Estimating the Needs of Substance Problem Use Services: An Exercise in Seven Finnish Municipalities Using Nationally Collected, Municipal-Level Survey and Register Data†

TANJA HIRSCHOVITS-GERZ, D...SCI., a,b,* KRISTIINA KUUSSAARI, PH.D., b KERSTIN STENIUS, PH.D., c & TUUKKA TAMMI, PH.D.; b

aEquality and Inclusion Unit, National Institute for Health and Welfare, Tampere, Finland
bAlcohol, Drugs, and Addictions Unit, National Institute for Health and Welfare, Tampere, Finland
National Institute for Health and Welfare, Tampere, Finland

ABSTRACT. Objective: The needs of substance problem use services (SPUSs) should ideally be assessed locally to support the provision of appropriate, cost-effective services for the population. In this article we present a model for estimating the adult population’s potential needs for and actual use of SPUSs. We used Finnish survey and register data as material for a qualitative assessment. The purpose of our article is to contribute to a discussion on the dimensions of assessment of the need for SPUSs at a local level. Method: Seven Finnish municipalities were chosen as examples. The need for SPUSs was assessed by freely available register and survey data of the use of services, substance use and problem use, side effects of use, and lack of social support. Babor et al.’s (2008) description of links between the use of services and need for treatment, in terms of substance use and general social conditions, and Ritter’s (2014a) set of methods for assessing the need for treatment are used as theoretical background. Results: The number of people using SPUSs varied from one municipality to the next. The local service system policy and the general well-being of the population have a remarkable role in the use of SPUSs. Conclusions: Estimations of need and demand with indicators can be useful for local treatment system policy but must be interpreted with thorough knowledge of the local treatment and social handling resources and general social situation. Comparisons between different local areas should be made with caution. (J. Stud. Alcohol Drugs, Supplement 18, 76–86, 2019)

RÉSUMÉ. Objectif : Idéalement, les besoins de service pour le traitement de la toxicomanie (STT) devraient être évalués localement pour soutenir une offre de service appropriée et rentable pour la population. Dans cet article, nous présentons un modèle pour estimer les besoins potentiels et l’utilisation réelle de STT de la population adulte. Nous avons utilisé les données d’une enquête finlandaise et des registres comme matériel pour mener une évaluation qualitative. Le but de notre article est de contribuer à la discussion sur les dimensions de l’évaluation des besoins de STT au niveau local. Méthode : Sept municipalités finlandaises ont été choisies comme exemple. Le besoin de STT a été évalué à partir des données en libre accès de registre et d’enquête sur l’utilisation des services, l’utilisation de substances ainsi que des problèmes qui y sont associés, les effets secondaires de l’utilisation et le manque de soutien social. Le contexte théorique que nous avons utilisé repose sur la description de Babor et coll. (2008) des liens entre l’utilisation de services et les besoins de traitements, en termes de toxicomanie et de conditions sociales générales ainsi que l’ensembles des méthodes de Ritter (2011) pour évaluer les besoins de traitement. Résultats : Le nombre de personnes qui utilisent les STT diffère d’une municipalité à l’autre. Les politiques inhérentes au système local de services et le bien-être général de la population jouent un rôle majeur quant à l’utilisation des STT. Conclusion : L’estimation des besoins et de la demande faite en s’appuyant sur des indicateurs peut être utile pour orienter les politiques liées au système local de traitement. Cette estimation doit cependant être interprétée par le biais d’une connaissance approfondie de la réalité locale en termes de traitement, des ressources sociales de prise en charge et de la situation sociale générale. Les comparaisons entre les différentes municipalités devraient être faites avec précaution.

RESUMEN. Objetivo: Las necesidades de los servicios para el uso problemático de sustancias (TUS) deberían evaluarse localmente para apoyar la provisión de servicios apropiados y rentables para la población. En este artículo presentamos un modelo para estimar las necesidades potenciales de la población adulta y el uso real de TUS. Se utilizó la encuesta finlandesa y registro de datos como material para una evaluación cualitativa. El propósito de nuestro artículo es contribuir a una discusión sobre las dimensiones de la evaluación de la necesidad de TUS a nivel local. Método: Siete municipios finlandeses fueron elegidos como ejemplos. La necesidad de TUS se evaluó mediante registro y los datos de la encuesta, disponible de forma gratuita, sobre el uso de los servicios, el uso de sustancias y el uso problemático, los efectos secundarios del uso y la falta de apoyo social. La descripción de Babor y colaboradores (2008) de los vínculos entre el uso de servicios y la necesidad de tratamiento, en términos de uso de sustancias y condiciones sociales generales, y el conjunto de métodos de Ritter (2011) para evaluar la necesidad de tratamiento se utilizan como antecedentes teóricos. Resultados: El número de personas que utilizó el TUS varió de un municipio a otro. La póliza del sistema de servicio local y el bienestar general de la población tienen un papel destacado para el uso del TUS. Conclusiones: Las estimaciones de necesidad y demanda con indicadores pueden ser útiles para la póliza del sistema de tratamiento local, pero deben interpretarse con un conocimiento profundo del tratamiento local y los recursos de manejo social y la situación social general. Las comparaciones entre diferentes áreas locales deben hacerse con precaución.

