public places
- Prevalence of current tobacco use among adolescents aged 13-15.
- Population with overweight and obesity (self-reported data)

### 3.2. Classification system

The following classifications are applied in the Health Determinants Statistics Publication.

**The National Classification for Economic Activities (ISIC4):**

It is a statistical classification based on the International Standard Industrial Classification of All Economic Activities (ISIC4) used to describe the productive activities of an establishment.

**Saudi Standard Classification of Occupations (ISCO\_08):**

A statistical classification based on the International Classification (ISCO\_08) that provides a system for the classification and compilation of professional information obtained through censuses, statistical surveys, and administrative records.

This classification is used in the Health Determinants Statistics Publication to categorize individuals based on their occupations.

**Saudi Classification of Specializations and Educational Levels:**

A statistical classification based on the International Standard Classification of Education (ISCED\_11) and (ISCED\_13) for education and training, issued by the United Nations Educational, Scientific and Cultural Organization (UNESCO). It serves as the reference



classification for organizing educational programs and qualifications according to their levels and fields of study. It comprehensively covers all educational programs, levels, and methods, spanning from early childhood education to higher education levels.

This classification is used in the Health Determinants Statistics Publication to categorize individuals aged 15 and older according to their fields of study and levels of education.

**National Code of Countries and Nationalities (ISO 3166- Country codes):**

A statistical classification based on the international standard (ISO 3166\_Country codes), which is a standard issued by the International Organization for Standardization (ISO of the UN), and this classification gives numeric and literal codes for the world's (248) countries, based on the classification of countries.

This classification is used in the Health Determinants Statistics Publication to categorize individuals as Saudi or non-Saudi.

Methodology and Quality is collected through interviews, so that output can be produced in accordance with all relevant classifications.

The classifications are available on the GASTAT's website: [www.stats.gov.sa](http://www.stats.gov.sa)

### 3.3. Sector coverage

Not applicable.

### 3.4. Statistical concepts and definitions

**Concepts and Terminology of Health Determinants Statistics:**

- The health determinants include the following dimensions:

body mass index and weight, tobacco prevalence, vegetable and fruit consumption.

- Second-hand smoke:

It is the inhalation of smoke emitted from a burning cigarette or the smoke that may come from the mouth or nose of another smoking individual.

- Smoked tobacco:

It includes cigarettes, rolling tobacco, bidis, cigars, pipe tobacco, shisha, and electronic cigarettes.



- Smokeless tobacco:

It includes chewing tobacco, snuff, and moist tobacco.

- Self-reporting:

It is a process in which an individual voluntarily provides information about themselves, typically for use in a study, research, or assessment. This information may pertain to their behaviors, opinions, experiences, or health status.

### 3.5. Statistical unit

The statistical unit in the Health Determinants Statistics Publication is the individual.

### 3.6. Statistical population

The statistical population of the Health Determinants Statistics Publication consists of households, whether they are Saudi or non-Saudi, who live in the Kingdom of Saudi Arabia.

### 3.7. Reference area

The Health Determinants Statistics Publication cover 13 administrative regions in the Kingdom of Saudi Arabia, along with 151 governorates affiliated with these regions.

### 3.8. Time coverage

Data is available for 2024.

### 3.9. Base period

The base year used to calculate the indicators is 2023.



## 4. Unit of measure

Most results are measured by numbers (e.g.: The amount of fruit servings consumed on regular days).

## 5. Reference period

**References period to the variables or dataset as following:**

Data is referred to the date of data collection in 26/06/2024.

## 6. Confidentiality

### 6.1. Confidentiality - policy

According to the Royal Decree No. 23 dated 07-12-1397, data must always be kept confidential and must be used by GASTAT only for statistical purposes.

Therefore, the data are protected in the data servers of the Authority.

### 6.2. Confidentiality - data treatment

Data are displayed in appropriate tables to facilitate its summarization, comprehension, results extraction, comparison with other data and coming up with statistical connotations for the study community. It is also easier to check tables without the need to see the original questionnaire, which usually include data like names and addresses of individuals, names of data providers, which violates the confidentiality of statistical data.

“Anonymity of data” is one of the most important procedures. To keep data confidential, GASTAT removed personal information of individuals, households, or business entities in a way that does not allow the identification of the respondent either directly (by name, address, contact number, identity number etc.) or indirectly (by combining different - especially rare - characteristics of respondents: age, occupation, education etc.).



## 7. Release policy

### 7.1. Release calendar

The Health Determinants Statistics Publication has been included in the statistical calendar.

### 7.2. Release calendar access

Available on the: <https://www.stats.gov.sa/statistical-calendar-releases>

### 7.3. User access

One of GASTAT's objectives is to meet its clients' needs, so it immediately provides them with the publication's results once the Health Determinants Statistics Publication is published.

**It also receives questions and inquiries of the clients about the Publication and its results through various communication channels, such as:**

- GASTAT official website: [www.stats.gov.sa](http://www.stats.gov.sa)
- GASTAT official e-mail address: [info@stats.gov.sa](mailto:info@stats.gov.sa)
- Client support e-mail: [info@stats.gov.sa](mailto:info@stats.gov.sa)
- Official visits to GASTAT's official head office in Riyadh or one of its branches in Saudi Arabia.
- Official letters.
- Statistical telephone: (199009).

