

Helsinki

PUHTI report

– Management of health and well-being promotion through information outside the service system

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Statistics
2025:1

Partnership for
Healthy Cities

Bloomberg
Philanthropies

 Vital
Strategies

What is PUHTI?

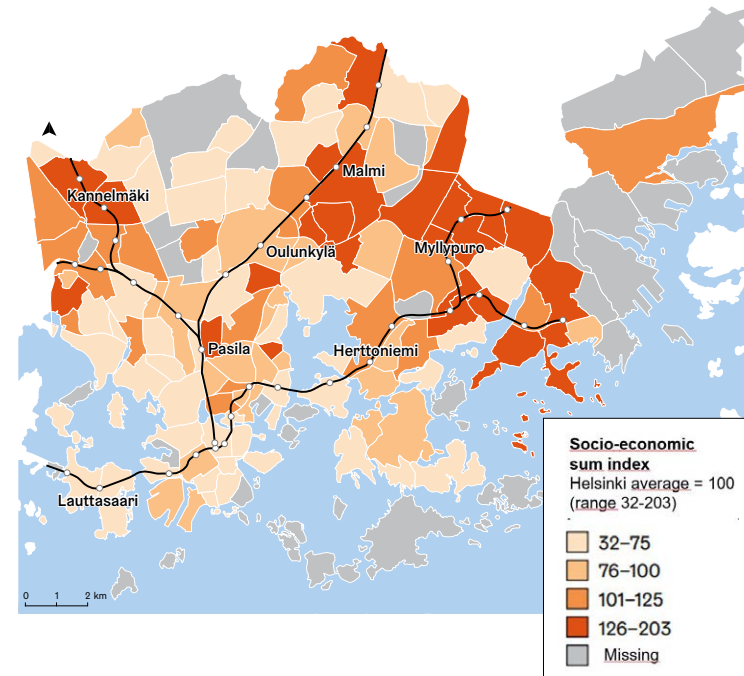
- PUHTI, i.e. information outside the service system, is a project implemented by the Finnish Institute for Health and Welfare THL, in which information accumulating outside the service system is produced for the use of health and well-being promotion.
- The aim of the project is to:
 - explore the potential of using new sources of information for the promotion of health and well-being
 - receive up-to-date information on the well-being of the population according to location
 - supplement the knowledge generated by the service system, surveys and studies.
- At the end of 2024, the PUHTI desktop contained area-specific information on participation in sports clubs, payment defaults and grocery sales.
- For more information about the PUHTI project, go to [THL website](#).

Funding of the PUHTI project in Helsinki

- The City of Helsinki's PUHTI project is supported by Partnership for Healthy Cities, a global network of 74 cities committed to preventing non-communicable diseases—such as heart disease, cancer, diabetes—and injuries, among their residents.
- The City of Helsinki was invited to join the Partnership for Healthy Cities network in 2019. Supported by Bloomberg Philanthropies in partnership with the World Health Organization and global health organization Vital Strategies, the initiative enables cities around the world to deliver a high-impact policy or programmatic intervention to reduce NCDs and injuries in their communities.
- The City of Helsinki's own goal in this cooperation project has been to utilise new sources of information from the perspective of promoting health and well-being, as well as to obtain up-to-date information on the health and well-being challenges of the population according to location. The PUHTI data, together with other data of the City of Helsinki, enable the investigation of areal segregation on an even broader knowledge base. This report is the final report of the City of Helsinki's own goal.
- The main implementer of the project on behalf of the City of Helsinki was the Urban Research and Statistics Unit of the City Executive Office's Strategy Department and its senior specialist, Docent Tommi Sulander.

What is included in this report?

- This report looks at some PUHTI data by the area's socio-economic status. The results are also presented by comparing the extremes of postal code areas.
- A socio-economic sum index (SES index) has been calculated for all of Helsinki's postal code areas. The index is formed from the share of the area's unemployment rate, people with only basic education and lowest income quintiles, investigated in proportion to the city average (Helsinki = 100). Postal codes are arranged in order of values and then divided into five categories. The SES 1 category thus refers to those postal codes in Helsinki that have the best score according to the SES index. Correspondingly, the SES 5 category refers to those postal codes in Helsinki that have the worst score according to the SES index. Each of the five categories includes 16–17 postal code areas.
- This report looks at the following PUHTI data according to the SES index: 1. Participation of children and young people in sports clubs 2. Physical functioning of children and young people according to Move! measurements 3. Daily consumption of vegetables and fruits 4. Tobacco purchases 5. Purchases of alcohol at a grocery store 6. Payment default entries.
- In addition to the PUHTI results, the report also highlights, where applicable, the results of other studies or surveys related to the phenomenon, which broaden the picture of the well-being of Helsinki residents.
- The materials used in this report are described in more detail in the list of references at the end of the report.



