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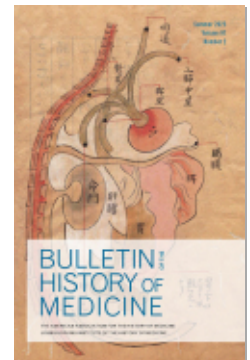
## The History of Psychiatric Epidemiology in Finland: From National Needs to International Arenas, 1900s–1990s

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# The History of Psychiatric Epidemiology in Finland: From National Needs to International Arenas, 1900s–1990s

MIKKO MYLLYKANGAS AND KATARIINA PARHI

**SUMMARY:** Psychiatric epidemiology has significantly influenced public health policies all around the world. This article discusses how Finnish epidemiologists reacted to local needs, which were born in specific circumstances and were controlled by science policy and funding opportunities. The development between the 1900s and 1990s is divided into three stages. The first Finnish studies in the field focused on the prevalence of mental illnesses in the country. The focus was to gain information for service planning, most of all to estimate the need for new hospitals and to set up the national social insurance system. After the Second World War, structural changes and social engineering fueled epidemiological interest. From the 1960s until the late 1980s, psychiatric epidemiology was interconnected with social psychiatry, which held a strong position in Finland. Since the 1990s, Finnish psychiatric epidemiology has been integrated with international epidemiology by using shared methodologies and through participation in transnational studies.

**KEYWORDS:** psychiatric epidemiology, history of psychiatry, mental disorders, mental health, epidemiology

Today, it is widely acknowledged that mental disorders are important in assessing public health. According to epidemiologists Evelyn J. Bromet and Ezra Susser, this understanding is to a large extent a result of findings in psychiatric epidemiology.<sup>1</sup> Since the 1950s, psychiatric epidemiology has been defined as a field that studies mental disorders in society and in populations, paying attention to biological, psychological, and social

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1. Evelyn J. Bromet and Ezra Susser, “The Burden of Mental Illness,” in *Psychiatric Epidemiology: Searching for the Causes of Mental Disorders*, ed. Ezra Susser et al. (Oxford: Oxford University Press, 2006), 5–14, 5.

explanatory factors.<sup>2</sup> Psychiatric epidemiology has considerably influenced mental health-related public health policy all around the world, although the globalization process has also been contested as Western academia has had the leading role in epidemiological research.<sup>3</sup>

This article reviews the emergence and development of psychiatric epidemiology in Finland from the early 1900s until the 1990s. Psychiatric epidemiology in Finland was initially motivated by national needs; since then, it has become a part of transnational research endeavors to study etiology of psychiatric disorders globally. We ask, what were the driving forces in planning and implementing epidemiological studies in the field of psychiatry? We focus on the main approaches, goals, and conceptual frameworks that have guided the practice of psychiatric epidemiology.

Finland shares many similarities with other Nordic countries, including a homogenous population and relatively small income disparity due to the social safety net and income transfers. In research, the ability to use register data is highly significant from the point of view of epidemiological research. In Finland, the population has remained stable and the local and national administrative documentation has developed for hundreds of years.<sup>4</sup> Additionally, personal identification codes have enabled the linking of data between different registers and the study of the whole population of the country since the 1960s.<sup>5</sup> Sociologist Susanne Bauer has shown how

2. J. N. Morris, "Uses of Epidemiology," *BMJ* 4936 (August 13, 1955): 395–401, 397, 401; Ann Oakley, "Fifty Years of JN Morris's *Uses of Epidemiology*," *Int. J. Epidemiol.* 36 (2007): 1184–85, 1184; Glyn Lewis, "Introduction to Epidemiologic Research Methods," in *Textbook of Psychiatric Epidemiology*, 3rd ed., ed. Ming T. Tsuang, Mauricio Tohen, and Peter B. Jones (Chichester: Wiley-Blackwell, 2011), 1–8; Ezra Susser and Zena Stein, *Eras in Epidemiology: The Evolution of Ideas* (Oxford: Oxford University Press, 2009), 3.

3. Nikolas Rose, *Our Psychiatric Future* (Cambridge: Polity, 2019), 141–48. There is some interest in localized histories; see, e.g., project SEHPE, which has focused on psychiatric epidemiology in Senegal. <https://anr.fr/Project-ANR-13-BSH1-0009>. There is also an ongoing project on "decolonizing madness," i.e., transcultural psychiatry. <https://cordis.europa.eu/project/id/851871>.

4. Finland and Sweden have the longest-running continuous mortality statistics in the world. The Swedish Crown enacted the "tabellverket" policy to collect annual population statistics in 1749. Peter Sköld, "The Birth of Population Statistics in Sweden," *Hist. Fam.* 9, no. 1 (2004): 5–21, 15–16.

5. Jouko Miettunen et al., "Use of Register Data for Psychiatric Epidemiology in the Nordic Countries," in Tsuang, Tohen, and Jones, *Textbook of Psychiatric Epidemiology* (n. 2), 117–31, 17; see also Susanne Bauer, "From Administrative Infrastructure to Biomedical Resource: Danish Population Registries, the 'Scandinavian Laboratory,' and the 'Epidemiologist's Dream,'" *Sci. Context* 27 (2014): 187–213.

Nordic countries have often been referred to as “goldmines for health research” and, for example, Denmark, as an “epidemiologist’s dream.”<sup>6</sup>

We divide the development of Finnish psychiatric epidemiology between the 1900s and 1990s into three phases, based on changing needs: (1) the state-led service planning preceding the Second World War, (2) the local-level investigations phase of the 1960s, and (3) the era of research infrastructures from the 1970s onward. During the first phase, psychiatrists gathered data for the planning of basic psychiatric services. The second phase is tied to the structural change in Finnish society and the growing influence of international social psychiatric and epidemiological research. It consisted of small-scale studies (by a single investigator or a small group) that focused on special populations and limited geographical areas and focused on understanding the effects of urbanization and modernization on mental health. During the third phase, psychiatric epidemiology has increasingly become a part of multidisciplinary research projects supported by vast research infrastructures and motivated by the increasing need to understand how mental conditions impact on daily well-being and productivity. There is an overlap in the second and the third phases, and the shift also indicates fundamental transitions in theoretical frameworks. The development in Finland reflects a global shift of focus in psychiatry in the latter half of the twentieth century from mental illnesses to mental disorders and then to mental health and ultimately to mental well-being. The history of psychiatric epidemiology in Finland has also taken a unique path, which has been dependent on local sociohistorical contingencies, funding opportunities, and research preferences. As primary sources, we use Finnish psychiatric publications, journal articles, research project reports and publications, governmental committee reports, and textbooks on social psychiatry and psychiatric epidemiology.<sup>7</sup>

Bromet and Susser have located the roots of psychiatric epidemiology in early twentieth-century sociology, especially in ecological studies by the French sociologist Émile Durkheim and Chicago School sociologists, who compared rates of mental disorders across different societies or communities.<sup>8</sup> Many scholars situate the roots of psychiatric epidemiology in the United States.<sup>9</sup> According to Bromet and Susser, the first couple of decades after the Second World War witnessed the emergence of community

6. Bauer, “Administrative Infrastructure” (n. 5) 199.

7. We have examined all studies we have been able to find by using search engines and lists of references between the 1900s and 1980s. From the 1990s onward, we have chosen examples to give an outline of the development in the field.

8. Bromet and Susser, “Burden of Mental Illness” (n. 1), 6.

9. David L. Streiner and John Cairney, “The Social Science Contribution to Psychiatric Epidemiology,” in *Mental Disorder in Canada: An Epidemiological Perspective*, ed. John Cairney

surveys, such as the New Haven Study, the Stirling County Study, and the Midtown Manhattan Study, to understand how widespread was impairment due to psychological symptoms.<sup>10</sup> These studies conceptualized mental health as a continuum from normal to abnormal and focused on sociocultural factors.<sup>11</sup> By looking at historiographical takes on psychiatric epidemiology in different countries, one can see that Bromet and Susser's U.S.-focused interpretation holds to an extent, particularly because so many, including the Finns, have referred to these studies and used them as examples for their own study plans.<sup>12</sup> At the same time, however, by focusing on famous studies, there is a risk of ignoring the idiosyncrasies of epidemiology in other countries and how local developments influenced international discourse. For example, the German history of psychiatric genetics is noteworthy, as are various Nordic studies.<sup>13</sup> Anne M. Lovell and Ezra Susser admit that the U.S.- and U.K.-focused narrative of the history of psychiatric epidemiology is incomplete, particularly due to language barriers.<sup>14</sup> One of our aims is to help fill this gap.

When objectives are examined from a historical perspective, local features become evident. For example, in postwar France there was an attempt to develop a French way of carrying out psychiatric epidemiology research. The development of psychiatric epidemiology was hampered by marginalization due to both the way that public health was organized and the privileged position of biological research. In the field of psychiatry, which was heavily influenced by psychoanalysis, humanism, and certain political ideas, epidemiological research and numerical data were met with mistrust.<sup>15</sup>

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and David L. Streiner (Toronto: University of Toronto Press, 2010), 11–28, 12–15; see also Allan V. Horwitz and Gerald N. Grob, “The Checkered History of American Psychiatric Epidemiology,” *Milbank Quart.* 89 (2011): 628–57.

10. Bromet and Susser, “Burden of Mental Illness” (n. 1), 6–7.

11. Dana March and Gerald M. Oppenheimer, “Social Disorder and Diagnostic Order: The US Mental Hygiene Movement, the Midtown Manhattan Study and the Development of Psychiatric Epidemiology in the 20th Century,” *Int. J. Epidemiol.* 43 (2014): i29–i42, i30.

12. E.g., Roger C. Bland and Tara Hanson, “The History of Psychiatric Epidemiology in Canada: The Development of Community Surveys,” in Cairney and Streiner, *Mental Disorder in Canada* (n. 9), 29–47.

