**Documentation of statistics for
Overweight among children 2018**

1 Introduction

The purpose of the statistics Overweight among children is to shed light on geographical differences in overweight among children in Denmark. The statistics are used to compare the prevalence of overweight and obesity among children in different municipality groups. The statistics are newly developed and cover the period from 2012 to 2018. The statistics are comparable throughout the period.

2 Statistical presentation

Overweight among children is an annual measurement of the prevalence of overweight and obesity among children stated in percentage. The statistics are grouped by sex, age, and municipality groups.

2.1 Data description

The statistics contain information on the prevalence of overweight and obesity among children stated in percentage. Besides information on the prevalence of overweight and obesity, the table also contains information on sex, age, and geography.

2.2 Classification system

The statistics use the following groupings and classifications: - Geography is stated in municipality groups and municipalities, cf. the municipality groups classification. - Age is grouped according to whether the children were 6-7 years old or 14-15 years old at the time of measurement. - Gender is stated in boys and girls.

2.3 Sector coverage

The statistics cover the health sector.

2.4 Statistical concepts and definitions

Overweight: a condition where the body's fat mass is too large, which increases the risk of disease and premature death. In practice, the body mass index (BMI) is often used to measure this condition. The body mass index is calculated by BMI = weight/height2 (weight in kg and height in m), where BMI ≥25 is categorized as overweight and BMI ≥30 as obesity (severe overweight). Among children, however, it is better to use the International Obesity Task Force's (IOTF) BMI cutoffs. The IOFT has developed BMI references for children aged 2 to 18 years based on six national data sets from the Netherlands, England, Singapore, Hong Kong, Brazil, and the USA. The BMI cutoffs for overweight and obesity have been found by extrapolating the BMI percentiles corresponding to 25 and 30 kg/m2 at 18 years to BMI percentiles for, respectively, boys and girls down to 2 years of age.

2.5 Statistical unit

The statistics are observed for persons.

2.6 Statistical population

The target population includes 6-7-year-old children and 14-15-year-old young people.

2.7 Reference area

Denmark.

2.8 Time coverage

These statistics cover the time period from 2012-2018.

2.9 Base period

Not relevant for these statistics.

2.10 Unit of measure

Percentage.

2.11 Reference period

The statistics refer to the calendar year.

2.12 Frequency of dissemination

Yearly.

2.13 Legal acts and other agreements

Collection of the information takes place pursuant to the Act on Statistics Denmark, §6. There is no EU regulation for the statistics.

2.14 Cost and burden

These statistics are based on administrative data. There is thus no direct response burden in relation to the compilation of these statistics.

2.15 Comment

Further information can be obtained by contacting Statistics Denmark directly.

3 Statistical processing

Data for these statistics are collected yearly from the National Child Health Register and the population statistics. Collected data are not further validated. Instead, collected data are merged, and the proportion of overweight among 6-7-year-old children and 14-15-year-old young people is calculated separately for boys and girls for each municipality to the final statistical output.

3.1 Source data

Data comes from an internal statistical register and an external administrative register. The population, including the persons' weight status, originates from the National Child Health Register administered by the Danish Health Data Authority, while information on sex, age and geography comes from the population statistics.

3.2 Frequency of data collection

Data are collected yearly.

3.3 Data collection

Data are collected directly from internal administrative registers.

3.4 Data validation

During the data processing, the population's height and weight measurements are manually validated and troubleshot. Among the 6-7-year-old children, it has been chosen to only include observations where the height is 80-179 cm and the weight is 10 kg or more. Likewise, among the 14 -15-year-olds, it has been chosen to only include observations where the height is ≥80 cm and the weight is ≥20 kg.

3.5 Data compilation

The population, including the persons' weight status, sex, and age, is identified from the National Child Health Register and linked with the population statistics' information on the municipality of residence at the time of measurement using the population's deidentified personal identification numbers.