Received: April 30, 2017. Revision: March 18, 2018.

This research was supported by a grant from the Academy of Finland, project name: Re-defining substance abuse problems through organizational reforms. The case of integrating substance abuse and mental health care in Finland, project number 254141.

†This article is based on an article published in Finnish: Hirschovits-Gerz, T., Kuussaari, K., Stenius, K. & Tammi, T. (2016). Miten pähdepalveluiden tarvetta on mahdollista mitata? Esimerkkinä tarveanalyysissä seitsemän kuntaa. Yhteiskuntapolitiikka, 81, 195–205.

*Correspondence may be sent to Tanja Hirschovits-Gerz at Equality and Inclusion Unit, National Institute for Health and Welfare, Biokatu 10, Finn-Medi 3, 7th floor, FI-33520 Tampere, Finland, or via email at: tanja.hirschovits-gerz@thl.fi.
IN RECENT YEARS, the Finnish government has tried to carry out an extensive restructuring of social welfare and health care services. The framework has not yet been finalized. What seems certain is that, from 2020, social welfare and health care services will be provided within 18 regions, each much larger than any one of the current approximately 300 municipalities, in a country with about 5.5 million inhabitants (Finlex, 2017). The dramatic centralization reform will pose challenges to the implementation of needs-based service systems.

The history of the Finnish system of specialized substance problem use treatment and services (SPUSs)\(^1\) goes back to the 1930s (Kaukonen, 2000). Basic and specialized SPUSs are organized as part of the municipalities’ general social welfare and health care services, produced by a mix of the municipalities themselves, third-sector actors, and private service providers (Kaukonen & Stenius 2005). Services are free or very inexpensive for clients. The Act on Welfare for Substance Abusers (1987) requires that municipalities offer services that correspond to the need in the municipality in terms of content and scale. But the act does not prescribe how municipalities should define their needs (see Arajärvi, 2013), even if both the Social Welfare Act (1301/2014) and the Health Care Act (1326/2010) have requirements for individual needs assessments. There is great variation in service provision regionally and locally (Stenius et al., 2012). In small towns or rural areas, it may be especially difficult to access appropriate services (Kekki & Partanen, 2008).

Service needs may be estimated at the individual level by assessing the alcohol consumption and the physical, mental, and social effects of drinking on individuals and their families, friends, and social surroundings. The earlier you intercept substance problem use, the higher the probability that the negative effects can be prevented and remedied (see, for instance, Stockwell, 2010). Service needs should also be assessed at the national, regional, and local levels as the basis for the planning and development of diversified service systems (Babor et al., 2008; Ritter, 2014b; Ritter et al., 2013, 2014). The literature on regional- and local-level needs assessment is still scarce (see, however, Ritter et al., 2013). This article adds to this literature and presents a model for estimations of the adult population’s needs and the use of SPUSs.

The number of problems related to substances is documented as correlating with the levels of alcohol and drug use and risky use/consumption patterns (Babor et al., 2010). Side effects are an indication of problems, which may have been prevented or reduced by treatment (Tigerstedt & Huhtanen, 2013; Warpenius & Tigerstedt, 2013). Together with knowledge about other social circumstances that affects the need for formal support, information about these dimensions can guide estimation of the need for treatment.

In this article, we present a model for estimating the adult population’s potential needs for and actual use of SPUSs in seven municipalities. Our qualitative analysis was developed within a research project called “Re-defining substance abuse problems through organizational reforms.” This project studied the meaning and impact of the integration of mental health care and SPUSs in seven municipalities. It also became important to develop a model that enabled integration reforms to be systematically guided by needs assessment, using available statistics and indicators at the municipal level for follow-ups on the functioning of the system.

Assessing the need for help is difficult but important. Registers are seldom complete, and surveys or other statistics do not cover all the aspects you would like to map. The treatment service policy is of great importance to clients, important for the manageability of the service system, and important for the containment of overall costs (Jääskeläinen & Österberg, 2013). Ideally, needs assessments are best when performed at the local level, close to decision makers, to ensure accountability, responsibility, and the accuracy of information (Ritter, 2014b; Ritter et al., 2014). The needs of the problem users may also vary greatly locally, and therefore local-level needs assessment is preferred. In practice, it is mostly done at the national level (Ritter et al., 2013). As municipalities have had the central role in ensuring the provision of social and health care, Finland has developed extensive local data that can be used for planning purposes. For a Finnish audience, this article can be used as an example of how to use easily available indicators in local planning and follow-ups. For an international audience, the purpose of our article is to contribute to a discussion on the dimensions of assessment of the need for SPUSs at a local level.