13. On the history of psychiatric genetics, see Thomas G. Schulze, Heiner Fangerau, and Peter Propping, “From Degeneration to Genetic Susceptibility, from Eugenics to Genetics, from Bezugsziffer to LOD Score: The History of Psychiatric Genetics,” *Int. Rev. Psychiatry* 16 (2004): 246–59.

14. Anne M. Lovell and Ezra Susser, “What Might Be a History of Psychiatric Epidemiology? Towards a Social History and Conceptual Account,” *Int. J. Epidemiol.* 43 (2014): i1–i5.

15. Nicolas Henckes, “Mistrust of Numbers: The Difficult Development of Psychiatric Epidemiology in France, 1940–1980,” *Int. J. Epidemiol.* 43 (2014): i43–i52.

So far, the history of psychiatric epidemiology in Finland has not been studied thoroughly, although some aspects have been analyzed. Sociologist Ilpo Helén portrays psychiatric epidemiology as one of the factors that have made depression a public health issue.<sup>16</sup> Sociologist Mikko Jauho and Helén have studied how “the risk rationale” transformed psychiatric epidemiology and the epidemiology of cardiovascular diseases.<sup>17</sup> Historian Mikko Myllykangas has studied how psychiatric epidemiology and suicide research contributed to social planning in the 1960s and 1970s.<sup>18</sup> In addition to historical studies, epidemiologists have written review articles about past epidemiological studies, such as research on schizophrenia and psychiatric research based on birth cohorts.<sup>19</sup> By focusing on long-term changes, we show that Finnish psychiatric epidemiology has reacted to Finnish needs rising from the surrounding sociohistorical contexts, such as the rapid modernization of Finnish society in the postwar years. The foci in epidemiological studies have depended on societal development and currents in social policy. In the Finnish case, social psychiatry, influenced by social engineering, has played a significant role.<sup>20</sup> Over the course of time and because of changes in diagnostic criteria and technological advancements in genetics and fMRI scanning, psychiatric epidemiology

16. Ilpo Helén, “Psykiatrian muodonmuutos ja depression nousu kansantaudiksi: Historiallis-sosiologinen interventio,” *Sosiaalilääketieteellinen Aikakauslehti* 47 (2010): 45–58.

17. Mikko Jauho and Ilpo Helén, “Symptoms, Signs, and Risk Factors: Epidemiological Reasoning in Coronary Heart Disease and Depression Management,” *Hist. Hum. Sci.* 31 (2018): 56–73.

18. Mikko Myllykangas, “The Social Engineering of Suicide: Psychiatric Epidemiology and Suicide Research in Finland in the 1960s and 1970s,” *Medizinhistorisches J.* 54 (2019): 145–68.

19. Ville Lehtinen, “The Epidemiology of Mental Disorders in Finland,” *Nordic J. Psychiatry* 36 (1996): 25–30; Erika Jääskeläinen et al., “Twenty Years of Schizophrenia Research in the Northern Finland Birth Cohort 1966: A Systematic Review,” *Schizophrenia Res. Treat.* (2015), <https://doi.org/10.1155/2015/524875>; Jouko Miettunen et al., “Psychiatric Research in the Northern Finland Birth Cohort 1986: A Systematic Review,” *International Journal of Circumpolar Health* 78 (2019), <https://doi.org/10.1080/22423982.2019.1571382>.

20. “Social engineering” emerged as a tool of social planning in many Western countries, including the United States, Sweden, and Finland, during the twentieth century. As Lutz Raphael has pointed out, the goal was to ensure the adaptation of citizens to modern society by implementing health policies, architecture, and urban planning. Raphael, “Embedding the Human and Social Sciences in Western Societies, 1880–1980,” in *Engineering Society: The Role of the Human and Social Sciences in Modern Societies, 1880–1980*, ed. Kerstin Bruckweh (London: Palgrave Macmillan, 2012), 41–56, 50–53. According to Pekka Kuusi (1917–89), a famous Finnish advocate of social planning, society could influence people’s behavior through careful planning. For example, people would seek medical assistance more readily if medical services were made more widely available. Kuusi, *60-luvun sosiaalipolitiikka*, 5th ed. (Helsinki: WSOY, 1968), 258–64, 278.

has become more international and generalizing, focusing on universal aspects of mental health.

This article is structured as follows: The first section delves into the early history of Finnish psychiatric epidemiology and introduces the National Pensions Act, which fueled epidemiological studies. The second section focuses on the influence of structural change and postwar social planning, where psychiatric epidemiology focused on specific populations and phenomena, such as students and suicide. Following this, the third section introduces larger studies that aimed to represent the whole society, while the fourth section discusses how the study of risk factors became more common in Finnish psychiatric epidemiology and how the focus shifted from mental disorders to mental health. Finally, the fifth section brings us up to the 2000s and looks at more recent developments. It also pays attention to the new emphasis of mental well-being as well as the continuing search for the causes of mental illnesses.

## The Pioneering Studies

Typically, the historiography of psychiatric epidemiology draws a line between nineteenth-century- and early twentieth-century asylum statistics, “proto-epidemiological” surveys, and ecological studies, and the later discourse on psychiatric epidemiology after the Second World War.<sup>21</sup> However, psychiatric epidemiology per se is typically not defined without referring to the definitions that epidemiologists and psychiatrists themselves have presented. For example, according to Lovell and Steeves Demazeux, American physician Henry Elkind declared in 1938 that he had not been able to find a “text in which mental diseases were clearly treated as epidemiological objects before the 1920s.”<sup>22</sup> Although Elkind did not define what he meant by “epidemiology of mental disease,” he pointed out how difficulties regarding the etiology of mental illnesses were similar to “the field of chronic physical diseases.”<sup>23</sup> Elkind also noted that the epidemiological study of mental diseases had developed slowly

21. The term “proto-epidemiology” is used here to refer to an era when present-day epidemiological concepts (prevalence, incidence, risk, etc.) were not yet in use in psychiatry but when epidemiological efforts could already be recognized. See Saran Boslaugh, ed., *Encyclopedia of Epidemiology* (Thousand Oaks, Calif.: SAGE, 2008), 318.

22. Anne Lovell, “The World Health Organization and the Contested Beginnings of Psychiatric Epidemiology as an International Discipline: One Rope, Many Strands,” *Int. J. Epidemiol.* 43 (2014): i6–i18, i7; Steeves Demazeux, “Psychiatric Epidemiology, or the Story of a Divided Discipline,” *Int. J. Epidemiol.* 43 (2014): i53–i66, i55.

23. Henry B. Elkind, “Is There an Epidemiology of Mental Disease?,” *Amer. J. Pub. Health.* 28, no. 3 (1938): 245–50, 248.

as the only statistical data available were from hospital populations.<sup>24</sup> Yet Norwegian psychiatrist and psychiatric epidemiologist Ørnulv Ødegård (1901–1983) saw a clear continuity between nineteenth-century asylum statistics and the epidemiological investigations carried out in the 1950s. His perception was influenced by the fact that he favored admission statistics in his epidemiological research.<sup>25</sup> When we look for a definition of psychiatric epidemiology before the late 1950s, it becomes clear that individual researchers who practiced psychiatric epidemiology had defined their approach based on the methodology and aims of their personal research.

The first Finnish studies of psychiatric epidemiology were commenced to inform the state-led establishment of health services. By the turn of the twentieth century, Finland had only three mental hospitals.<sup>26</sup> Because psychiatrists and policy makers realized that the prevalence of mental illnesses in Finland could not be based on the available hospital statistics, in 1906 the Senate of Finland, the domestic government of the Grand Duchy of Finland,<sup>27</sup> appointed a committee to determine the prevalence of mental illness in the general population and to assess the present state and the sufficiency of care for the mentally ill. The preliminary data collection was carried out by sending questionnaires to every municipality in Finland. The committee received consultation from Swedish health authorities, where a similar survey had been conducted in 1901–2. The Swedish study had found a significant discrepancy between the questionnaire data and detailed examination of selected areas. Consequently, the committee decided to send physicians with psychiatric expertise to examine mentally disturbed individuals in six rural districts and four towns. The physicians traveled from village to village to track down possible cases and to evaluate and report their condition and prognosis.<sup>28</sup> The diagnoses followed the “Kraepelian system”;<sup>29</sup> *Dementia praecox* was diagnosed in

24. *Ibid.*, 247.

25. Ørnulv Ødegård, “Psychiatric Epidemiology,” *Proc. Roy. Soc. Med.* 55, no. 10 (1962): 831–37, 831–32.

26. Petteri Pietikäinen, *Kipeät sielut: Hulluuden historia Suomessa* (Helsinki: Gaudeamus, 2020), 55.

27. The Grand Duchy of Finland was an autonomous part of the Russian Empire.

28. Komiteanmietintö 1908:6, *Mielisairaanhoidon komitean mietintö* (Helsinki: Keisarillisen senaatin kirjapaino, 1909), 6, 22, 27–39; Ernst Therman, “Havaintoja matkalta, jonka tein mielisairasten tarkastamista varten Oulunjärven ympäristöllä maaliskuussa 1906,” *Duodecim* 22, no. 5 (1906): 117–23.

29. German psychiatrist Emil Kraepelin (1856–1926) presented in the consecutive editions of his *Lehrbuch der Psychiatrie* an influential classification of mental illnesses. Andrew Scull, *Madness in Civilization: A Cultural History of Insanity from the Bible to Freud, from the Mad-*



65.3 percent of the examined. The committee regarded the distribution of different diagnoses as suggestive and stated that a systematic study of “the incidence of various mental illnesses” would be useful for developing what the committee called “comparative psychiatry”—an ecological approach to study the differences in the prevalence of mental illness in different circumstances.<sup>30</sup> The committee considered the survey methodology essential to understand how different environments caused incidences of different mental illnesses and how these could be prevented.<sup>31</sup> In addition, the committee recommended the establishment of several new provincial mental hospitals and the expansion of the capacity of the four existing hospitals.<sup>32</sup>

The Finnish origin of psychiatric epidemiology stands in stark contrast with how the early history of the discipline is typically described. According to Demazeux, the first generation of studies of psychiatric epidemiology “consisted primarily of asylum statistics.”<sup>33</sup> Demazeux cites epidemiologists Bruce and Barbara Dohrenwend who discuss the history of psychiatric epidemiology in the United States and note that “the first generation of twentieth century epidemiologic investigators tended to rely on key informants and agency records.”<sup>34</sup> In Finland, although such sources did not exist—at least not systematically—in the early twentieth century, this did not stop the pioneering epidemiologists. Instead, it forced them to do the legwork much in the manner that would come to define the post–World War II community surveys.