## 8. Frequency of dissemination

Annual.



## 9. Accessibility and clarity

### 9.1. News release

The announcements of each publication are available on release calendar as mentioned in 7.2. Release calendar access. The news release can be viewed on the website of GASTAT through the following link:

<https://stats.gov.sa/news>

### 9.2. Publications

GASTAT issues the Health Determinants Statistics on a regular basis within a pre-prepared dissemination plan and are published on GASTAT's website. GASTAT is keen to publish its publications in a way that serves all users of different types, including publications in different formats that contain (publication tables, data graphs, indicators, Methodology and Quality Report, and questionnaires) in both English and Arabic.

**The results of the Health Determinants Statistics are available at:**

<https://www.stats.gov.sa/statistics>

### 9.3. On-line database

**The data is published on the statistical database.**

[GASTAT \(stats.gov.sa\)](https://stats.gov.sa)

### 9.4. Micro-data access

Microdata are unit-level datasets derived from surveys, censuses, and administrative records. These datasets provide detailed insights into individuals, households, businesses, and geographic areas, supporting the development of statistical indicators and in-depth research.

**The different types of microdata files to meet different information needs:**

- Public use:



It consists sets of records containing information on individual persons, households, or business entities anonymized in such a way that the respondent cannot be identified either directly (by name, address, contact number, identity number etc.) or indirectly (by combining different - especially rare - characteristics of respondents: age, occupation, education etc.).

- Scientific use:

These files established based on specific methodology asked by data requester to extract the datasets with specific characteristics used for strategic studies and decision making as well scientific research purposes on individuals, households and enterprises with no direct identifiers, which have been subject to control methods to protect confidentiality.

Access to Scientific Use Files (SUF) is restricted to authorized researchers who comply with ethical and confidentiality standards. Representative samples of SUF can be obtained through GASTAT's secure platform, "Etaha," while more sensitive datasets are accessible only through secure physical lab environments managed by GASTAT.

## 9.5. Other

Not available.

## 9.6. Documentation on methodology

### Framework of the health determinants statistics:

The concepts, definitions, issues and classifications are based on internationally approved scientific standards. GSBPM statistical phases were followed starting from determination of needs, design, collection, processing, analysis, publication and finally evaluation. However, the methodology of sampling was as follows:

A set of international methodologies was used to calculate the indicators, which are:

- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the Body Mass Index (BMI) for adults.
- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the prevalence of obesity.
- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the Body Mass Index (BMI) for children aged 0 to 14 years.
- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the prevalence of obesity among children under 15 years old.



- The **WHO** (World Health Organization) methodology was used to calculate the prevalence of tobacco smokers by gender and type of tobacco.
- The **Eurostat** methodology was used to calculate the percentage of individuals who consume fruits during the week, excluding non-fresh juices.
- The **Eurostat** methodology was used to calculate the amount of fruit servings consumed on regular days.

The Methodology and Quality required to describe concepts, the statistical framework, and the allocation and selection of the sample were also identified.

### 9.7. Quality documentation

Quality documentation covers documentation on methods and standards for assessing, measuring, and monitoring the quality of statistical process and output. It is based on standard quality criteria such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, comparability, and coherence.

## 10. Quality management

### 10.1. Quality assurance

GASTAT declares that it considers the following principles: impartiality, user orientated, quality of processes and output, effectiveness of statistical processes, reducing the workload for respondents.

Quality controls and validation of data are actions carried out throughout the process in different stages such as the data input and data collection and other final controls.

### 10.2. Quality assessment

GASTAT performs all statistical activities according to a national model (Generic Statistical Business Process Model - GSBPM). According to the GSBPM, the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. This information is used to prepare the evaluation report which outlines all the quality issues related to the specific statistical activity and serves as input for improvement actions.



## 11. Relevance

### 11.1. User needs

**Internal users in the GASTAT for the Health Determinants Statistics Publication data:**

Social statistics

- Population, gender, and diversity statistics.
- Living conditions, lifestyles, and justice statistics
- Health and education statistics

**Some several external users and beneficiaries greatly benefit from the Research and Development Survey data, including:**

- Government entities.
- Regional and international organizations.
- Research institutions.
- Media.
- Individuals.

**The disseminated key variables used by external users:**

Ministry of Health	Survey variables and indicators.
Ministry of Economy and Planning	
Public Health Authority	
Saudi Health Council	
National Health Information Center	
Health Sector Transformation Program	
Ministry of Sport	Indicators of physical activity.
Quality of Life Program	

### 11.2. User satisfaction

Not available.



### 11.3. Completeness

The data for the Health Determinants Statistics Publication are based on survey data from:

- National Health Survey
- Woman and Child's Health Survey

and complete data

## 12. Accuracy and reliability

### 12.1. Overall accuracy

- The data collected is improved through the researchers, that have been selected according to a set of practical and objective criteria and training program related to the field of work.
- Alert, prevention, and correction rules are applied during the data collection process on the electronic questionnaire for health determinants statistics to improve data quality.
- Data is checked with previous years to identify any significant changes in the data.
- The internal consistency of the data is checked before it is finalized.
- The links between variables are checked and coherence between different data series is confirmed.