Method and theoretical frame

The theoretical frame of reference for the model for needs assessment relies on Ritter’s (2014b; Ritter et al., 2013) population needs assessment models and the model of Babor et al. (2008) for the effect of systems on population health. According to Ritter (2014b; Ritter et al., 2013), the concept of treatment need related to substance problem use at the population level refers to the needs of all people who fulfill

\[^1\]“Services for substance abusers” is the established term in Finland. The services are available in the form of general social and health services, specialist services for substance abusers, and a specific level of medical treatment. Service forms include outpatient care, institutional care, rehabilitation, and housing and support services. Anyone can seek outpatient services, but institutional care usually requires a referral. Here the term substance means alcohol and illicit drugs (Ministry of Social Affairs and Health, 2018).

\[^2\]Finnish Academy funded project nr. 254141: ethical approval granted August 31, 2011, by the National Institute for Health and Welfare. The work on this article was funded by the Finnish Foundation for Alcohol Studies. [http://en.alkoholitutkimus paidi. fi]
the criteria for a substance abuse and dependence diagnosis or who use substances in a harmful or risky way and could benefit from treatment. Not all people with substance use problems need special treatment for these problems; some benefit from a light intervention, others need material or emotional support, some benefit from peer support, and many manage on their own. In practice, need is often defined by treatment demand. However, in reality, one could identify four categories: those that need treatment, seek it, and get it (met demand and need); those who need treatment, seek it, but do not get it (unmet demand, but need); those who may benefit from treatment but do not seek it or do not receive it (no demand, but need); and finally those who seek and receive treatment but do not need it (met demand and no need). Defined this way, treatment demand and need are only partly overlapping (Figure 1). Our estimation uses data on those who receive treatment (met demand with need and met demand with no need) and, by means of several variables, the estimated number of people who could benefit from treatment (need). We have not been able to get any local data on unmet demand, nor have we been able to identify and exclude met demand but no need.

The supply of services, as a result of political decisions, is affected by local social policy, available treatment facilities, and needs estimations. We know that the supply of services per se shapes the demand. On the other hand, there are also aspects of the treatment system that prevent people from seeking treatment even if they would benefit from it or want it (Babor et al., 2008; Kuussaari et al., 2012; Luopa et al., 2014; Stenius et al., 2012; Storbjörk, 2014). Demand is, as a rule, significantly smaller than the need. The gap between the estimated need and the met demand for treatment—the penetration ratio—is important information for the local service planning authorities (Ritter, 2014b; Ritter et al., 2013; World Health Organization, 2006). Importantly, register and survey data indicating need for treatment must be analyzed against knowledge about the local operational environment.

Ritter (2014a, 2014b) divides the needs assessment methods into six categories: (1) a description of treatment on demand (information on met demand, including treatment register data); (2) descriptive data on problems related to substance use in the population (surveys, etc.); (3) international benchmarking, including, in addition to the above, overall alcohol consumption statistics; (4) multi-indicator methods, which also include a chronological aspect; (5) a needs-based design model that uses, in addition to the above, mostly qualitative methods; and (6) system-dynamic modeling that, in addition to the above, uses the analysis of clients’ paths and cost-efficiency assessment models.

In our exercise, we have been able to use assessment measures of Categories 1 (registers), 2 (surveys), and 5 (qualitative knowledge about the service system, political decision making, and indicators picturing the social environment) among indicators and survey data that are freely available in national data banks at the municipal level. Consumption data at the municipal level (Category 3) do not exist in Finland. For some of our data, we could have made analyses of changes over time (Category 4). However, the purpose in this article is primarily to present a model that can be used in future needs assessments at the municipal or regional level, where changes over time will be a natural addition. Some

**Figure 1.** Estimated need for treatment of problems related to substance use in relation to met demand
data for analyses of Category 6 are only available in a few municipalities in the country.

The numerical information presented here is used for a qualitative analysis, comparing levels of need for services with use of services. The comparison is interpreted alongside knowledge of the municipalities, their treatment system history, and their actual system at the time of the analyses. The interpretations have also been presented and discussed with representatives of the municipalities.

**Research sites and data**

This study uses four large and three medium-sized Finnish municipalities as cases. The municipalities were chosen from 20 municipalities with more than 50,000 inhabitants and represent a cross-section of different types of areas and service systems in southern and central Finland (Kokko et al., 2009).

Table 1 contains a description of the seven municipalities and their economic carrying capacity, using figures that describe their size, tax-paying possibilities (disposable income), and demographic dependency ratio (which is the number of people younger than age 15 years and older than age 64 years per 100 working-age people [ages 15–64]) and the employment rate (as a mark of social problems). The municipalities are clearly different. Municipality C was the biggest, youngest, and most affluent municipality, and Municipality G was the smallest, with more unemployment and the biggest burden for the employed with relatively small incomes.