It took three decades until the next studies were executed. In 1935–36, a study initiated by the Ministry of Social Affairs focused on areas composing 12 percent of the population in Finland. First, the mentally ill were sought from the subpopulation by using hospital and other official registers, followed by examinations by eight psychiatrically trained physicians from village to village. Each examination followed a predefined protocol and also included interviews of other people in the community, such as teachers. The study charted the prevalence of feeble-mindedness

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*house to Modern Medicine* (Princeton, N.J.: Princeton University Press, 2015), 263–65. The first Finnish professor of psychiatry, Christian Sibelius (1869–1922), studied in Germany for several years and visited Kraepelin in Munich in 1906. For Sibelius and other Finnish psychiatrists, Germany provided the main influence for the development of psychiatry until the Second World War. Pietikäinen, *Kipeät sielut* (n. 26), 47–49.

30. *Komiteanmietintö* 1908:6 (n. 28), 63–64.

31. *Ibid.*, 76.

32. *Ibid.*, 33–35, 91–92.

33. Demazeux, “Psychiatric Epidemiology” (n. 22), i58.

34. Bruce P. Dohrenwend and Barbara Snell Dohrenwend, “Perspectives on the Past and Future of Psychiatric Epidemiology,” *Amer. J. Pub. Health* 72, no. 11 (1982): 1271–79, 1271.

and mental illnesses as well as epilepsy, asocial psychopathy, and chronic alcoholism and aimed at a general overview of the whole population.<sup>35</sup>

A few years following these studies, epidemiological information on mental illnesses was required to set up a national social insurance system. The National Social Insurance Institution (NSII) was founded in 1937,<sup>36</sup> followed by the National Pensions Act in 1939, which guaranteed pensions to all able-bodied Finns between the ages of eighteen and fifty-four.<sup>37</sup> This made it crucial to determine the number of people who were unable to work.<sup>38</sup> In 1938, all Finns with an invalidity had to inform the NSII about their condition: 55,442 was the total number, of which the NSII excluded some conditions, such as psychopathy, alcoholism, and encephalitis lethargica.<sup>39</sup>

Psychiatrist Martti Kaila used these two statistical surveys to create a cross-sectional study. He compared his findings to those of earlier cross-sectional studies by Carl Brugger in Thüringen, Germany, and Erik Strömngren in Bornholm, Denmark, thus tying his study to genealogical research. He also referred to German psychiatrist Ernst Rüdin's cross-sectional studies and his genealogical family method in studying mental illnesses. Though Rüdin was in favor of racial hygiene, Kaila believed that a different approach was required to get a trustworthy overview of the whole population in Finland, as he considered Finland racially rather uniform.<sup>40</sup>

Although Kaila was not keen on Rüdin's approach, in 1942 there was a plan to establish a Finnish institute for racial hygiene, population policy, and genetics. However, such plans were not realized.<sup>41</sup> Had the institute been founded, it would have provided a platform for eugenically inspired psychiatric genetics and epidemiological studies. This turn of events is significant because prior to the 1950s interest in the connection between

35. For more on the study, see Martti Kaila, "Über die Durchschnittshäufigkeit der Geisteskrankheiten und des Schwachsinn in Finnland," *Acta Psychiatrica et Neurologica* 17 (1942): 47–67, 48–49.

36. Kai Häggman, *Suurten muutosten Suomessa: Kansaneläkelaitos 1937–1997* (Helsinki: Kansaneläkelaitos, 1997), 11, 17.

37. Kansaneläkelaki täytäntöönpanomääräyksineen, Pieni lakisarja n:o 57, Valtioneuvoston kirjapaino, Helsinki 1938, 1. luku 1 §.

38. Martti Kaila, *Työkyvyttömyyttä aiheuttavien tautien esiintymistiheydestä Suomessa ikäryhmissä 18–54 vuotta*, Kansaneläkelaitoksen tieteellisiä ja tilastollisia julkaisuja n:o 2 (Helsinki: Kansaneläkelaitos, 1940), 1; Häggman, *Suurten muutosten Suomessa* (n. 36), 33.

39. Kaila, "Über die Durchschnittshäufigkeit" (n. 35), 51–52.

40. *Ibid.*, 47.

41. Marjatta Hietala, "Tutkijat ja Saksan suunta," in *Tutkijat ja sota: Suomalaisten tutkijoiden kontakteja ja kohtaloita toisen maailmansodan aikana*, ed. Marjatta Hietala (Jyväskylä: SKS, 2006), 30–141, 119–29.

mental illnesses and genetics was much stronger, and over sixty studies were published in the Nordic countries and Central Europe.<sup>42</sup> Although psychiatric epidemiology did not exist as a distinct medical discipline, the goals and practices of early studies show us that the so-called proto-epidemiological phase includes epidemiological observational study techniques and shares similarities with later epidemiological research.

## Studies on the Effects of Societal Change

The methods, goals, and utility of psychiatric epidemiology came under international discussion immediately after the Second World War. Between the 1950s and the 1970s, the emerging international and transnational community of psychiatric epidemiologists strove for a universal methodological and conceptual foundation to yield internationally comparable results and knowledge about psychiatric disorders.<sup>43</sup> The World Health Organization's Mental Health Unit generated international awareness of the need for universal yet culturally sensitive language and diagnostic criteria while supporting the rise of a social psychiatric approach in psychiatric discourse.<sup>44</sup> The 1960s brought changes to the theory and practice of psychiatric epidemiology in Finland, too. On one hand, epidemiology in general, and psychiatric epidemiology in particular, was discussed as a novelty and a discipline of the future.<sup>45</sup> Yet on the other hand, Finnish psychiatrists continued carrying out epidemiological investigations, which they regarded as successors of earlier epidemiological surveys. Simultaneously, psychiatrists tried to overcome obstacles identified in international discussions, such as how to define "a case" and the problems caused by the lack of universal diagnostic criteria. This era has a further significance.

42. Bland and Hanson, "History of Psychiatric Epidemiology" (n. 12), 30.

43. Harry Yi-Jui Wu, *Mad by the Millions: Mental Disorders and the Early Years of the World Health Organization* (Cambridge, Mass.: MIT Press, 2021), 79–89; Lovell, "World Health Organization" (n. 22), i10–i11, i15–i16; see also Marcus Cueto, Theodore M. Brown, and Elizabeth Fee, *The World Health Organization: A History* (Cambridge: Cambridge University Press, 2019), 61, 63.

44. Matthew Smith, "Getting on in Gotham: The Midtown Manhattan Study and Putting the 'Social' in Psychiatry," *Cult. Med. Psychiatry* 45 (2021): 385–404, 386–87; Harry Yi-Jui Wu, "World Citizenship and the Emergence of the Social Psychiatry Project of the World Health Organization, 1948–c. 1965," *Hist. Psychiatry* 26 (2015): 166–81, 167, 179; Dan G. Blazer, *The Age of Melancholy: "Major Depression" and Its Social Origins* (New York: Routledge, 2005), 97–98; Wu, *Mad by the Millions* (n. 43), 50–55.

45. Antti Mattila, "Epidemiologian teoriaa," *Duodecim* (1961): 125–29, 127; Martti Olkinuora, "Epidemiologia näkökohtia psykiatriassa," *Duodecim* 82, no. 4 (1966): 145–52, 150–51.

Psychiatric epidemiology emerged as a modern discipline in Finland in the 1960s and 1970s. The terminology, methodologies, and theoretical considerations were influenced by the vivid international, particularly Anglo-American, discussion. As shown in the next section, the first doctoral dissertations on psychiatric epidemiology were also produced during this period.

In addition to international influences, fundamental changes in Finnish society nourished the interest in psychiatric epidemiology. Between 1950 and 1970, the city-dwelling population increased by one million in a country where the total population was little over four million. Finland transformed from a dominantly agriculture- and forestry-driven economy into a postindustrial service economy. The change resulted in massive internal migration, wage work, working outside of home, and the emergence of a new, urban middle class.<sup>46</sup> All these changes called for reform in the health care system,<sup>47</sup> and epidemiological knowledge was deemed necessary to complete the task. Finnish social policy makers, such as sociologist and future minister of interior Pekka Kuusi, were convinced that science-based planning (social engineering) would enhance national economic and social development, which further encouraged epidemiological research.<sup>48</sup>

Initially, the Finnish studies of psychiatric disorders in a changing society were of limited scope and conducted by small groups of researchers or individual investigators. In 1964, psychiatrists Asser Stenbäck and Kalle Achté perceived the need for “sociologically oriented psychiatric studies of our large cities with their fast growing populations” and the urgency to “obtain adequate information for administrative planning of mental health facilities.”<sup>49</sup> The social psychiatric approach was inspired by the

46. Riitta Hjerpe and Jukka Jalava, “Economic Growth and Structural Change: A Century and a Half of Catching-Up,” in *The Road to Prosperity: An Economic History of Finland*, ed. Jari Ojala, Jari Eloranta, and Jukka Jalava (Helsinki: SKS, 2006), 33–63, 35, 49–53; Päivi Uljas, *Hyvinvointivaltion läpimurto* (Helsinki: Into, 2012), 15, 56, 125–29; Matti Peltonen, “Suomalainen maatalous,” in *Vaurastumisen vuodet: Suomen taloushistoria teollistumisen jälkeen*, ed. Jaana Laine et al. (Helsinki: Gaudeamus, 2019), 117–30, 119–24; Juha Siltala, *Keskiluokan nousu, lasku ja pelot* (Helsinki: Otava, 2017), 9–11.