The population only includes children and young people who have had their height and weight measured at school in connection with the statutory introductory schooling and school-leaving examinations since 2012, as it did not become mandatory for the municipalities to report to the National Child Health Register until the end of 2011. Since the introductory schooling examination must take place in the 0th or 1st grade, while the school-leaving examination must take place in the 8th or 9th grade, the population is further limited to children aged 6-7 and young people aged 14-15. For children and young people with several measurements of height and weight, the most recently recorded measurement is used.

Data are grouped in relation to sex, age and geography (municipality group and municipality, cf. the municipality groups classification).

Overweight among children is calculated as the proportion of children within a given group whose BMI is classified as overweight or obese.

Weights are not used.

3.6 Adjustment

No adjustments are made beyond what is already described under Data validation and Data compilation.

4 Relevance

The statistics are relevant for professionals, analysts and other interested parties as a basis for elucidation and in-depth analyses of geographical differences in overweight among children in Denmark.

4.1 User Needs

Users can use the figures to gain insight into geographical differences in overweight among children in Denmark. This can, for example, form the basis for more detailed political and research analyses, journalistic stories, school assignments, etc.

4.2 User Satisfaction

The statistics have been developed based on a workshop with a task group that has given their input on which topics could be relevant to focus on when describing health differences between rural and urban areas. The final choice of health indicators has subsequently been consulted in the task group to ensure that the users of the statistics get what they need and that the statistics are relevant to the users.

4.3 Data completeness rate

Not relevant for these statistics.

5 Accuracy and reliability

The statistics are a good measure of overweight among children. The average coverage is 89 pct. among the 6-7-year-olds and 70 pct. among the 14-15-year-olds. Measurement errors on height and weight are likely, although these are assumed to be due to random misregistrations. The uncertainty increases in line with the level of detail in the statistics. Overall, however, the statistics are reliable, as both the data and methods are of good quality. Revisions are not expected.

5.1 Overall accuracy

The statistics include all children and young people who have had their height and weight measured at school in connection with the statutory introductory schooling and school-leaving examinations and are thus a good measure of overweight among the target population of 6-7-year-old children and 14-15-year-old young people.

However, there is not full coverage among the birth cohorts that should have complete information, and it is important to be aware that the coverage may vary considerably between different birth cohorts and municipalities.

For more detailed information on the accuracy of the source data, please refer to the documentation of the respective statistics.

5.2 Sampling error

Not relevant for these statistics.

5.3 Non-sampling error

The statistics' frame population includes all children and young people who have had their height and weight measured at school in connection with the statutory introductory schooling and school-leaving examinations since 2012. Among the birth cohorts that should have complete information, the average coverage is 89% among the 6-7-year-olds and 70% among the 14-15-year-olds. Previously published reports have not found differences in the characteristics of the children and young people who have had their height and weight measured at school and other children and young people in the same age groups - see, for instance, the analysis [Inequality in child obesity in Denmark](#).

Measurement errors in the population's height and weight are likely. Since the introductory schooling and school-leaving examinations are carried out by a nurse, possibly a school doctor, it is assumed that measurement errors are due to random misregistrations.

There is no non-response.

5.4 Quality management

Statistics Denmark follows the recommendations on organisation and management of quality given in the Code of Practice for European Statistics (CoP) and the implementation guidelines given in the Quality Assurance Framework of the European Statistical System (QAF). A Working Group on Quality and a central quality assurance function have been established to continuously carry through control of products and processes.

5.5 Quality assurance

Statistics Denmark follows the principles in the Code of Practice for European Statistics (CoP) and uses the Quality Assurance Framework of the European Statistical System (QAF) for the implementation of the principles. This involves continuous decentralized and central control of products and processes based on documentation following international standards. The central quality assurance function reports to the Working Group on Quality. Reports include suggestions for improvement that are assessed, decided and subsequently implemented.

5.6 Quality assessment

The source data for the statistics come from the National Child Health Register administered by the Danish Health Data Authority and the population statistics. Detailed descriptions of the quality of the source data can be found in the statistical documentation of these statistics.