At the time of the study, all seven municipalities offered (free) outpatient special services for persons with problems related to substance use. All these outpatient services were multi-professional and low-threshold services for which clients did not need any referrals. Inpatient treatment was also available in all seven municipalities. This was either produced by the municipality itself or bought from third-sector or private-service providers. In addition, there were housing services and low-threshold services for persons with drug problems (e.g., needle exchange services) in all municipalities. Primary-level mental health services and psychiatric special health care services were also available, but to a more varying degree. The main structure of the services was thus quite similar, with some differences in emphasis. In Municipality C, the integration of mental health and SPU/Ss was stressed. In Municipalities A, E, F, and G, multi-professional and low-threshold specialized types of services were emphasized. In Municipality D, work-related action was integrated into the service system. Finally, in Municipality B, the services were primarily provided by the municipality and peer support was part of public-service provision (Stenius et al., 2012).

The municipal data for this study were mainly obtained from Sotkanet (www.sotkanet.fi) and the Terveytemme (translation: “our health”) website (www.terveytemme.fi). The Sotkanet Indicator Bank, maintained by the State National Institute for Health and Welfare (THL), offers information about key population welfare and health data with hundreds of indicators, available from 1990 onward for all Finnish municipalities. The data consist of information from several national registers and surveys. Terveytemne is also compiled by THL and publishes central follow-up data on health and well-being indicators based on statistics, registers, and national population surveys.

Sotkanet contains information on state, provincial, and municipal levels but does not include data on an individual level. In this case study, we used statistics as qualitative features of the situations in municipalities. More precise information about the indicators and data used can be found in Appendix 1. (An appendix appears as an online-only addendum to the article on the journal’s website.)

**Indicators of met demand**

This article summarizes the met demand with data on the use of services or number of clients in specialized outpatient and inpatient services for persons with problems related to substance use, in housing services, and patients in hospital inpatient care for substance abuse/dependence diagnoses.

---

**Table 1. Population and income levels in seven Finnish municipalities and for the whole country, in 2011**

| Variable                        | A (2011) | B (2011) | C (2011) | D (2011) | E (2011) | F (2011) | G (2011) | The whole country (2011) |
|--------------------------------|----------|----------|----------|----------|----------|----------|----------|-------------------------|
| Mid-year population            | 67,049   | 201,528  | 250,204  | 131,439  | 116,958  | 64,759   | 54,827   | 5,388,272               |
| Average age                    | 43       | 38       | 37       | 39       | 43       | 40       | 44       | 42                      |
| Demographic dependency ratio   | 57       | 45       | 46       | 45       | 52       | 51       | 56       | 53                      |
| Employment (as % of the total population) | 43   | 50       | 50       | 46       | 42       | 46       | 38       | 44                      |
| Disposable income of household (median €) | 30,017   | 34,060   | 41,586   | 28,326   | 26,573   | 29,835   | 27,892   | 31,108                  |

*Source: Statistics Finland: income and consumption / overall statistics of income distribution (using Sotkanet and Statistics Finland’s PX-Web databases, see Appendix 1.)*
Information about the specialized services for persons with problems related to substance use is based on annual municipal statistics compiled by Statistics Finland. The total number of clients is broken down by the type of operating unit (Appendix 1). Information about patients treated in the inpatient wards of hospitals and health centers was extracted from the THL Hospital Discharge Register, from Sotkanet (www.sotkanet.fi) (Figure 2).

Indicators of need

In this article, we chose several indicators to capture the need for treatment, being aware of the reality that some of the indicators are overlapping. We divided the need indicators into three categories relating to the different dimensions of need: problematic substance use in the population, the negative side effects of substance use, and the lack of social support.

Two indicators are available to illustrate the amount of problem use of substances in the population (ATH study; see Appendix 1): cannabis use (being illegal) during the last 12 months and self-reported excessive use of alcohol (AUDIT-C test) (A-Clinic Foundation 2018) (see Appendix 1 and the limitations) (Figure 3).

The unwanted side effects of substance use are an indication of alcohol and drug problems and partly indicate the inadequacy of treatment and support services. Even if many of the persons registered for drunk driving or detained because of intoxication also receive problem use services, these figures can indicate both unmet demand for the treatment of problems related to substance use and need without demand. Four relevant indicators were available to describe the phenomenon: drunk-driving cases, the number of suspects of violent crimes committed under the influence of intoxicants, detained intoxicated persons, and narcotic crimes known to the police (Figure 4).

The lack of social resources or support describes life situations where professional treatment may be required in the absence of protective factors, such as family, work, or
education (cf. Babor et al., 2008). We chose one indicator describing long-term unemployment to picture the exclusion from one important life area: work. A number of other indicators, such as the overall unemployment rate, were also tested, giving similar results. The indicator people who have received income support for a long period reflects those who have dropped out from receiving normal income and whose lives are economically restricted. Our third indicator here, homeless persons living on their own, reflects a group of citizens who in many ways are outsiders from society and vulnerable (Figure 5).