47. Minna Harjula, “Health Citizenship and Access to Health Services: Finland 1900–2000,” *Soc. Hist. Med.* 29 (2016): 573–89, 578, 586.

48. Armo Hormia, “Yhteiskuntasuunnittelu ja mielenkterveys,” *Terveystieteiden lehti* 74 (1962): 506–7.

49. Asser Stenbäck and Kalle A. Achté, “An Epidemiological Study of Psychiatric Morbidity in Helsinki,” *Acta Psychiatrica Scandinavica* 39, suppl. 180 (1964): 287–307, 287.

New Haven Study and the Midtown Manhattan Study,<sup>50</sup> and by several Norwegian prevalence studies by Ørnulv Ødegård, in which Ødegård speculated on the influence of social and environmental factors on incidences of mental disorders.<sup>51</sup> Stenbäck and Achté investigated the inter-relatedness of sociological variables (sex, age, place of birth / migration, social class) and the prevalence of psychoses, neuroses, personality disorders, and addictions. Similar to Ødegård but unlike the American studies, the Finns employed admission statistics instead of a community survey. Stenbäck and Achté regarded hospital admission as reliable evidence of the impairment of psychological and social functioning and expressed their reservation toward “those census investigations which rather liberally include neuroses,” pointing the finger at the Midtown Manhattan Study.<sup>52</sup> In contrast, for psychiatrist Leo Srole, one of the principal investigators of the Midtown Manhattan Study, community surveys were a liberator of epidemiology from “dependence on institutional records.”<sup>53</sup>

Following their investigation, Stenbäck and Achté concluded that social class had a major significance in the distribution of mental illnesses in society, especially in relation to psychoses, and that “social class, as a variable of education, achievement, income and social status seems also to have a bearing upon the type of mental illness.”<sup>54</sup>

Subsequent investigations seemed to confirm that the quality of the urban environment and living conditions influenced the incidence of psychiatric disturbances.<sup>55</sup> In a 1967 study, child psychiatrist Sakari Turunen examined variations in children’s “psychic disturbances” in different parts of the city of Turku, where he discovered that the improvement of old and poorly built settlements evened out the distribution of children’s behavioral problems in the city, which typically concentrated on the areas

50. The New Haven Study and the Midtown Manhattan Study were two major North American studies of psychiatry epidemiology that analyzed socioeconomic status, immigration, and other social variables in the 1950s. Matthew Smith, “A Fine Balance: Individualism, Society and the Prevention of Mental Illness in the United States, 1945–1968,” *Palgrave Commun.* 2, no. 16024 (2016), 4, <https://doi.org/10.1057/palcomms.2016.24>.

51. See, e.g., Ørnulv Ødegård, “The Distribution of Mental Diseases in Norway,” *Acta Psych. et Neurol.* 20 (1945): 247–84.

52. Stenbäck and Achté, “Epidemiological Study” (n. 49), 287–88.

53. Leo Srole et al., *Mental Health in the Metropolis: The Midtown Manhattan Study* (New York: McGraw-Hill, 1962), 31.

54. Stenbäck and Achté, “Epidemiological Study” (n. 49), 303.

55. K. A. Achté, “Itsemurhat ja itsemurhayritykset,” *Sosiaalilääketieteellinen Aikakauslehti* 2 (1963): 21–28, 21; K. A. Achté, “Kaupungistuneen ihmisen mielenterveys,” *Terveystieteellinen* 81 (1969): 26–28, 28, 48.

in bad repair.<sup>56</sup> Psychopathological effects of urban environment were further studied in the context of suicide, which was an important subject of epidemiology from the 1960s onward.<sup>57</sup> In 1977, psychiatrist Jouko Lönnqvist published an investigation of “socio-epidemiology” of suicide in Helsinki. In this work, Lönnqvist studied the variations in suicide rates in different parts of Helsinki over a ten-year period. He focused on the “social environment” in explaining differences in suicide rates between socioeconomic groups. Lönnqvist employed the theory of “social disorganization” of the Chicago School sociologists to explain why certain areas in cities seemed to generate more mental illnesses and deviant behavior, including suicide.<sup>58</sup>

Whereas the epidemiological study of the psychological effects of urbanization was a consequence of the ongoing societal transformation in Finland, mental health of the college and university students had gathered wider interest in the Western countries. By the turn of the 1950s, the U.S.-based Group for the Advancement of Psychiatry (GAP) began to advocate paying more psychiatric attention on university students and students in general. Adolescence was regarded as a period of emotional vulnerability but also as a time during which psychotherapy could be successful.<sup>59</sup> UNESCO had indicated a growing need of psychiatric help among college and university students. Interest in the mental health of university students was in line with postwar pacifist ideology, according to which world peace depended on mentally sound individuals.<sup>60</sup> Additionally, for example in Britain, an increasing amount of available data due to the establishment of student health structures in the universities from the 1930s onward fed the interest of researchers.<sup>61</sup>

56. Sakari Turunen, “Muutoksista lasten psyykkisten häiriöiden ekologiassa,” *Sosiaalilääketieteellinen Aikakauslehti* 6 (1967): 3–9, 9.

57. Mikko Myllykangas, “Rappeutuminen, tiedostamaton vai yhteiskunta? Lääketieteellinen itsemurhatutkimus Suomessa vuoteen 1985” (Ph.D. diss., Acta Universitatis Ouluensis B120, University of Oulu, 2014), 154–203.

58. Jouko Lönnqvist, *Suicide in Helsinki. An Epidemiological and Socialpsychiatric Study of Suicides in Helsinki in 1960–61 and 1970–71* (Helsinki: Psychiatria Fennica, 1977), 72–76.

59. Group for the Advancement of Psychiatry, “The Role of Psychiatrists in College and Universities” (Report 17, 1951); Group for the Advancement of Psychiatry, “Promotion of Mental Health in the Primary and Secondary Schools” (Report 18, 1951).

60. J. R. Rees, “By Way of Introduction,” *Int. Soc. Sci. J.* 11, no. 1 (1959): 7–13, 9; Sarah Crook, “Historicising the ‘Crisis’ in Undergraduate Mental Health: British Universities and Student Mental Illness, 1944–1968,” *J. Hist. Med. Allied Sci.* 75, no. 2 (2020): 193–220, 197, 204–5; Wu, *Mad by the Millions* (n. 43), 29–30.

61. Crook, “Historicising the ‘Crisis’” (n. 60), 196–200, 203.

In Finland, the number of undergraduates grew significantly after the Second World War through the expansion of higher education,<sup>62</sup> and in 1965 the Department of Psychiatry of the University of Helsinki and the Finnish Student Health Service commenced a study of the mental health of university students led by the psychiatrist Yrjö O. Alanen. The results were published in national journals and in *Social Psychiatry* in 1967–68. The study followed social psychiatric outlines, where the psychiatrists interviewed students about their family, school backgrounds, personality, illnesses, and mental disorders. The purpose of the combination of psychiatric examination with sociological perspectives was to understand how nonpsychological and psychological factors were interrelated in the occurrence of mental disorders. While the British student mental health experts had emphasized a national interest in providing psychological support and psychiatric treatment for university students,<sup>63</sup> Finnish psychiatrists were more interested in the influence of urbanization and other social psychiatric aspects. For example, the 1965 study found that any “disturbances” were more prevalent among students from an urban background and female students who had graduated from girls’ schools.<sup>64</sup>

The comparison of the 1965 study’s findings with studies from other countries ran into problems caused by differences in psychiatric cultures. In the 1960s, the debate over differentiation between various psychiatric diagnoses was wide open. The obstacles it created for psychiatric epidemiology had been recognized by international psychiatric organizations, the WHO, and individual researchers.<sup>65</sup> The situation was highlighted in the Finnish Student Study too. The study found possibly twice as high prevalence of “mental disturbances” among Finnish university students as their Anglo-Saxon counterparts. The international numbers were based on hospital admissions and psychiatric service consultations. The Finnish study used interviews and therefore included many mild cases of psychiatric abnormalities, which may or may not have ever become registered as psychiatric cases outside of the study.<sup>66</sup> In this regard, the

62. Maria Jalava, *The University in the Making of the Welfare State* (Frankfurt am Main: Peter Lang, 2012).

63. Crook, “Historicising the ‘Crisis’” (n. 60), 201, 204.

64. Yrjö O. Alanen et al., “The Mental Health of Finnish University Students: A Psychiatric Study of Freshmen,” *Soc. Psychiatry* 3 (1968): 60–65, 61, 63; Yrjö O. Alanen et al., “Suomalaisen ylioppilaan mieleninterveys—psykiatrinen tutkimus ensimmäisen vuoden opiskelijoista,” *Sosiaalilääketieteellinen Aikakauslehti* 6 (1967): 127–38, 133.

65. Olkinuora, “Epidemiologia näkökohtia psykiatriassa” (n. 45), 151; Wu, *Mad by the Millions* (n. 43), 118–19.

66. Alanen et al., “Mental Health” (n. 64), 62, 64.

Finnish study was more akin to a study of normal population, like the Midtown Manhattan Study.

The results of psychiatric epidemiology conducted in any one country could not easily be compared with those observations from another country. However, Finnish researchers worked toward a classification system that could bring cohesion even to Finnish studies. In 1966, Yrjö O. Alanen published “The Family in the Pathogenesis of Schizophrenia and Neurotic Disorders,” based on a study funded by the U.S.-based Foundations’ Fund for Research in Psychiatry (FFRP).<sup>67</sup> The study focused on family background and the family dynamics of schizophrenic and neurotic patients, but as the investigation also covered family members, a plethora of psychiatric diagnoses was used. In the process of the study, individual diagnoses were placed in six diagnostic categories on “a descriptive-diagnostic scale” that indicated the degree of seriousness of the disorders: (I) normal, (II) mild neurotic/psychopathic features, (III) neuroses, (IV) character disorders, (V) borderline cases, (VI) psychoses. This was done to make it possible to compare different patient series and subgroups.<sup>68</sup> The 1965 study of Finnish university students also led by Alanen used this categorization, and the majority of examined students were placed in category II (62 percent), with only one individual case in category V and none in the psychoses category.<sup>69</sup> To sum up, relatively limited studies were conducted by small groups or individual psychiatrists who followed the growing international discussion. Though the problems faced in international psychiatric epidemiology were acknowledged, Finnish researchers set out to find solutions to make their observations comparable with other national studies.