Map 1. Value of the socio-economic sum index in Helsinki's areas in 2021

Sources of data: Statistics Finland / Register of Completed Education and Degrees, Statistics Finland / Employment statistics) (the presentation of the map can be viewed from the model's HYTE-barometer on page 11: https://www.hel.fi/static/kanslia/Kaupunkitieto/24_05_21_Tilastoja_3.pdf

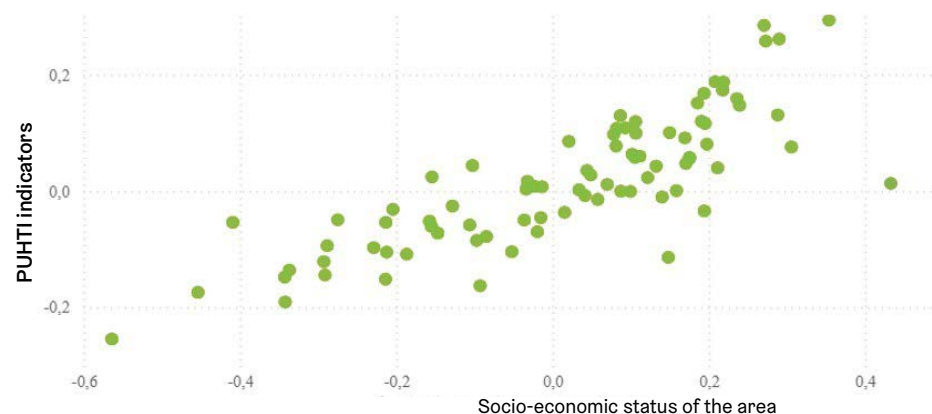


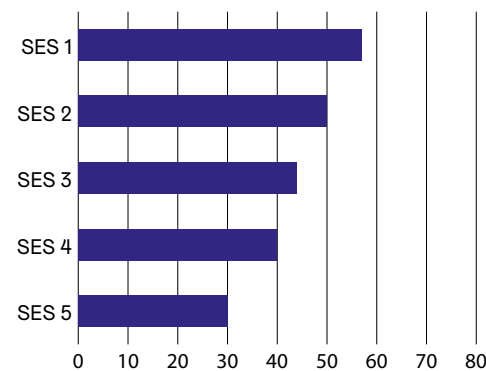
Figure 1. Correlation between PUHTI indicators and the socio-economic sum index in Helsinki's postal code areas

These have a strong connection according to the comparison of the SES index and the index calculated on the basis of the PUHTI data. The higher the socio-economic status of the area, the better the situation is with regard to the PUHTI data. Despite this, it can be seen from the figure that there may be quite large differences between some postal code areas according to socio-economic status, but in the light of Puhti data, these areas appear similar. This also applies the other way around.

1. Participation of children and young people in sports clubs

The participation of children and young people in sports clubs is clearly differentiated by the socio-economic status of the area. In residential areas with a high socio-economic status, participation in sports clubs is more common than in residential areas with a low socio-economic status.

Figure 2. Proportion of people aged 7–12 years participating in sports clubs by SES index in Helsinki in 2023 (%)



Data source: Olympic Committee/Suomisport, sports federations (Football Association of Finland, Finnish Golf Association, Basketball Finland, Finnish Figure Skating Association and Finnish Gymnastics Federation) and The Guides and Scouts of Finland



The most common sports club activities among Helsinki residents aged 7–15 years are:



Football

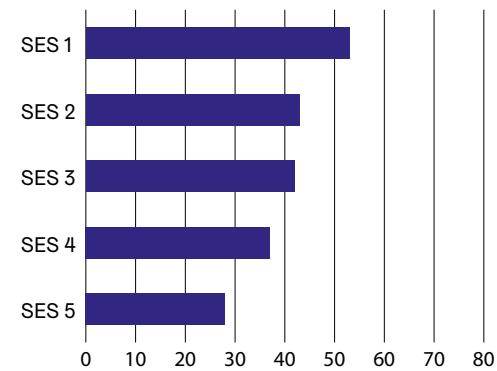


Scouts



Basketball

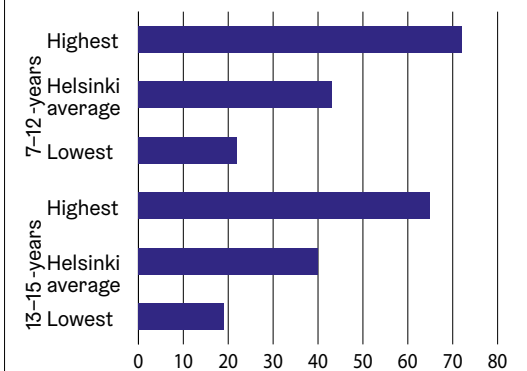
Figure 3. Proportion of people aged 13–15 years participating in sports clubs by SES index in Helsinki in 2023 (%)



Data source: Olympic Committee/Suomisport, sports federations (Football Association of Finland, Finnish Golf Association, Basketball Finland, Finnish Figure Skating Association and Finnish Gymnastics Federation) and The Guides and Scouts of Finland

A large proportion of comprehensive school-age children in Helsinki participate in sports clubs. Participation in sports clubs is more likely among people of Finnish background than among people of foreign background, and also more likely among those who feel that the family's financial situation is better. Age also plays a role. The likelihood of stopping participation in sports clubs increases with age group. (Source: Määttä, et al. 2024, Data source: LIITU study 2022).

Figure 4. Proportions of people aged 7–12 and 13–15 years participating in sports clubs, extremes according to postal code and Helsinki average (%)



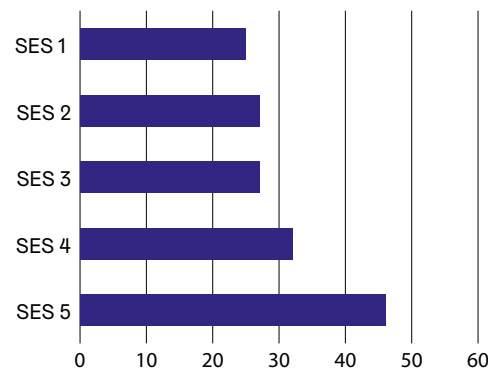
Data source: Olympic Committee/Suomisport, sports federations (Football Association of Finland, Finnish Golf Association, Basketball Finland, Finnish Figure Skating Association and Finnish Gymnastics Federation) and The Guides and Scouts of Finland

The participation of young people in guided physical activity is differentiated by the individual, the family's socio-economic status and the area of residence in Helsinki. Young people who live in families with a higher socio-economic background, with both parents and in residential areas with better recreational opportunities or a higher socio-economic status, participate more often in guided hobbies. (Source: Ahtainen & Määttä, 2024, data source: THL/School Health Promotion Study 2023).

2. Physical functioning of children and young people (Move! measurements)

According to Move! measurements, the physical functioning of children and young people shows clear areal differences according to the socio-economic status of the area. Particularly in areas of a low socio-economic status, the proportion of children and young people with low physical functioning is significantly higher according to Move! measurements.

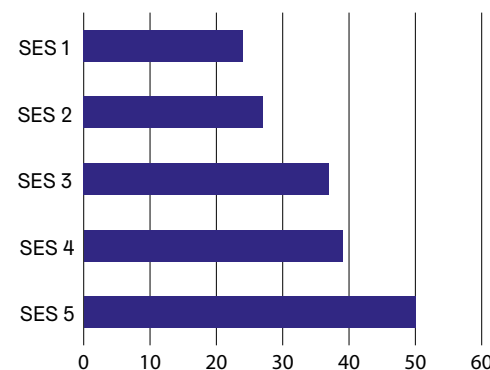
Figure 5. Proportion of 5th graders with low physical functioning based on Move! measurements, according to the SES index in Helsinki in 2023 (%)



Data source: National Sports Council / MOVE! system's national register

On average, 33% of 5th graders had low physical functioning according to Move! measurements in 2023. In this age group, 35% of girls and 30% of boys had low physical functioning. The share had decreased by a few percentage points compared to previous years.