Results

Profiles of municipal substance use treatment needs

Figures 2–5 summarize the data of the exercise. It is clear from the figures that the municipalities differ from each other. Municipality G stands out with more service use than the national average; in particular, there is much use of specialized outpatient services. Municipality A lies below the national average, which may partly be explained by their emphasis on substance use services in primary health care; statistics on services related to substance use in outpatient primary health care were not available (Lindberg et al., 2010). There are also differences within the use of inpatient care, with Municipalities G, E, and F at the top. In Municipality G, both the indicator of hospital inpatient care for substance abuse/dependence and the indicator of institutional care for persons with substance use problems were high; in Municipality F, the distribution of inpatient treatment was concentrated in specialized substance use treatment (Figure 2).

The percentage of people drinking alcohol excessively was about the national average in most of the municipalities studied, and somewhat lower in Municipalities A and F. Despite the high level of use of services in Municipality G, the percentage who drank too much alcohol was not especially high. The percentage of cannabis users was highest in Municipality E, but Municipalities C and D were also above the average (Figure 3).

There was more lack of social support in Municipalities B, E, and G than the national average. The number of people on income support in Municipality G was high compared with the other municipalities and the entire country, and the number of long-term unemployed in Municipalities E and G
was higher than in the other municipalities. Homelessness was more of a concern in the larger municipalities (B and C) (Figure 5).

Last, we examined the municipalities, comparing the estimated met demand with the estimated need for services (Table 2). If we apply the idea of the so-called penetration ratio (Ritter et al., 2013, 2014) we can see that the municipalities differ from each other. Municipalities A and C have low indicators of need and medium or fairly little treatment use. Municipality G has a lot of service use but also high indicators of need for services. The situation in Municipality E seems problematic, with medium service use and high indicators of need for treatment. All the municipalities that scored medium or low regarding a lack of social support seemed to also score medium or low on the other need indicators. Again, we would like to remind the reader that these figures are only indicative and that comparisons between municipalities should be avoided; the results can only properly be analyzed with local knowledge of the entire service systems and other local conditions.

Limitations of the study

This study had several limitations. First, we could only receive part of the optimal information needed. To get a full picture of service use, one should study the service consumption related to substance use in all parts of the social welfare and health care service system. However, outpatient social welfare and health care services, child welfare institutions, and occupational health care services provide no systematic register information about clients with problems related to substance use. The register data do not include information about the amount of peer support or early support for risky behavior. Neither do we have
TABLE 2. Indicators of need and met demand for services in seven municipalities and the whole country in 2011

| Region              | Estimated met demand | Substance use and problem use in the population: The sum of the variables in Figure 2 | Side effects: The sum of the variables in Figure 3 | Lack of social support: The sum of the variables in Figure 5 |
|---------------------|----------------------|----------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------|
| **Municipalities**  |                      |                                                                                       |                                                   |                                                           |
| A–G                 |                      |                                                                                       |                                                   |                                                           |
| A                   | 15                   | 27                                                                                    | 13                                                | 5.1                                                       |
| B                   | 17                   | 35                                                                                    | 18                                                | 8.6                                                       |
| C                   | 18                   | 35                                                                                    | 9                                                 | 5.6                                                       |
| D                   | 19                   | 36                                                                                    | 14                                                | 7.3                                                       |
| E                   | 19                   | 36                                                                                    | 16                                                | 8.6                                                       |
| F                   | 22                   | 29                                                                                    | 15                                                | 5.3                                                       |
| G                   | 35                   | 36                                                                                    | 16                                                | 9.2                                                       |
| Whole country       | 18                   | 34                                                                                    | 13                                                | 5.5                                                       |

FIGURE 5. Lack of social support: homelessness, recipients of long-term income support, and long-term unemployment, both in the seven municipalities studied and in the whole country in 2011 (Source: Sotkanet). The headings for the data are taken directly from the Sotkanet’s English language version.

information about actual requests for services (Wahlbeck et al., 2017).

Sotkanet contains information on the state, province, and municipal levels but does not include data on the individual level. Therefore the possibility to do statistical analysis is limited. The same people can be duplicated in the data, and thus the interpretation has to be made with this in mind.

In the general health care system, and in mental health care, problems related to substance use are often underdiagnosed (Kuussaari & Hirschovits-Gerz, 2016; Samposalo et al., 2018; Turtiainen et al., 2018). It is well known that surveys reach only a limited part of the population. Risky use of alcohol or drugs will be underestimated (Kopra, 2018), and homeless people are often totally excluded from the data.

We know that 90% of the Finnish population use alcohol (Finnish National Institute for Health and Welfare, 2013; Hakkarainen et al., 2011). Unfortunately, we do not have information at the municipal level about the use of alcohol or people using alcohol excessively for the last 12 months, which would have been a good indicator. Neither do we have statistics about the use of “hard” drugs or the problematic use of prescription drugs at the municipal level. The lifetime prevalence among adults (in 2010) of amphetamine and Ecstasy use was 2%, cocaine 1.5%, opiates 1%, prescription drugs 6.5%, and cannabis 17% in the whole country (Hakkarainen et al., 2011).