## Social Psychiatric Epidemiology of Two Finlands

In the 1970s and the early 1980s, the social psychiatric approach became more prominent due to several factors. A shift of focus from treatment to prevention in medicine was a major international change in medicine

67. In 1958, Alanen had visited Yale University and worked with Fredrick C. Redlich and other pioneers of social psychiatric epidemiology and psychiatric family research such as Theodore Lidz and Stephen Fleck. Yrjö O. Alanen, “The Family in the Pathogenesis of Schizophrenia and Neurotic Disorders,” *Acta Psych. Scand. suppl.* 189 (1966): 9. Redlich had personally made sure that the FFRP grant would be substantial enough to ensure the completion of the study and encouraged Alanen to double the amount he was asking. Yrjö O. Alanen, *Samassa veneessä—psykiatrin muistelmia ja merkintöjä* (Jyväskylä: Therapeia-säätiö, 2012), 52–53.

68. Alanen, “Family in the Pathogenesis” (n. 67), 116.

69. Alanen et al., “Mental Health” (n. 64), 62.



and psychiatry in the postwar era. In Finland, the attention moved from the hospital building to the development of community health centers, a process fueled by the Public Health Act in 1972. The goal was to achieve a more equal distribution of health in the population, including similar access to health services in all parts of the country.<sup>70</sup>

Within the psychiatric discourse, social psychiatrists called for a move away from institutional care toward early prevention and outpatient care.<sup>71</sup> Internationally, criticism had been voiced not only by individual reformist psychiatrists but also by social critics and activists.<sup>72</sup> At the same time, the use of prescribed psychotropic drugs, including major and minor tranquillizers, sedatives, and antidepressants, was increasing in Finland.<sup>73</sup> A revision of the Mental Health Care Act in 1977 broadened the scope of state subsidies to cover outpatient care, which thus facilitated the deinstitutionalization of psychiatric treatment in Finland.<sup>74</sup> Consequently, psychiatric epidemiology in the 1970s was conducted in a new ideological, theoretical, and sociopolitical environment.

Since the early 1960s, the NSII had conducted epidemiological surveys of chronic illnesses, focusing especially on cardiovascular diseases. In 1968, the NSII established a social psychiatric task force to examine the mental health situation, which raised the public health significance of mental disorders right next to cardiovascular diseases. The task force, composed of professors of psychiatry Yrjö Alanen and Pekka Tienari and undergraduates Ville Lehtinen and Erkki Väisänen from the universities of Turku and Oulu, commenced a social psychiatric and epidemiological study on two geographical areas approximately 720 kilometers apart. The epidemiological survey included five hundred randomly sampled

70. Ranja Aukee, "Vanhasta uuteen sosiaalilääketieteeseen: Suomalaisen sosiaalilääketieteen muotoutuminen 1800-luvun lopulta vuosituhannen vaihteeseen" (Ph.D. diss., Acta Universitatis Tamperensis, University of Tampere, 2013).

71. E.g., Erik E. Anttinen, "Mielenterveyshuolto maassamme 1970- ja 1980-luvuilla," *Sosiaalilääketieteellinen Aikakauslehti* 8 (1970): 134–41, 135.

72. Scull, *Madness in Civilization* (n. 29), 369–74; Oisín Wall, *The British Anti-Psychiatrists: From Institutional Psychiatry to the Counter-Culture, 1960–1971* (London: Routledge, 2018), 18–22; Katariina Parhi and Mikko Myllykangas, "Liberating the Deviants: How to Change the Politics of Social Control—A Case Study from Finland, 1967–1971," in *Social Class and Mental Illness in Northern Europe*, ed. Petteri Pietikäinen and Jesper Kragh (London: Routledge, 2019), 194–213, 199–200, 204–5.

73. On the increase in Finland, see Elina Hemminki, *Prescription of Psychotropic Drugs in Outpatient Care* (Tampere: Acta Universitatis Tamperensis, 1974), 18–23; more generally, see Petteri Pietikäinen, *Madness: A History* (Oxon: Routledge, 2015), 287–311; Scull, *Madness in Civilization* (n. 29), 367–69, 378–83.

74. Ville Lehtinen and Erkki Väisänen, *Psykiatrinen sairastavuus ja hoidon tarve Suomessa*, Kansaneläkelaitoksen julkaisuja AL:12 (Turku: Kansaneläkelaitos, 1979), 10.

individuals from the southwestern coast town of Uusikaupunki and the rural districts of Uusikaupunki and Kalanti and another five hundred from the town and rural district of Kemijärvi, north of the Arctic Circle.<sup>75</sup> This epidemiological survey came to be known as the UKKI study.<sup>76</sup> Both Lehtinen and Väisänen authored their doctoral theses as part of the study in 1975, making them effectively the first psychiatrists in Finland to specialize in epidemiology. The study setting of the UKKI study was planned so that it would reflect the different living and working conditions in Finland. Therefore, the UKKI study can be situated on the long, historical tradition of seeing Finland as composed of two (or more) distinct areas, people, cultures, and ways of earning one's livelihood.<sup>77</sup>

Similar to the smaller-scale epidemiological studies of the 1960s, the UKKI study drew influences from Anglo-American psychiatric epidemiology. The division of labor between Lehtinen and Väisänen reflected the structure of *Social Class and Mental Illness* by Redlich and Hollingshead, in which an epidemiological study was followed by the analysis of cultural factors and attitudes toward psychiatric illnesses. Väisänen's doctoral thesis, "Mielenterveyden häiriöt Suomessa" (Psychiatric disorders in Finland), focused on the prevalence and epidemiology of mental disorders, while Lehtinen's doctoral thesis, "Psykiatrisen hoidon ja kuntoutuksen tarve sekä mielisairauteen kohdistuvat asenteet" (Need of psychiatric treatment and rehabilitation: Attitudes toward mental illness), discussed attitudes toward mental illnesses and questions of rehabilitation.

Unlike previous Finnish studies, the UKKI study used multiple survey techniques to achieve empirical accuracy. First, the subjects completed the Cornell Medical Index (CMI) Health Questionnaire, followed by a personal examination. This examination included psychological tests (the Zulliger projective test and the Wartegg drawing test)<sup>78</sup> and—most importantly—a semistructured interview by a psychiatrist. Väisänen underlined

75. The acronym UKKI was derived from the districts' names of Uusikaupunki, Kalanti, and Kemijärvi.

76. Ville Lehtinen, "Need of Psychiatric Treatment and Rehabilitation in Finland. Evaluation Based on Psychiatric Examination of General Population," *Psychiatria Fennica* 6 (1975): 365–71, 365.

77. Pertti Haapala, Petri Karonen, and Nils Erik Villstrand, "Suomalainen yhteiskunta: rakenteet ja instituutiot," in *Suomalaisen yhteiskunnan historia 1400–2000*, ed. Petri Karonen, Nils Erik Villstrand, and Pertti Haapala (Tampere: Vastapaino, 2021), 9–27, 15.

78. Both tests were widely used in the Finnish occupational psychology as well as in clinical settings. Ville Lehtinen, "Psykiatrisen hoidon ja kuntoutuksen tarve sekä mielisairauteen kohdistuvat asenteet," *Kansaneläkelaitoksen julkaisuja AL:3* (Turku: Kansaneläkelaitos, 1975), 259; Eka Roivainen, "A Brief History of the Wartegg Drawing Test," *Gestalt Theory* 31, no. 1 (2009): 55–71, 65.

the importance of not letting the individuality of each interview to disappear while using statistical methods. A cultural insight was important to understand how people from different social classes and backgrounds expressed mental distress.<sup>79</sup> The combined data were used to assess the presence of a mental disorder and the need for psychiatric treatment.

A common problem of psychiatric epidemiology has always been how to make mental disorders observable and quantifiable. Fredrick Redlich and Daniel Freeman operationalized the concept of psychiatric disorders as “disturbed behavior” in their 1966 book *The Theory and Practice of Psychiatry*, and this approach was chosen for the UKKI study too. Behavior was understood very broadly as encompassing social, physical, and verbal actions and “internalized behavior.” The researchers then observed these areas of behavior and defined disturbances based on their examinations. Disturbed behavior was something that caused harm and suffering to the individual, while normal behavior was defined by the prevailing culture and social norms and values.<sup>80</sup> To circumvent the much-discussed problem of case-identification in psychiatric epidemiology,<sup>81</sup> the ontological foundation of mental disorders shifted further away from biology toward social constructionism or context dependency.

By using observations and data collected by the investigators, the UKKI study charted the prevalence of mental disorders. Admission data were categorically ruled out, and information from hospital registers and various authorities was used only to verify information gathered by individual examinations.<sup>82</sup> The study used the six-step diagnostic classification developed by Alanen as the aim was to make the classification comparable with earlier Finnish studies.<sup>83</sup> Broad diagnostic categories were considered to ensure the accuracy of the overall diagnostic scheme by eliminating differences in the interpretation of symptoms and diagnoses.<sup>84</sup> Five years after the initial study, Lehtinen and Väisänen conducted a follow-up study in 1974–75. The follow-up study also used the CMI questionnaire as the main instrument ( $N = 1,000$ ), supplemented with 287 interviews of such

79. Erkki Väisänen, “Mielenterveyden häiriöt Suomessa,” *Kansaneläkelaitoksen julkaisuja* AL:2 (Helsinki: Kansaneläkelaitos, 1975), 20.

80. Lehtinen and Väisänen, *Psykiatrinen sairastavuus* (n. 74), 15.

81. E.g., David Mechanic, “Problems and Prospects in Psychiatric Epidemiology,” in *Psychiatric Epidemiology: Proceedings of the International Symposium held at Aberdeen University 22–5 July 1969*, ed. E. H. Hare and J. K. Wing (London: Oxford University Press, 1969), 3–22, 5–7.