Figure 6. Proportion of 8th graders with low physical functioning based on Move! measurements, according to the SES index in Helsinki in 2023 (%)



Data source: National Sports Council / MOVE! system's national register

On average, 37% of 8th graders had low physical functioning according to Move! measurements in 2023. In recent years, the share has varied between 33% and 40%. A total of 42% of girls and 32% of boys in this age group had low physical functioning. The proportion of girls has increased compared to the previous year, while the proportion of boys has decreased.

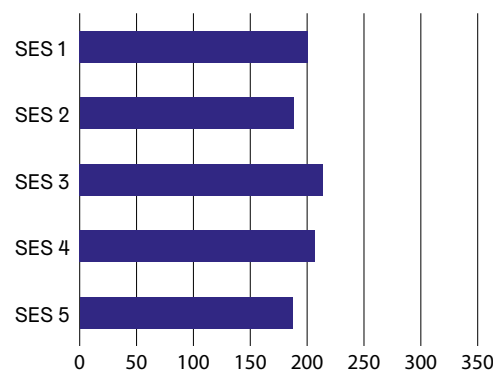


Physical functioning is classified as low if the total score of the Move! measurements is 15 points or less. The indicator is formed from six sections of Move! measurements, which describe various areas of functional ability: endurance, muscle performance, motor skills and mobility. The score of the indicator is the sum score formed from the sections, in which the above-mentioned areas of functional capacity are equally weighted.

3. Purchases of fruit and vegetables

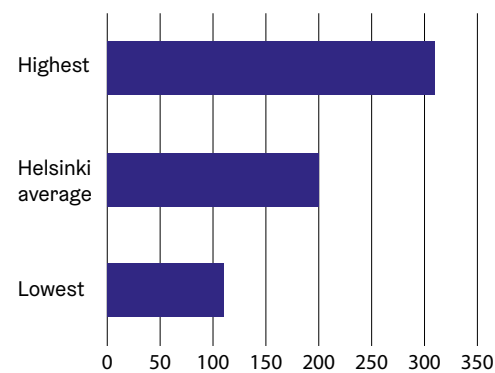
According to the classification based on the SES index between Helsinki's areas, no major differences are observed in the average daily consumption of fruit and vegetables based on shopping data. However, there is wide internal variation in shopping behaviour within a single SES index category. Disparities between postal code areas with the highest and lowest consumption are clear.

Figure 7. Average daily consumption of fruit and vegetables in Helsinki according to the SES index in Helsinki in 2022–2024 (g)



Data source: SOK & Kesko

Figure 8. Average daily consumption of fruit and vegetables in Helsinki, extremes according to postal code and average for Helsinki (g).



Data source: SOK & Kesko

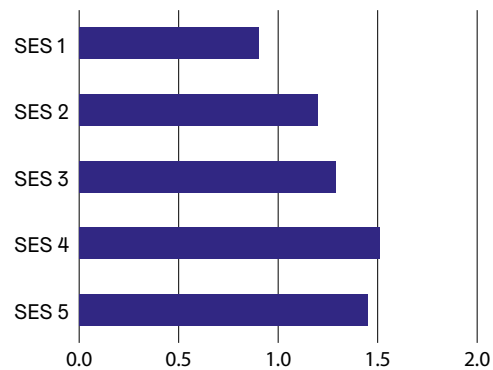
35% of Helsinki residents aged over 20 years report that they eat vegetables, fruit and berries several times a day. Compared to other educational groups, people with a higher education typically eat vegetables as well as fruit and berries several times a day (40%). On the other hand, there is no statistically significant difference between the average and the low level of education in the prevalence of eating vegetables, fruit and berries. There are hardly any statistically significant differences between the major districts in the prevalence of eating vegetables and fruit and berries (range 29% – 41%). However, the northern major district stands out positively from many other areas, as eating vegetables, fruits and berries several times a day is most common there. (Data source: THL/Terve Suomi 2023).