Our indicators are ambiguous. For instance, the number of detained persons and narcotics crimes can point to problematic use or the need for treatment and to the role of the control systems. When interpreting crime statistics, we have to take into account police resources and geographical location, among other factors. In Municipality B for example, the
large number of drug offenses is partly explained by crimes at the biggest national airport.

**Discussion**

Social and health service system planning would benefit from better methods for assessing local and/or regional needs for services for persons with problems related to substance use. In this article, we have argued for the consideration of several dimensions of treatment need assessment and illustrated how the need in the population and the use of services can be estimated with the help of existing indicators in Finland. Seven municipalities were studied. We presented a picture on how indicators of the need for services and met demand (service use) reflect each other. We used different types of freely available indicators data to describe municipal profiles.

The penetration ratio—the relation between met demand and estimated need—seemed to be different in different municipalities. If we only view the penetration ratio by comparing the percentage of people who drink excessively to the number of persons in specialized SPUSs and hospital inpatient wards, we will lose important parts of the picture. To plan and improve the local treatment system, a wider perspective, with several other pieces of information at the local level, is needed. Circumstances outside of the treatment system have an important role for the level of use of services. Policymakers in the municipalities have responded to social burdens, such as the different side effects of substance use, in different ways: by investing in police work, by developing the service system in different ways, and by placing the treatment of problems related to substance use in different priority orders. Thus, the local service system reflects the different ways of organizing municipal services, the division of work between different social institutions (such as primary health care and addiction treatment or the police and treatment), and the local willingness to allocate money to treatment and services (Kekki & Partanen, 2008; Malmström et al., 2018; Metso et al., 2012; Stenius et al., 2012; Wahlbeck et al., 2017).

This study was primarily done to assist local decision makers in their planning rather than to compare different municipalities. To be properly useful, the figures in Table 2 should be interpreted in relation to other municipal services not covered here and with knowledge about data collection at the local level. Only an understanding of the local conditions makes room for accurate interpretations, and only repeated measurements can lead to definite practical conclusions. For example, in Municipality A, substance use problems expertise and help were available not only as part of specialized SPUSs but also more broadly as part of primary health care services. In Municipalities F and G, on the other hand, SPUSs had a solid and comprehensive position in the service system, and these services were widely used. The high figures for service use in Municipality G are also partly explained by poor resourcing in mental health services and the fact that youth station clients are included in the A-Clinic client register.

Table 1 provides information about the economic status of the municipality. It gives a signal that not only the employment rate or demography dependency ratio matter, but how to divide the capacity between the different actors in the “need field” is also important.

The results presented here are an illustration of the possibility of using available data to assess the need for SPUSs in municipalities and, above all, the possibility to use these data locally over time to follow up on how the local response to these problems has developed. This effort needs to be further discussed and developed. Our study seems to support the insight that the need for treatment for problems related to substance use is affected by living conditions and social problems (such as unemployment, a weak financial situation, and homelessness). Without work, a home, or a family, persons abusing substances are more dependent on professional help than those in a better situation when trying to solve their substance use-related problems (Babor et al., 2008).

The information in this article describes the municipalities’ service policies at the time of the study in relation to potential need for services. The results can be useful in Finland when selecting indicators for the systematic development, assessment, and monitoring of services for problems related to substance use during the coming times of system reforms (e.g., Vartiainen, 2013; see Ala-Nikkola et al., 2014). We hope that this model and exercise will inspire local treatment needs assessments in other countries.

**References**

Act on Welfare for Substance Abusers. (1986). Chapter 1. § 3 (41/1986). Retrieved from https://www.finlex.fi/fi/laki/ajantasa/1986/19860041

Ala-Nikkola, T., Pirkola, S., Kontio, R., Joffe, G., Pankakoski, M., Malin, M., . . . Walibbeck, K. (2014). Size matters — determinants of modern, community-oriented mental health services. *International Journal of Environmental Research and Public Health, 11*, 8456–8474. doi:10.3390/ijerph110808456

Arajärvi, P. (2013). Päiäsy sosiaalihuollon pähdepalveluhiin [Access to social welfare substance abuse treatment services]. In J. Moring, V. Bergman, E. Nordling, J. Markkula, A. Partanen, & M. Soikkeli (Eds.), *Kansallinen mietintöverys- ja pähdeasuunnitelma 2009–2015 – Monipuolista sisällöllistä ja rakenteellista kehittämistä 2012* [Plan for mental health and substance abuse work for 2009–2015 – diverse substance and structural development 2012]. Tampere, Finland: Institute for Health and Welfare, Paper 15/2013, (pp. 29–35). Retrieved from http://www.julkari.fi/handle/10024/114817

A-Clinic Foundation. (2018, March 18). AUDIT-C test in website Päihdelinkki.fi. Retrieved from http://www.paihdelinkki.fi/sites/default/files/audit-c_0.pdf

Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., & Graham, K., . . . Rossow, I. (2010). *Alcohol: No ordinary commodity—research and public policy* (2nd ed.). Oxford, England: Oxford University Press.
Hirschovits-Gerz, T., Kuussaari, K., Stenius, K., & Tammi, T. (2016). Miten päihdepalveluiden tarvetta on mahdollistuksia mitata? Esimerkkeinä tarveanalyysissä seitsemän kuntaa [How to measure the needs of substance abuse services? Using seven municipalities as examples in needs analysis]. Yhteiskuntatutkimus, 81, 195–205.