82. Väisänen, “Mielenterveyden häiriöt Suomessa” (n. 79), 12.

83. Lehtinen, “Psykiatrisen hoidon” (n. 78), 91.

84. Väisänen, “Mielenterveyden häiriöt Suomessa” (n. 79), 20.

individuals whose results of the CMI questionnaire had shown changes in mental health.<sup>85</sup>

In the study design, striking differences in the living conditions between agrarian Finland and growing urban Finland were acknowledged. “The harsh conditions in Northern Finland and very long distances to treatment facilities mean that sometimes a disturbed individual must travel 650 kilometers to get treatment,” characterized Väisänen, adding that mental health care in Finland was hardly “communally well-integrated.”<sup>86</sup> Social environment had an impact on etiology, too. Analyzing the impact of different environments and social conditions reflected the social psychiatric ethos. Historian Harry Wu characterizes this as weaning from “bio-determinism” and a shift toward the study of populations.<sup>87</sup> “Constitution and structure,” Väisänen thought, “set only some boundaries for the behavior, whereas actions were conditioned by the social environment.”<sup>88</sup> This was significant as the arrival of psychotropic medication had had no major impact on the prevention or rehabilitation of psychiatric patients.<sup>89</sup> The UKKI study emphasized social factors and conveyed what Wu considers as an emancipatory aspect of social psychiatry.<sup>90</sup> Väisänen vehemently criticized the tendency of psychiatrists to be blind to the influence of their own social background, especially when evaluating individuals from lower social classes. Consequently, this led to bias in diagnostic practice and treatment, where those patients from lower classes were denied “insight-oriented” psychotherapy, often because their verbal expression was regarded limited or undeveloped. Regarding the treatment in general, the poorest regions of Finland completely lacked treatment facilities.<sup>91</sup> Thus, the social psychiatric epidemiology of the UKKI study attempted to uncover the influence of social class, rurality, and gender for the occurrence of mental disorders.<sup>92</sup> During an era when Finland as a modern postindustrial economy emerged and large areas of the country were becoming sparsely populated, the UKKI study turned the focus on the differences in prevalence and incidence of mental disorders between urban and rural settings. The social psychiatric approach

85. Lehtinen and Väisänen, *Psykiatrinen sairastavuus* (n. 74), 23–25.

86. Väisänen, “Mielenterveyden häiriöt Suomessa” (n. 79), 28.

87. Wu, *Mad by the Millions* (n. 43), 57.

88. Väisänen, “Mielenterveyden häiriöt Suomessa” (n. 79), 27.

89. *Ibid.*, 11.

90. Wu, *Mad by the Millions* (n. 43), 12.

91. Väisänen, “Mielenterveyden häiriöt Suomessa” (n. 79), 11, 27–29.

92. Erkki Väisänen, “Mental Health in Finland,” *Psychiatria Fennica* 6 (1975), 359–63, 359; Erkki Väisänen, “Psychiatric Disorders in Finland,” *Acta Psychiatrica Scandinavica* suppl. 263 (1975): 22–33, 22.

of the UKKI study encouraged one to look for differences in a seemingly homogenous society.

The postwar boom of social medicine and social psychiatry was embodied by the UKKI study. It challenged the “one disease–one cause” thinking and inspired one to look for multiple causes from biological, psychological, and social risk factors. The development of computer technology facilitated such a change as the UKKI study was one of the first Finnish studies of psychiatric epidemiology to use the computer-aided analysis of data generated from interviews and questionnaires. To investigate how multiple factors influenced the need of psychiatric treatment, psychological functioning, need of psychiatric rehabilitation, and attitudes toward mental illness, the UKKI study used automatic interaction detector (AID) and multiple classification analysis (MCA) computer-assisted methodologies developed in the University of Michigan in the 1960s.<sup>93</sup> Thus, the researchers observed correlations, for example, between “experienced impairment due to somatic illness” and “psychic impairment.”<sup>94</sup> AID analysis revealed that aside from experiencing a diagnosable mental disorder, a low level of education was “a significant risk factor” in the development of psychological impairment. In the social psychiatric framework of the study, this was understood as a consequence of individuals with lower education being more vulnerable in the labor market.<sup>95</sup> Moreover, multifactorial analysis enabled the researchers to correlate data from various empirical domains, combining and calculating data representing, for example, socioeconomic status, psychological state, and somatic health.

In the historiography of epidemiology, the latest era has been labeled the Risk Factor Era, which Ezra Susser and Alfredo Morabia date to the 1950s.<sup>96</sup> In psychiatric epidemiology, the shift toward the search for risks and risk factors occurred somewhat later. Jauho and Helén date the adoption of “risk rationale” in Finnish psychiatric epidemiology to the late 1980s and associate the increasing emphasis on risks with the National Suicide Prevention Project, carried out between 1986 and 1996. Since the 1990s, the focus of psychiatric epidemiology has been on individual risk

93. James N. Morgan and John A. Sonquist, “Problems in the Analysis of Survey Data, and a Proposal,” *J. Amer. Statist. Assoc.* 58, no. 302 (1963): 415–34; Frank M. Andrews, James N. Morgan, and John A. Sonquist, “Multiple Classification Analysis: A Report on a Computer Program for Multiple Regression Using Categorical Predictors” (Ann Arbor: Survey Research Center, University of Michigan, 1967).

94. Lehtinen, “Psykiatrisen hoidon” (n. 78), 233–34, 245.

95. *Ibid.*, 250–51.

96. Ezra Susser and Alfredo Morabia, “The Arc of Epidemiology,” in Susser et al., *Psychiatric Epidemiology* (n. 1), 15–24, 19–21.

factors (such as certain modes of behavior and gender).<sup>97</sup> However, in the case of the UKKI study, social psychiatry and the adoption of computer technology encouraged a multicausal outlook on the etiology of mental disorders on societal level. In the intellectual environment still strongly influenced by social psychiatry in the 1970s and the early 1980s, this multicausal outlook identified certain aspects of social environment and life situations as risk factors. In the wake of the UKKI study, the Academy of Finland published a report that investigated the state of mental health research in Finland in 1976, where mental health was conceptualized as “a resource” that had implications to public health as well as the national economy. Therefore, the report called for studying the prevention of mental disorders above all else. In practice, this meant understanding complex interactions between everyday life-changes, the ability to adapt, social structures, education, and the etiology of mental disorders.<sup>98</sup> The authors and the consultants of the 1976 report included, among others, all Finnish professors of psychiatry. Thus, it is not surprising that NSII launched a new study of psychiatric epidemiology just a year later. In summary, the UKKI study represented a new, modern kind of psychiatric epidemiology as it harnessed the latest international methods in the field alongside methodologies and the diagnostic categorization developed in Finland. The ultimate goals of the UKKI study did not differ from previous Finnish studies. The aim was to help improve the Finnish welfare state, the process that had been accelerated by the postwar structural change and modernization of the Finnish economy as well as rapid urbanization. Following the ideological shift of the late 1960s, public services—including mental health services—were regarded as every citizen’s right, the use of which should not be stigmatized.<sup>99</sup> To accomplish this task, the UKKI study not only studied the prevalence of mental disorders but harnessed epidemiological research methods to understand the size and characteristics of the user base of the planned mental health services.

97. Jauho and Helén, “Symptoms, Signs, and Risk Factors” (n. 17), 63.

98. Suomen Akatemia, *Mielenterveystutkimuksen tausta, nykytila ja tehtäväkenttä Suomessa* (Helsinki: Suomen Akatemia, 1976), 19–20, 200–204.

99. Ville Kivimäki et al., “Sadon vuoden kansalaisuus: yhteiskunta, yksilö ja toimijuus,” in Karonen, Villstrand, and Haapala, *Suomalaisen yhteiskunnan historia* (n. 77), 377–417, 396–400.

## Toward International Arenas

By the late 1970s, epidemiology had gained a strong foothold in the field of medical research in Finland.<sup>100</sup> The construction of the welfare state had given public health and mental health unprecedented importance in health political thinking and the national economy. The expansion of social welfare put a price tag on disability, not only as a loss of productivity but also as a treatment expense. As scientific interest and national needs came together, the scope and manpower available for psychiatric epidemiology increased significantly. Instead of focusing on two areas in Finland as in the UKKI study, the new study wanted the data to represent the whole of Finland.

Launched in 1977, the Mini Finland Health Survey (MFHS) was in many respects a direct successor of the UKKI study. Psychiatric epidemiology in the MFHS was only part of a large public health study focusing on chronic somatic illnesses, such as cardiovascular and musculoskeletal illnesses. The MFHS was planned and coordinated by a mental health research group with the UKKI study veteran Ville Lehtinen acting as chair. The empirical phase of the study was significantly expanded. The fieldwork took place in 1977–81, and the initial examinations encompassed eight thousand individuals aged thirty and over, selected randomly from forty areas in Finland. All individuals were medically examined and interviewed to gather background information on social background, employment, use of health services, and subjectively experienced impairment. The study employed the thirty-six-item General Health Questionnaire (GHQ) as the preliminary screening method to identify possible cases of mental health disorders.<sup>101</sup> If the preliminary general health examination, interview, or GHQ results so indicated, the individual was invited to further examinations. Compared with the UKKI study, the in-depth examination was much more refined: the MFHS study used a plethora of questionnaires and examinations to investigate a wide array of factors. These included tests and questionnaires on subjective ability to work, need for psychiatric care, somatization, hypochondria, psychological and

100. For example, the Finnish part of Angel Key's Seven Country study, the East-West study, had targeted cardiovascular disease from the late 1950s onward and gained both national and international interest, e.g., Paavo Roine et al., "Diet and Cardiovascular Disease in Finland," *Lancet* 272, no. 7039 (1958): 173–75.