When looking at the average daily consumption of fruit and vegetables in the SES index areas, there are no major differences between the areas. Based on shopping data, Helsinki residents consume an average of 200 grams of fruit and vegetables every day. This does not include the amounts contained in school and work meals, restaurant meals or home-delivered meals. Although according to the regional SES review the consumption differences are small, there is even large variation between postal codes within these areas. The difference between the extremes is almost triple. When looking at the daily consumption of fruit and vegetables at the level of Helsinki as a whole, inflation does not seem to have a significant impact on shopping behaviour. However, in some individual postal code areas, a slight decrease in fruit and vegetable consumption can be observed from 2022 to 2024.

4. Tobacco purchases

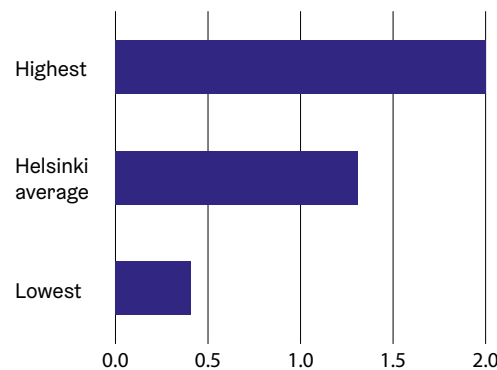
Especially in residential areas with a high socio-economic status, tobacco consumption is less frequent than in other areas. When examined by postal code, the extremes stand out clearly. The difference in the daily amount of tobacco is about four times between the extremes when viewed by postal code.

Figure 9. Average daily tobacco consumption of Helsinki residents according to the SES index in Helsinki in 2022–2024 (pcs)



Data source: SOK & Kesko

Figure 10. Average daily tobacco consumption in Helsinki, extremes according to postal code and average for Helsinki (pcs)



Data source: SOK & Kesko

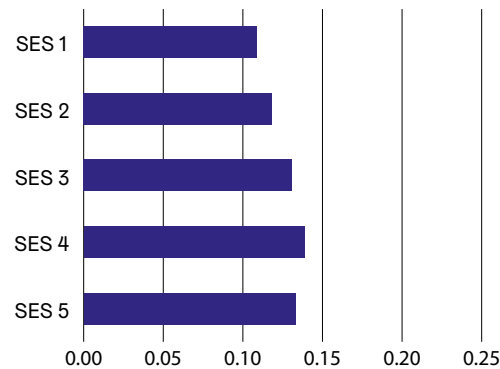
On the basis of the shopping data, differences in smoking can be observed between socio-economic areas. Total consumption volumes are low because all tobacco purchases are distributed among the population of the whole area, and the majority of the population does not smoke. Smoking is most common in the two areas with the lowest socio-economic status and clearly least common in the areas with the highest status. Investigation by postal codes reveals an approximately four-fold difference between the extremes in the daily amount of tobacco products purchased.

9% of Helsinki residents aged over 20 years reported that they smoke on a daily basis. Smoking is much more common among people with a low education. 16% of them smoke on a daily basis, compared to 5% of highly educated smokers. The wide range in the prevalence of smoking at the level of major districts is 4–15 percent. Smoking is least common in the southern major district and most common in the eastern district. In fact, the areas in question differ most clearly when it comes to smoking. (Data source: THL/Terve Suomi 2023)

5. Purchases of alcohol from grocery stores

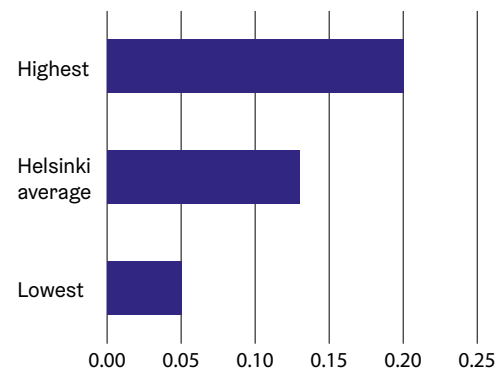
Alcohol purchased from a grocery stores shows differences between residential areas, so that purchases made from a grocery store are somewhat less common in areas with a high socio-economic status. The differences are very clear by postal code. The difference in alcohol purchases from a grocery stores is about four times between the extremes.

