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# Monitoring health and well-being with survey research – reporting results for regional level decision making

Topic 4 – Getting the statistics out

## Introduction

Finnish municipalities and cities have broad responsibilities in providing their citizens with social and health care services, education and cultural services, in supervising activities affecting the environment, in promoting employment and commerce, and in arranging preventive work. Moreover, the Health Care Act (2010) obliges municipalities to monitor the health of their population and its subgroups. Even after going through a reform of healthcare service provision in 2019 the municipalities will still be responsible for promoting health and well-being of their residents.

National Institute for Health and Welfare (THL) has obligatory responsibility to study and monitor the welfare and health of the population, the factors affecting them and problems related to the welfare and health of the population, the prevalence of these problems and opportunities for preventing them, and to develop and promote measures that further welfare and health and reduce welfare and health problems. (Act of National institute for health and welfare § 2). In collaboration with municipalities THL has been able to collect regional-level survey and register data that includes socioeconomic status.

The challenge has been to provide the results in such way that local authorities would find them easy to understand and use them in decision-making. For this purpose THL has created a new way to collect and report survey results.

## Methods / Problem statement

In 2010, THL launched a new questionnaire survey called the Regional Health and Well-Being Study (ATH from its Finnish initials). During three-year period 2013–2015 in collaboration with municipalities, the sample size of the survey was increased up to 170 000. The aim is to collect follow up data from such health and well-being promotion actions that cannot be found from registers.

Questions of the survey cover e.g. living and work conditions, well-being, health, functional and working capacity, risk behavior, service use and satisfaction. Three versions of the questionnaire (paper/online) were prepared for the age groups 20–54, 55–74 and 75+ in four languages: Finnish, Swedish, Russian and English. During 2014 the research was also extended to cover ethnic groups. Questionnaire forms and study variables are described in a machine readable XML format. This provides a quick way to modify forms and questions and also to gather metadata with the form.

Paper forms are optically scanned and logical validity checks are performed. Obtained data from paper and online forms is saved in a database and paired with metadata and register data (ex. education, income). Register data is also available for non-respondents, and that information is used to calculate adjustment

weights to correct the non-response bias (Härkänen et al 2014). Overall the response rate has been 54%. The gathered data is ready for analysis within 6 to 8 months from the beginning of the data co

## Results / Proposed solution

Survey data is processed into indicators together with substance experts. International indicator definitions such as WHO's quality of life (WHOQOL-BREF) and Mental Health Index (MHI-5) are also used. For each indicator a metadata table is written, which includes the description of the indicator, what phenomena it measures, and how it is relevant for the public health and well-being.

Metadata may also contain examples of cost burden of the phenomena, and some advice on what local authorities could do to affect the phenomena. These indicators are reported in THL's interactive online service (www.terveytemme.fi/ath) with tables, graphs and thematic maps (InstantAtlas). In the online service it is possible to view the results divided into different population groups like age-, gender and education groups. Is also possible to compare different regions and compare municipality's results with regional and national results. The indicator data is also available as Excel and csv sheets, in case the local authority needs to make their own reports. Indicator data is also available via open interface (see www.thl.fi/opendata) for database use and to use in different applications.

THL offers educational events where the use of these reporting services is presented. In case the municipality or other area has the resources to use on data analysis they can order the data for free by writing a short description of the data use.

## Conclusions

In order to efficiently communicate survey results there should be more than a written report and tables. Results should be presented in an interactive way and make them easily accessible for everyone. Descriptions and metadata should be written so clearly that not only the substance experts but also decision makers would be able to make correct interpretations of the results. If these demands are not met, we have noticed that useful results may easily be dismissed especially in local level decision making (see for example InstantAtlas Talks).

Open interface is a new booming option e.g. for application developers and it should be developed further to cover more of THL's data matter. For the future there is a reporting service in development at THL where all the data results from THL's surveys and register would be reported. From that service it would also be possible to view results on phenomena based approach (for example all the tobacco and smoking related results in the same view regardless of the data/register they come from).

At the moment ATH survey results can only cover municipalities of population 30 000 or larger. Smaller municipalities can use their county level results but they can also order a bigger sample from their area for the cost of data collection. This still discriminates smaller municipalities with few resources and small area estimation for these areas would be one option to discover in the future.