101. Developed by psychiatrist David Goldberg in the early 1970s, various versions of GHQ have since been widely used to detect mental health problems in nonclinical populations. Sigurd W. Hystad and Bjørn Helge Johnsen, "The Dimensionality of the 12-Item General Health Questionnaire (GHQ-12): Comparisons of Factor Structures and Invariance Across Samples and Time," *Frontiers in Psychology* 11 (June 2020): 1–11.

psychomotor performance, concentration, memory, and reactions. When standardized international methods were unavailable, as in the case of studying friendship and family relationship, the investigators developed a new questionnaire. Moreover, information from various registers supplemented the gathered data.<sup>102</sup> The use of different methods stemmed from one of the goals of the MFHS, which was to map “factors tending to foster or impair mental health.”<sup>103</sup> By using varying methodologies, the MFHS studied the significance of social factors on the manifestation of mental health problems in an individual.

To achieve international comparability, the MFHS discarded the previously used six-step diagnostic scheme and instead utilized the Present State Examination (PSE) interview schedule. The PSE was developed by the British psychiatrist John K. Wing in the 1960s, and since then it has been used in several international studies, including the WHO’s International Pilot Study of Schizophrenia.<sup>104</sup> The Finnish social psychiatric task force had met Wing in the international symposium of psychiatric epidemiology at Aberdeen University in 1969. Wing described the PSE as a tool to overcome the obstacles of case identification in population studies as well as psychiatrist-to-psychiatrist variations in diagnosing. The PSE was designed following the principles of “a medical model” instead of “dimensional analysis,” in which the opposing poles were “health” and “pathology.” According to Wing, the medical model rested on giving a precise diagnosis, which formed the basis of intervention and future prevention and would also make psychiatric epidemiology scientifically more robust.<sup>105</sup> Wing’s presentation convinced the Finns, and Wing’s personal support for the implementation of the PSE and the related Catego-ID computer program was repeatedly acknowledged in MFHS publications. The choice of using the PSE was justified by noting that the method was

102. Ville Lehtinen et al., *Mini-Suomi -terveys tutkimuksen toteutus. Osa 4, Mielenterveyden häiriöiden tutkimusmenetelmät* (Helsinki: Kansaneläkelaitoksen sosiaaliturvan tutkimuslaitos: Kansaneläkelaitoksen kuntoutustutkimuskeskus, 1985), 16–57; Ville Lehtinen et al., *Suomalaisten aikuisten mielenterveys ja mielenterveyden häiriöt*, Kansaneläkelaitoksen julkaisuja AL: 33 (Helsinki: Kansaneläkelaitos, 1991), p. 304.

103. Lehtinen et al., *Mini-Suomi* (n. 102), 121.

104. On the development and principles of the PSE, see John E. Cooper, “The Development of the Present State Examination (P.S.E.),” in *Clinical Psychopathology Nomenclature and Classification*, ed. P. Pichot et al. (Boston: Springer, 1985), 133–39.

105. John Wing, “A Standard Form of Psychiatric Present State Examination,” in *Psychiatric Epidemiology: Proceedings of the International Symposium Held at Aberdeen University 22–5 July 1969*, ed. E. H. Hare and J. K. Wing (London: Oxford University Press, 1970), 93–108, 94–100.



“standardized and internationally tested.”<sup>106</sup> Finnish psychiatric epidemiologists did not uncritically embrace the new diagnostic classifications or the new methodologies and noted that the diagnostic culture in the United Kingdom had influenced the development of the PSE interview questions. Therefore, the Finnish translation of the PSE interview was modified so that it would correspond with the ways of expression Finnish people were thought to be accustomed to. Furthermore, to establish the reliability of the PSE in case identification, the investigators performed a psychiatric and a psychological interview parallel to the PSE interview to verify the results.<sup>107</sup>

The use of the PSE was a major step toward making the MFHS internationally relevant as the Catego-ID results based on the PSE interviews were compatible with the ICD-8 classification. While the fieldwork material was analyzed in the 1980s, use of the *DSM-III* for diagnostic classification was also discussed, but the researchers considered the diagnostic matrix of *DSM-III-R* as “too individualistic.”<sup>108</sup> Demazeux pointed out how *DSM-III* caused a split in the “disciplinary matrix” of psychiatric epidemiology, dividing the scholars between *DSM-III*-backed “medical approach” and “socio-ecological approach.” Importantly, and contrary to a widespread misconception, *DSM-III* did not cause a sweeping paradigm shift in the psychiatric profession internationally.<sup>109</sup> Even as the main diagnostic method, the PSE had been designed to support the “medical model,” the MFHS focused on finding socially and environmentally determined risk factors and the study can thus be described as socioecological.

The risk factors included subjective dissatisfaction with personal relationships, lack of leisure activities, difficulties at work, and excessive drinking.<sup>110</sup> Because the etiology of mental disorders was still unclear, the identification of risk factors made it possible to tease out applicable information for prevention. By recognizing risk factors, health care professionals in primary health care could “encounter the patient as a whole person” and observe possible underlying mental health problems.<sup>111</sup>

In the context of psychiatry, focusing on risk factors has been argued to enable even more control over the psychological lives of individuals.<sup>112</sup>

106. Lehtinen et al., *Mini-Suomi* (n. 102), 56–57.

107. *Ibid.*, 52–60.

108. Ville Lehtinen et al., *Sosiaalipsykiatria* (Helsinki: Tammi, 1989), 172.

109. Demazeux, “Psychiatric Epidemiology” (n. 22), i59–i63.

110. Lehtinen et al., *Suomalaisten* (n. 102), 311.

111. *Ibid.*, 327.

112. Jauho and Helén, “Symptoms, Signs, and Risk Factors” (n. 17), 64; Ilpo Helén, “The Depression Paradigm and Beyond: The Practical Ontology of Mood Disorders,” *Science Studies* 24 (2011), 81–112, 96–103.

Yet, we should pay attention to whether a risk factor was considered as individual or as social/environmental. On the one hand, the MFHS still embraced a social psychiatric approach by looking for social and environmental mental health risk factors, such as working conditions and social class. However, on the other hand, a further development and equal distribution of mental health services was found to be of key importance in improving mental health in the population by focusing on the individual citizens. The public was to be made aware that the difficulties they were facing could stem from health problems, for which they could seek treatment. Bringing these viewpoints together, the MFHS espoused the view that the etiology of mental health problems surpassed the medical model, but at the same time the answer was to reinforce the mental health care sector. For example, mental health problems were seen as a frequent cause of “flight to early retirement,” which could be prevented by “emphasis in occupational health services” and by the “improvement of psychological welfare in work.”<sup>113</sup>

From the mid-1980s onward, the drive to expand the welfare state through governmental measures was challenged. Inspired by the international rise of neoliberal thinking, it was now asked whether the achieved level of welfare could be maintained under the weight of various social and health services.<sup>114</sup> By the early 1990s, when the last MFHS publications appeared, health political and epidemiological discourses began to reflect the neoliberal way of speaking, in which sociological and juridical arguments were accompanied and sometimes replaced by terminology derived from market economy discourse.<sup>115</sup> The burden of disease and impairment was now worded as costs in health care services and as a “loss of productivity,” following a trend that was emerging in international public health discourse.<sup>116</sup> As we have shown, the MFHS did not shy away from recommending further expansion of mental health services and from pointing out that the goal of the equal availability of services for all citizens had not yet been achieved. Although the reports of the study paid lip service to the health political lingo that was on the rise in the early 1990s, the theory and practice of psychiatric epidemiology in the MFHS

113. Lehtinen et al., *Suomalaisten* (n. 102), 327.

114. Jari Eloranta et al., “Vuosisadan rakennemuutos: väestö, talous ja tasa-arvo,” in Karonen, Villstrand, and Haapala, *Suomalaisen yhteiskunnan historia* (n. 77), 459–514, 466.

115. Lehtinen et al., *Suomalaisten* (n. 102), 27–28, 31–33.

116. *Ibid.*, 27. For example, March and Oppenheimer noted that the Epidemiological Catchment Area study, launched in 1980, marked a transition in community-based surveys to determine disease burden and service need. March and Oppenheimer, “Social Disorder and Diagnostic Order” (n. 11), i30.

still reflected socioecological and social psychiatric approach on etiology and prevention of mental disorders.

## Genes and Well-Being

Since the 1990s, the number of studies in Finnish psychiatric epidemiology has exploded, and Finnish studies have often been part of international collaborative research projects that combine epidemiological data from several countries. The methodological toolbox has further expanded following the development of information processing technologies, fMRI, and genetic research.

Over the past thirty years, psychiatric epidemiology has separated into two branches. One of these continues prevalence studies focusing on a wide range of mental disorders and/or the biological, social, and psychological risk factors of psychological well-being.<sup>117</sup> A noteworthy example was the National Suicide Prevention Project (1986–96), in which suicide was used as an indicator of psychological and social troubles, focusing on the former. Based on an epidemiological analysis of all suicides committed in Finland in 1987, the project emphasized the relationship between depression and suicide.<sup>118</sup> Later, the Health 2000 and Health 2011 studies—successors of the MFHS—measured the prevalence of “psychological distress,” where various psychological symptoms, such as work-related burnout,<sup>119</sup> or disorders such as panic disorder, agoraphobia, social phobia, generalized anxiety disorder, dysthymia and major depressive disorder, alcohol abuse, and dependence were regarded as indicators of being psychologically overburdened.<sup>120</sup> The survey data in these studies were analyzed to study, for example, correlations between employment status and mental disorders,<sup>121</sup> the impact of psychiatric disorders on the

117. E.g., Kirsi Ahola et al., “The Relationship between Job-Related Burnout and Depressive Disorders—Results from the Finnish Health 2000 Study,” *Journal of Affective Disorders* 88 (2005), 55–62.