Figure 11. Alcohol with volume percent >2.7% per capita purchased by Helsinki residents from grocery stores according to the SES index in Helsinki in 2022 – 2024 (litres per day)



Data source: SOK & Kesko

Figure 12. Daily consumption of alcohol with volume percent >2.7% purchased by Helsinki residents from grocery stores, postal code extremes and average for Helsinki (litres per day)



Data source: SOK & Kesko

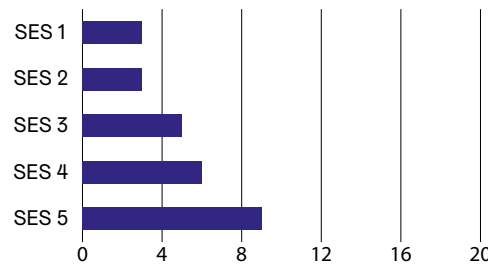
22% of Helsinki residents aged over 20 years reported that they drink alcohol to get drunk at least once a month. Binge drinking is more common among people with intermediate education (25%). This share differs statistically significantly from the share of highly educated people (18%). The range at the major district level is between 18 and 27 percent. Binge drinking is more common than especially in the central district than in many other areas. (Data source: THL/Terve Suomi 2023)

According to shopping data, a Helsinki resident's average daily consumption of alcohol purchased from a grocery stores is 0.13 litres. The amount of alcohol purchased is proportional to the population of the residential areas, so residents not consuming alcohol are also included in the proportion. Investigation based on the socio-economic status of the areas indicates that average daily consumption is lowest in areas with the highest socio-economic status. The amount of daily consumption rises relatively steadily from the highest to the lowest socio-economic status areas. When looking at individual postal code areas, a fairly large difference in the daily consumption of alcohol purchased from stores is observed between the extremes, ranging from 0.05 to 0.2 litres.

6. Payment default entries

There are evident differences in young adults' payment default entries according to the SES index. In areas with a low socio-economic status, payment defaults of young adults are more common than in areas with a high socio-economic status.

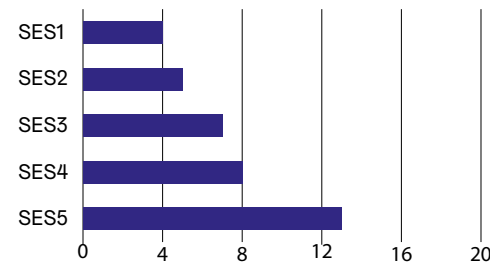
Figure 13. Proportion of people aged 18–24 years with payment defaults by SES index in Helsinki in 2023 (%)



Data source: Suomen Asiakasastieto Oy/Payment default register

In 2023, 6.4% of Helsinki residents had a payment default entry in the register of Suomen Asiakasastieto Oy. Looking at the average temporal change in the number of Helsinki residents with payment defaults from the beginning of 2022 to autumn 2024, inflation does not seem to have a major impact on the number of people with defaults. Despite this, a slight increase in the number of people with payment defaults can be observed when looking at the situation according to postal code areas. As a rule, these areas are located in areas of a lower socio-economic status.

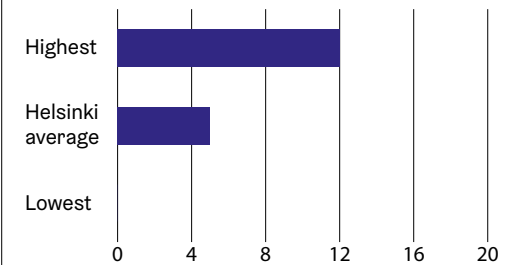
Figure 14. Proportion of people aged 25–39 years with payment defaults by SES index in Helsinki in 2023 (%)



Data source: Suomen Asiakasastieto Oy/Payment default register

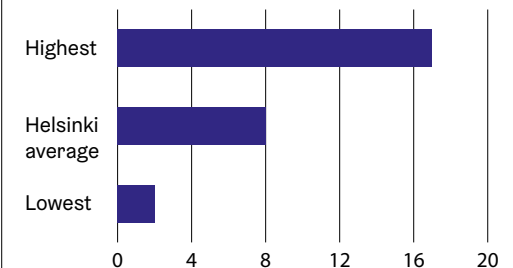
In 2023, the proportion of people with payment defaults varied clearly according to the SES index. The payment defaults of young adults increase when moving from areas with the highest SES status to areas with a lower SES status. A specific increase in the figures is observed when moving from the second-lowest area to the lowest area. The difference between the areas with the highest and lowest socio-economic status among those with payment defaults is more than threefold for residents aged 18–24 years as well as those aged 25–39 years. Similar differences were also recorded for the areas for older age groups.