Efforts are being made to improve the timeliness of the statistics, as Statistics Denmark currently only has information on overweight among children through 2018. Updated information from the National Child Health Register would improve the timeliness considerably.

These statistics have been developed based on current methods.

5.7 Data revision - policy

Statistics Denmark revises published figures in accordance with the Revision Policy for Statistics Denmark. The common procedures and principles of the Revision Policy are for some statistics supplemented by a specific revision practice.

5.8 Data revision practice

The statistics only publish final figures. Since these are completely new statistics, no revisions have currently been made.

6 Timeliness and punctuality

These statistics are published within 5 years after the end of the reference period. Publications are released on time, as stated in the release calendar.

6.1 Timeliness and time lag - final results

The statistics' average production time is currently 5 years, as information on overweight among children is obtained from the National Child Health Register, from which Statistics Denmark currently only has information through 2018. Efforts are being made to obtain updated information from the National Child Health Register, whereby the average production time can be significantly reduced.

6.2 Punctuality

These statistics are published without delay with reference to the announced time of publication in the release calendar.

7 Comparability

The statistics are newly developed and cover the period from 2012 through 2018. The statistics are comparable throughout the period.

7.1 Comparability - geographical

The statistics are not directly comparable with similar statistics that are published internationally. There are several international estimates of the proportion of overweight among children; e.g. in the publication Health at a Glance 2019: OECD Indicators, the OECD reports the proportion of overweight and obesity among children aged 5-9 for each of the OECD countries. However, the OECD uses the WHO's classification of overweight and obesity, where overweight is defined as a BMI of one standard deviation above the median and obesity as a BMI of two standard deviations above the median of the WHO's weight-for-height standard, while the present statistics are based on the IOFT's classification of overweight and obesity.

7.2 Comparability over time

There have been no changes in the method of assessment or the data composition, so the time series is fully comparable during the period.

7.3 Coherence - cross domain

The statistics are part of a theme about differences between rural and urban areas.

Health differences between rural and urban areas are also highlighted in the statistics Coverage of general practitioners, which measure the number of people per medical capacity by municipality group since 2015, and in the statistics Life expectancy for newborn babies, which measure the average life expectancy for newborn babies by municipality groups and sex since 2006-07.

7.4 Coherence - internal

The internal consistency of the statistics is ensured by first identifying the population, including the persons' weight status, from the National Child Health Register and then merging the population with information about sex, age, and the municipality of residence at the time of measurement from the population statistics.

8 Accessibility and clarity

In the StatBank, these statistics can be found under the subject Consultations of physicians. For further information, go to the subject page.

8.1 Release calendar

The publication date appears in the release calendar. The date is confirmed in the weeks before.

8.3 User access

Statistics are always published at 8:00 a.m. at the day announced in the release calendar. No one outside of Statistics Denmark can access the statistics before they are published.

8.2 Release calendar access

The Release Calender can be accessed on our English website: Release Calender.

8.4 News release

No separate Danish press release is published for these statistics.

8.5 Publications

The statistics are based on the same data as used in the analysis Inequality in child obesity in Denmark.

8.6 On-line database

The statistics are published in the StatBank in the following tables: - LABY26: Overweight among children by municipality groups, sex and age.

8.7 Micro-data access

There is no access to the microdata of the statistics.

8.8 Other

The statistics are not available elsewhere.

8.9 Confidentiality - policy

Data Confidentiality Policy for Statistics Denmark is applied.

8.10 Confidentiality - data treatment

The statistics are published on an aggregated level, which ensures that individuals cannot be identified. Furthermore, confidentiality is applied so that there are never less than three observations in the table's data cells.

8.11 Documentation on methodology

There are no separate method descriptions for these statistics.

8.12 Quality documentation

Results from the quality evaluation of products and selected processes are available in detail for each statistics and in summary reports for the Working Group on Quality.

9 Contact

The administrative placement of these statistics is in the division of Personal Finances and Welfare. The contact person is , tel.: , and e-mail: .