Jääskeläinen, M., & Österberg, E. (2013). Alkoholin aiheuttamat haitat in Finland in 2010]. In K. Warpenius, M. Holmila, & C. Tigerstedt (Eds.), Yhteiskuntapolitiikka, 81, S50–S59. doi:10.1002/mpr.249

Kuussaari, K., Ronkainen, J.-E., Partanen, A., Kaukonen, O., & Vorma, H. (2012). Kuntoutuksesta katkaisuun. Päihdepalvelut ympäristöjen ja palvelajärjestelmien kehitystöönottoo [From rehabilitation to detoxification: Using a survey of intoxicant-related case studies to picture the substance abuse service system]. Yhteiskuntatutkimus, 77, 640–654.

Kuussaari, K., & Hirschovits-Gerz, T. (2016). Co-occurrence of substance use related and mental health problems in the Finnish social and health care system. Scandinavian Journal of Public Health, 44, 202–208. doi:10.1177/140349481561303

Lindberg, J., Tuominen, A., Ahokas, H., Ala-Kukko, S., Harjula, L., & Heiskanen, A., . . . Ylikerä, S. (2010). Seudullinen mielenterveys- ja päihdytöön toimintaohjelma 2010-2015, Hattula, Hämeenlinna, Janakakka. [Regional Plan for mental health and problematic substance use work 2010-2015 in Hattula, Hämeenlinna, Janakakka] Hämeenlinna: Kopiojyvä oy. Retrieved from http://www.e-julkaisut.fi/hameenlinna/kaupunki/mielenterveyestoimintaohjelma/pdf/mielenterveyestoimintaohjelma.pdf

Luopa, P., Kivimäki, H., Mattikka, A., Vilkki, S., Jokela, J., Lakkaronen, E., & Paananen, R. (2014). Naorton hyvinvointi Suomessa 2000–2013 – Kouluterveyskyselyn tulokset [Youth welfare in Finland 2000–2013: The results of a school health promotion study] (Report 25). Tampere, Finland: National Institute for Health and Welfare.

Malmström, T., Leskelä, R.-L., Lindh, M., Kajova, M., Niemelä, P., Rissanen, A., & Salmisaari, T. (2018). Kuntoutusjärjestelmän kokonaisuudet – tieto muutostyön tukena [The planning of the reform of the rehabilitation system – knowledge as a support for modification]. A publication of the government’ s analysis, assessment and research activities (Report 7). Retrieved from http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160567/9-2018-Kuntoutusjärjestelmä%20kokonaisuudistus.pdf?sequence=1&isAllowed=y

Mehto, S., Wirtta, T., & Hakkarainen, P. (2012). Suomalaisien huumeiden käyttö ja huumeasentotettu yhteiskunta vuonna 1996–2010. [Substance use related and mental health problems in the Finnish social and health examination surveys (report). University of Jyväskylä, Department of Mathematics and Statistics, 164.

Koko, S., Heinämäki, L., Tynkkynen, L.-K., Haverinen, R., Kaskisaari, M., Muuri, A., . . . Tammelin, M. (2009). Kunta- ja palvelurakenneaineistuksen toteuttaminen. Kuntakysely ja palvelututkimuksen järjestämisestä ja tuottamisesta 2009-2013. [The planning of the reform of the welfare state. Nordic experience] (Report 1). Helsinki, Finland: National Research and Development Centre for Welfare and Health.

Ministry of Social Affairs and Health. (2018). Services for substance abusers. Retrieved from http://stm.fi/paihdepalvelut?p_p_id=56_IN STANCE_75jJVdYeHj&pp_p_state=normal&pp_p_mode=view&pp_p_col_id=column-2&pp_p_col_count=3&56_IN STANCE_75jJVdYeHj_languagefld=en_US

Ritter, A. (2014a, August). WHO-SAMHS. Population planning / Population needs assessment module: A Draft 14th April 2011. Paper presented in the seminar “Effective and needs-based addiction treatment systems,” Helsinki, Finland.

Ritter, A. (2014b, August). Planning for treatment system changes: An overview of different models. Paper presented in the seminar “Effective and needs-based addiction treatment systems,” Helsinki, Finland.