Figure 15. Proportion of residents aged 18–24 years with payment defaults, extremes of postal code areas and average for Helsinki in 2023 (%)



Data source: Suomen Asiakasastieto Oy/Payment default register

Figure 16. Proportion of residents aged 25–39 years with payment defaults, extremes of postal code areas and average for Helsinki in 2023



Data source: Suomen Asiakasastieto Oy/Payment default register

Strengths and challenges of the usability of PUHTI data

- The strength of the PUHTI data is that it provides real-time information on the situation in the areas in relation to many register data, for example, which may have a delay of several years. Several pieces of data also provide information for several years, which makes it possible to monitor more accurately whether the temporal development of phenomena has been similar by area, for example.
- Some of the PUHTI data is percentages that are proportional to a specific age group, such as the physical functioning indicator and the recreational index. Both types of data can also be viewed by gender. The usability of these indicators at the municipal level from the point of view of targeting services may be more diverse than other PUHTI data, because the age group, gender and area can be taken into account in the investigation. As can be seen in both of these examples, the differences between the extremes of the areas are clear and, therefore, simply following the city average may overlook the areas at which measures should be specifically targeted.
- Some of the PUHTI data, such as hobbies and payment defaults, is available by age group, which increases the usability of the data. In connection with hobbies, it can be seen from the data, for example, that as young people become of age, differences are observed between areas in the types of sports that young people pursue in clubs. Football, which is the most common sport for children in all areas, maintains its position as the most common sport for young adults in several areas of a low socio-economic status, while in several areas of a high status young adults opt out of football and golf becomes the most common sport. Such information helps us better understand what kind of hobbies there are at different stages of the life cycle and whether the hobby paths are similar in different areas according to socio-economic status. From the point of view of targeting services, it could be essential in the future if other types of PUHTI data could also be examined according to more accurate age groups together with areal data.

- The PUHTI data generates new regional information about Helsinki, but from the point of view of its usability, a critical question must be raised as to whether this will produce a new perspective on the already known areal differences in well-being in Helsinki. So far, research has remained at a descriptive level, i.e. suggesting that there are areal differences.
- Therefore, it may be essential in using PUHTI data in the future to ensure that it is better reflected in relation to other information that is available about a phenomenon in order to better identify the areas to which to target services. The PUHTI project has also collected data from open data sources to describe the strengths and development targets of the areas. Although the data is not presented in this report, its use together with other PUHTI data allows for a more diverse areal investigation.
- In the future, it will be important to more clearly combine pieces of PUHTI data with each other, rather than look at areas one piece of PUHTI data at a time. Among others, this would provide more information on whether several well-being challenges accumulate in the same postal code areas in the light of PUHTI data. In that case, it would be possible to better combine areal demographic factors with the investigation in addition to the area's socio-economic status. In the future, it should also be ensured that the information now found useful provides an updated snapshot of the situation in the coming years, so that the temporal change can be better monitored by area. This would provide a better view of whether or not the health and well-being differences between areas are narrowing.

Strengths and challenges of the usability of PUHTI data

- One obstacle to using PUHTI data has been that it has been difficult to interpret the presented data. This is especially evident in the shopping bag data. Among others, it can be difficult to perceive the consumption quantities of a product in grams, litres or pieces, especially when they are proportional to the total population in the area. Some of the food data has been combined into entities that are difficult to interpret in terms of a healthy diet. Another example of the challenging interpretation of data is mobile data from Telia, which describes immobility. Immobility is defined by how long the phone of city residents with a Telia subscription is in an area outside the home and how long it is in the immediate vicinity of the home. However, this data tells about the movement of the phone and not about the person's own movement. In other words, the phone may be stationary at home even if the person is moving. Due to these interpretative aspects, some information, such as immobility, has not been raised for consideration in this report.
- The PUHTI data gives reason to consider the question of what is measured when measuring health and well-being. Shopping bag information can give a different picture of nutrition-related themes than information collected through surveys, for example. This is explained by a different set of questions; where one question investigates an individual's eating or drinking in general, the other measures shopping behaviour. One of the biggest challenges with shopping bag data is that the data is collected partly at the household level and partly at the individual level. Shopping bag data does not directly tell who has consumed the purchased food, alcohol or cigarettes. Food is also eaten out or at work. Information on out-of-home food consumption can be derived through surveys, but not through shopping bag data. The shopping bag data does not include those items that have been purchased from kiosks, markets or other stores outside the customer ownership relationship. In addition, for alcohol purchases, the data does not include products purchased from Alko. Therefore, the shopping bag data only partially describes individual-level food consumption, smoking or alcohol consumption. However, there is research evidence that comprehensive household-level shopping data can relatively reliably model individual-level dietary styles (e.g. Becker, 2001; Vepsäläinen et al. 2022). More information about the possibilities of consumer data from the public health point of view can be found in a writing by Erkkola et al. (2019).