118. Ilpo Helén, “Multiple Depression: Making Mood Manageable,” *J. Med. Human.* 28 (2007): 149–72.

119. E.g., Ahola et al., “Relationship between Job-Related Burnout and Depressive Disorders” (n. 117).

120. Jaana Suvisaari et al., “Psykkiset oireet ja mieleninterveyden häiriöt,” in *Terveys, toimintakyky ja hyvinvointi Suomessa 2011*, ed. Seppo Koskinen, Annamari Lundqvist, and Noora Ristiluoma (Helsinki: National Institute for Health and Welfare, 2012), 96–101, 96–97; Jaana Suvisaari et al., “Mental Health,” in *Health 2011 Survey—Methods*, ed. Annamari Lundqvist and Tomi Mäki-Opas (Helsinki: National Institute for Health and Welfare, 2016), 123–27, 124–25.

121. T. Honkanen et al., “Employment Status, Mental Disorders and Service Use in the Working Age Population,” *Scand. J. Work Environ. Health* 33 (2007): 29–36.

quality of life,<sup>122</sup> and particularities of mental health among the immigrant population.<sup>123</sup>

To investigate risk factors of one specific type of mental disorders, for example schizophrenia or bipolar disorder, the other branch of psychiatric epidemiology employs new technologies, especially genome-wide association studies.<sup>124</sup> The focus on risk factors has been seen as a by-product of the medicalization of everyday life and as a telltale sign of the expansion of “psychiatric power” in society. These views disregard the goals of psychiatric epidemiology, which, for over a hundred years, has been to understand the prevalence and etiology of psychological disturbances and suffering. The adoption of neoliberal thinking in Finnish sociopolitical discourse has had a discouraging effect on social psychiatric epidemiology. In the early 1990s, Finland experienced a serious economic depression with mass unemployment, which forced the government to cut back on public spending.<sup>125</sup> The economic depression and the adoption of market-driven economic thinking, which did not completely question the necessity of a welfare state but halted its expansion, urged epidemiological thinking to look for causes of psychiatric disorders in the individual instead of society.

Whereas psychiatric epidemiology of the 1960s and the 1970s did everything to be freed from “dependence on institutional records,” registers had become increasingly significant by the 2000s. In Finland, national registers include the hospital discharge register, the causes of death register, the disability pension register, the prescription registers, the medical birth register, the twin cohorts, and the cancer registers. In addition, there are important biobanks and social welfare registers which include data on social benefits, sick leave, unemployment, working periods, housing, crime and conscription.<sup>126</sup> With the aid of new technologies, epidemiological research constantly finds new ways to combine data

122. Samuli I. Saarni et al., “Impact of Psychiatric Disorders on Health-Related Quality of Life: General Population Survey,” *Brit. J. Psychiatry* 190 (2007): 326–32.

123. Saija Kankaanpää, *Mental Health among Somali Origin Migrants in Finland: Considerations for Depressive Symptom Manifestation, Causal Attributions of Mental Health Problems, and Psychiatric Assessment*, Acta Universitatis Tamperensis 2341 (Tampere: University of Tampere, 2018).

124. E.g., Outi M. Palo, “Genetic Background of Bipolar Disorder and Related Cognitive Impairments” (Ph.D. diss., Helsinki University, 2010); Toni Myllyaho et al., “Interaction of Genetic Vulnerability to Schizophrenia and Family Functioning in Adopted-Away Offspring of Mothers with Schizophrenia,” *Psychiatry Res.* 278 (August 2019): 205–12.

125. Kivimäki et al., “Sadan vuoden kansalaisuus” (n. 99), 405–6; Eloranta et al., “Vuosisadan rakennemuutos” (n. 114), 485, 490.

126. Miettunen et al., “Use of Register Data” (n. 5), 117–24.

from different sources to study mental illnesses and their possible causes, mental health risk factors, and even psychological well-being. According to Katherine Keys and Ezra Susser, the discourse of psychiatric epidemiology in the twenty-first century is firmly connected with the “hard science” of neurology and the genetic research of psychiatric disorders. Major advances in the field concern a more nuanced understanding of the biological mechanisms through which social environment influences mental health.<sup>127</sup> Nikolas Rose notes that the ever-increasing availability of new and more sophisticated diagnostic technologies has hugely broadened the scope of abnormal cases and therefore warrants the interest of experts and epidemiologists. Additionally, new technologies have made it possible to detect “pre-diseases” and opened a new field of inquiry on those who are “pre-symptomatically ill.”<sup>128</sup>

Besides its registers, Finnish psychiatric epidemiology is internationally recognized for its birth cohort studies. Birth cohorts are considered to enable good control of bias and confounding factors and thus provide a more accurate base for statistical inferences.<sup>129</sup> The Finnish 1987 Birth Cohort collected data of all individuals born in 1987 and was thoroughly based on register data, with no contact with the cohort members. This was later followed by another research program, SALVE, “Life-Course Determinants of Mental Health, Marginalization and Social Coping,” through the Academy of Finland. The Helsinki Birth Cohort Study began in 1995 and will continue until 2025, with the aim of collecting data on people born in Helsinki between 1934 and 1944. In the clinical part of the study, 2,500 individuals have participated, and information on prenatal and childhood growth is retrieved from the records.<sup>130</sup> Outside Helsinki, one of the longest running cohort studies, the Northern Finland Birth Cohort (NFBC), was launched in 1966. Initially, it did not focus on psychiatric issues, but since the 1990s has been used for psychiatric epidemiology. Early risk factors were of focal interest at first, but partially due to technical development, schizophrenia research has since also focused

127. Katherine M. Keys and Ezra Susser, “The Expanding Scope of Psychiatric Epidemiology in the 21st Century,” *Soc. Psychiatry Psychiatric Epidemiol.* 49 (2014): 1521–24, 1521–23.

128. Rose, *Our Psychiatric Future* (n. 3), 10.

129. On the role of birth cohorts in the development of epidemiology, see Élodie Giroux, “Risk Factor and Causality in Epidemiology,” in *Classification, Disease and Evidence: New Essays in the Philosophy of Medicine*, ed. Philippe Huneman, Gérard Lambert, and Marc Silberstein (Dordrecht: Springer, 2015), 179–92.

130. Reija Paananen and Mika Gissler, “Cohort Profile: The 1987 Finnish Birth Cohort,” *Int. J. Epidemiol.* 41 (2012): 941–45; Johan Eriksson, “Early Growth, and Coronary Heart Disease and Type 2 Diabetes: Experiences from the Helsinki Birth Cohort Studies,” *Int. J. Obesity* 30 (2006): 18–22.

on somatic and psychiatric outcomes, brain morphology and cognition, the use of antipsychotics, and genetics.<sup>131</sup> Finnish psychiatric epidemiology has thus gained a firm ground in international arenas, producing not only internationally recognized research, but also data to be used in research consortiums.

## Conclusion

The history of psychiatric epidemiology can be viewed from multiple perspectives. In the 2020s, the discipline is characterized by transnationality and international research endeavors. In the recent historiography of the discipline, psychiatric epidemiology as an international field has dominated. This article, however, has approached the same goal from a different point of view: how changes and developments in one country, together with the gradual integration into international discourses, have shaped the goals, theories, and practices of psychiatric epidemiology. Certain developments that might seem a universal trend when scrutinized on a global level appear to have been answers to specific, locally, or nationally defined needs rising from changes in Finnish society.

Over the course of time, psychiatric epidemiology has come to study a far wider set of phenomena than just the prevalence of mental illnesses. By focusing on risks and by employing new technologies, psychiatric epidemiology has broadened the spectrum of what necessitates psychiatric attention. Yet, for the most part, the data have come from specific social and historical contexts in different countries.<sup>132</sup> As we have shown in this article, it is therefore important to analyze the historical development of a global science through locally adjusted lenses. The history of Finnish psychiatric epidemiology exemplifies the progress of globalization. Finns have intently followed international and particularly Anglo-American research, and various technological and methodological innovations and international classifications have influenced the development of the field significantly. At the same time, Finnish epidemiologists have reacted to local needs, which were born in specific circumstances and were controlled by science policy and funding opportunities.

Locality of psychiatric epidemiology, even in the present era of vast multinational projects, is significant for our understanding of what is

131. E.g., Jääskeläinen et al., “Twenty Years of Schizophrenia Research” (n. 19).

132. Susanne Bauer has pointed out how formalized epidemiological knowledge easily crosses boundaries between “content, place or subject matter” to generate global knowledge. Bauer, “Mining Data, Gathering Variables and Recombining Information: The Flexible Architecture of Epidemiological Studies,” *Stud. Hist. Philos. Sci. C: Stud. Hist. Philos. Biol. Biomed. Sci.* 39 (2008): 418–28, 246.

psychiatric epidemiology. Underlining the “performativity” of epidemiology in general, Bauer states that epidemiology can be regarded as a “generative machine” producing a contingent setting of medical, social, and biological interrelations.<sup>133</sup> The history of psychiatric epidemiology cannot be understood by focusing on theoretical and methodological changes only. As the populations studied in psychiatric epidemiology are always situated in a geographical, social, political, and historical context, so is the practice of psychiatric epidemiology, too.

The first Finnish studies in the field of psychiatric epidemiology focused on the prevalence of mental illnesses in the country. The main focus of these studies was to gain information for service planning, most of all to estimate the need for new hospitals, and to establish the national social insurance system. From the 1960s until the late 1980s, psychiatric epidemiology was strongly interconnected with social psychiatry, which held a strong position in Finland. The development of psychiatric epidemiology in Finland shows the change in what has been the object of study. Whereas early epidemiological studies aimed to determine the prevalence of mental illnesses, the focus shifted to mental disorders and, later, to mental health, including the study of risk factors that could influence it. Since the 1990s, the focus of research has been developing toward biomedical interests. The change from illnesses and disorders to health reflects the way that psychiatry has found ways to study factors that influence everyday well-being. The change also implies that psychiatric epidemiology has not been able to solve the mysteries of mental illnesses, which might have influenced the tendency to focus on the aspect that can be influenced: health.



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133. Susanne Bauer, “Modeling Population Health: Reflections on the Performativity of Epidemiological Techniques in the Age of Genomics,” *Med. Anthropol. Quart.* 27, no. 4 (2014): 510–30, 511–12.