Ritter, A., Berends, L., Chalmers, J., Hull, P., Lancaster, K., & Gomez, M. (2014). New Horizons: The review of alcohol and other drug treatment services in Australia. Sydney, Australia: Drug Policy Modelling Program, National Drug and Alcohol Research Centre, University of New South Wales.

Ritter, A., Chalmers, J., & Sunderland, M. (2013, May). Planning for drug treatment services: Estimating population need and demand for treatment. Drug Policy Modelling Program, National Drug and Alcohol Research Centre, University of New South Wales. Seventh Annual Conference of the International Society for the Study of Drug Policy. Universidad de los Andes, Bogotá – Colombia. Conference paper. Retrieved from http://www.isssdp.org/wp-content/uploads/2015/06/ISSSDP-2013-Conference-program.pdf

Samposalo, H., Kuussaari, K., Hirschovits-Gerz, T., Kaukonen, O., Partanen, A., & Vorma, H. (2018). Tarpeenmukaiset palvelut kaikille? Päihdeaiakkaat sosiaali- ja terveydenhuollon palveluissa Kaakkos-Suomen ja Lapin alueilla [Equal services for all? Substance abusers in the social
welfare and health care system in south-eastern Finland and Lapland. Yhteiskuntapolitiikka, 83, 50–61.

Social Welfare Act 1301/2014 Chapter 1, § (2014). Retrieved from http://finlex.fi/fi/laki/ajantasa/2014/20141301?search%5Btype%5D=pika&search%5Bpika%5D

Stenius, K., Kekki, T., Kuussaari, K., & Partanen, A. (2012). Päihde- ja mielenterveyspalveluiden integraatio – kirjava käytäntö Suomessa [The integration of substance use and mental health services - diverse practice in Finland]. Yhteiskuntapolitiikka, 77, 167–175.

Stockwell, T. (2010). Effective prevention of substance use disorders. In WHO ATLAS on Substance Use (2010). Resources for the prevention and treatment of substance use disorders (pp. 105–131). Geneva, Switzerland: WHO. Retrieved from http://apps.who.int/iris/bitstream/10665/44455/1/9789241500616_eng.pdf

Storbjörk, J. (2014). Stakeholders’ arguments for and against moving Swedish substance abuse treatment to the health care system: How a fat reform proposal become a thin government bill. Nordic Studies on Alcohol and Drugs, 31, 81–110. doi:10.2478/nsad-2014-0006

Tigerstedt, C., & Huhtanen, P. (2013). Päihtyneiden aiheuttamat häiriöt julkisilla paikoilla [Harms caused by intoxicated people in public places]. In K. Warpenius, M. Holmila, & C. Tigerstedt (Eds.), Alkoholi-ja päihdehaitat läheisille, muille ja yhteiskunnalle [The Harms of Alcohol and Substances to Those Closely Related, Others and Society], (pp. 90–99). Tampere, Finland: National Institute for Health and Welfare, Suomen yliopistopaino.

Turtiainen, S., Ropponen, T., Lybäck, K., Sohliman, P., Inkinen, N., & Vorma, H. (2018). Mitä alkoholiongelmaiselle tapahtuu kuntoutustukijakson jälkeen? [What happens to alcohol abusers after the rehabilitation aid period?], Suomen lääkärilehti, 73, 447–448.

Vartiainen, A. (2013). Kuuden suurimman kaupungin päihdehuollon palvelujen ja kuntannusten vertailu vuonna 2012 [Comparison of substance abuse services and costs in the six biggest cities]. Kuusikkotööryhmä Publication Series 3. Helsinki, Finland: Editia. Retrieved from https://www.hel.fi/hel2/tietokeskus/Kuusikkopihdepalvelut_2012.pdf

Vahlbeck, K., Hieta, O., Kuosmanen, L., McDaid, D., Mikkonen, J., Parkkonen, J., . . . Tourunen, J. (2017). Toimivat mielenterveys- ja päihdepalvelut [Effective mental health and substance abuse services] (publications of the government’s analysis, assessment and research activities 89/2018). Retrieved from http://tietokayttoon.fi/documents/10616/3866814/89-2017-YhdessaMielin_valmis.pdf/e60e6d56-43cb-40e8-8f49-54e6dfdac5bb?version=1.0

Warpenius, K., & Tigerstedt, C. (2013). Miten alkoholiotkimus käsitteellistää haitat läheisille, muille ja yhteiskunnalle? [How to conceptual harms to other people and society within alcohol research]. In K. Warpenius, M. Holmila, & C. Tigerstedt (Eds.), Alkoholi- ja päihdehaitat läheisille, muille ja yhteiskunnalle [The Harms of Alcohol and Substances to Those Closely Related, Others and Society], Tampere, Finland: Suomen yliopistopaino, National Institute for Health and Welfare.

World Health Organization. (2006). WHO Technical consultation on the assessment of prevention and treatment systems for substance use disorders. Geneva, Switzerland: Author. Retrieved from http://www.who.int/substance_abuse/activities/saims_report_2006.pdf