SUMMARY

- What can be interpreted from the PUHTI findings presented in this report?

1. Some of the phenomena examined show a social gradient in health and well-being, i.e. a regular gradual or stepwise change in health and well-being. As the areal socio-economic status increases, the average health and well-being of the area's inhabitants improves. Such a stepwise change is visible in hobbies and payment defaults, for example.

2. Either extreme of the areal socio-economic status is clearly differentiated from the other in many of the phenomena investigated. The best SES index category differs from other categories in terms of participation in sports clubs, smoking or alcohol purchases. On the other hand, the category of the weakest SES index differs especially in the proportion of the physical functioning of children and young people or in payment default entries. This finding is probably due to the fact that the classification according to the SES index into five categories has been done evenly, dividing the postal code areas so that each category has 16–17 postal codes. However, only a few postal code areas at both extremes stand out particularly clearly when postal codes are classified from the best to the weakest according to the SES index. Thus, some of the postal code areas belonging to the category of the highest SES index are clearly distinguished from the others, while some have a small score difference to the next SES category. A similar interpretation can also be made in the low SES index category. Thus, especially the middle SES index categories 2–4 are very similar to each other in their socio-economic status, which may be reflected in the fact that there are also no major differences in well-being between these categories. It may be a good idea to view areal data in parallel according to the SES index and postal code areas.



3. For the time being, it remains partly unclear how the current PUHTI data complements the knowledge base accumulating from the service system, surveys and studies. Some of the PUHTI data is quite useful as such for monitoring the health and well-being promotion of the City of Helsinki. Some of the data is currently quite raw and its utilisation includes question marks about the content of the data and partly about its reliability. In the future, areal differences should be investigated more closely to provide a better view of the targeting of interventions in areas of a low socio-economic status, for example. A more in-depth study of the significance of built and social environmental factors by area could bring a new perspective to the design and implementation of measures, as they can have an impact on health and well-being related behaviour.

References:

Sources PUHTI results

Participation in sports clubs: Finnish Olympic Committee - Suomisport Register. The number of people participating in a sports club obtained from different data sources has been calculated in the hobby index, so the same person may be counted several times. Only one license/member information is included for the same sports. The hobby index includes the number of people participating in each sports and is proportional to the population of the same age in the area. Demographic data is from 2022. Hobby information for 2023.

Physical functioning: National Sports Council, MOVE! system's national register. The data of the indicator is collected in the national register of the national Move! system, where pupils' measurement results are stored anonymously. Measurements are included in the curriculum of basic education and are carried out in schools as part of physical education for all 5th and 8th grade pupils. The measurements are performed in August-September. Data presented from 2023.

Shopping bag data: SOK & Kesko. The material includes the sales data of the daily consumer goods of the locations. Sales are allocated to postal codes based on estimated impact areas. Only grocery sales data has been taken into account. Average daily consumption indicates the average daily consumption of the grocery category in the area during that time (in kilograms, litres or number of items), which is proportional to the population of the area. The grocery data presented is from 2022–2024, population data from 2022.

Payment defaults: Suomen Asiakastieto Oy – Payment default register. A payment default entry is information recorded in the consumer's credit history, which indicates a prolonged failure to pay. Payment defaults are divided into two categories 1) All the causes of defaults, 2) Quick loans, which consist only of payment defaults caused by quick loans. The indicator shows the percentage of people in the area for whom one or more payment default entries have been recorded during the selected time period. The data is from 2023.

Other sources used in the report

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Jukka Hirvonen

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