## 13. Timeliness and punctuality

### 13.1. Timeliness

GASTAT uses the Special Data Dissemination Standard (SDDS) issued by the International Monetary Fund. According to this Standard, all statistics agencies are required to publish data on an annual basis, and with a delay of not more than mid of year (180 days) after the end of the reference period. If the data are from different sources, they may be published in a different frequency.



## 13.2. Punctuality

Publication takes place in accordance with published release dates for Health Determinants Statistics in GASTAT webpage.

The data are available at the expected time, as scheduled in the statistical release calendar, If the publication is delayed, reasons shall be provided.

## 14. Coherence and comparability

### 14.1. Comparability - geographical

The data is geographically comparable.

### 14.2. Comparability - over time

The Health Determinants Statistics publication started in 2023 as an annual publication.

### 14.3. Coherence- cross domain

Not applicable.

#### 14.3.1. Coherence - sub annual and annual statistics

Not applicable.

#### 14.3.2. Coherence- National Accounts

Not applicable.

### 14.4. Coherence - internal

The Health Determinants Statistics Publication estimates have full internal coherence, as they are all based on the same corpus of microdata, and they are calculated using the same estimation methods.



## 15. Resources used

Description	Total
Total staff (GASTAT's staff, researchers).	2101
Number of unites surveyed.	73544
	79723
Total days of data collection period (end date - start date).	37
Average conducted interviewer per day (during data collection).	6000

## 16. Data revision

### 16.1. Data revision - policy

Not applicable, only final results will be published.

### 16.2. Data revision - practice

Not applicable, only final results will be published.

## 17. Statistical processing

### 17.1. Source data

Health Determinants Statistics are based on the data of the National Health Survey and Woman and Child's Health Survey implemented by GASTAT.

**The disseminated key variables of survey data are:**

- Gender.
- Nationality.
- Administrative region.
- Age groups.



## 17.2. Frequency of data collection

Annual.

## 17.3. Data collection

**Data for the Health Determinants Statistics publication is collected through computer-assisted personal interviews (CAPI) as follows:**

- National Health Survey: A sample consisting of both male and female individuals (Saudi and non-Saudi) aged 15 years and older.
- Woman and Child's Health Survey: A sample consisting of women aged 15 to 49 years old and children under 15 years old in Saudi Arabia.

## 17.4. Data validation

Data are reviewed and matched to ensure their accuracy and precision in a way that suits their nature with the aim of giving the presented statistics quality and accuracy.

The data for the current year's publication are compared with the data of the previous year to ensure their integrity and consistency in preparation for processing data and extracting and reviewing results.

In addition to processing and tabulating the data to verify its accuracy, all outputs are stored and uploaded to the database after being calculated by the General Authority for Statistics. They are then reviewed and processed by specialists in health determinants statistics using modern technologies and software designed for this purpose.

## 17.5. Data compilation

### **Data Coding:**

Interviewers in the health determinants statistics collect from respondents, a detailed description of each field. This information is then coded in-house by an automated process, which is reviewed by a small-dedicated team of coding experts using a series of consistency checks.

### **Data editing:**



Specialists in Health and Education Statistics have processed and analyzed data in this stage, and this step was based on the following measures:

- Sorting and arranging data in groups or different categories in a serial order.
- Summarizing detailed data into key points or data.
- Combining many data segments and ensuring their interconnection.
- Processing incomplete or missing data.
- Processing illogical data.
- Converting data into statistically significant data.
- Arranging, presenting, and interpreting data.

#### **Extrapolation and weighting:**

After processing the data collected from respondents, survey weights were generated to produce indicator tables by following two main steps in creating survey weights:

- Adjustment of non-response.
- Calibration weight

#### **Applied statistical estimation:**

GASTAT has relied on the formulas approved by the international standards in calculating Health Determinants Survey indicators, as follows:

- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the Body Mass Index (BMI) for adults aged 15 and older, categorized by sex and nationality.
- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the prevalence of obesity among adults aged 15 and older, categorized by sex, nationality, and administrative region.
- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the Body Mass Index (BMI) for children aged 0 to 14 years, categorized by sex and nationality.
- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the prevalence of obesity among children under 15 years old, categorized by sex, nationality, and administrative region.
- The **\*\*WHO\*\*** (World Health Organization) methodology was used to calculate the prevalence of tobacco smokers categorized by sex and type of tobacco.
- The **\*\*Eurostat\*\*** methodology was used to calculate the percentage of individuals aged 15 and older who consume fruits during the week, excluding non-fresh juices, categorized by administrative region and sex.



- The **\*\*Eurostat\*\*** methodology was used to calculate the amount of fruit servings consumed on regular days by individuals aged 15 and older, categorized by administrative region and sex.

#### 17.6. Adjustment

Not applicable, only final results will be published.

### 18. Comment