

The North Karelia Project

The Spark That Ignited the Flame!



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The North Karelia Project (NKP) was started in Finland in the early 1970s against the historical background that cardiovascular disease (CVD) had become a huge public health problem in Finland, the U.S., and some other industrialized countries. While the response from health services at that time was predominantly hospital treatment of myocardial infarctions, some studies, like the Framingham Heart study (FHS), the Seven Country Study, and others, had started to investigate the etiology and causal risk factors of atherosclerotic diseases. The NKP and the FHS together have come to be the torch-bearers for the profound impact of epidemiology on public health. The FHS has been credited with coining the term “risk factors.” The NKP was among the first and certainly among the most successful large-scale, community-based intervention projects carried out anywhere in the world.

The NKP stemmed from growing public pressure to deal with exceptionally high cardiovascular (CV) mortality rates in eastern Finland. A young team supported by some World Health Organization experts took on this herculean task. The team focused on shifting the entire curve of CV risk at the population level leftward rather than only focusing on sick patients or high-risk individuals. Reducing the risk factor levels in the population meant influencing lifestyles in the area, especially concerning dietary habits and smoking. The team realized that influencing these lifestyles called for broad interventions in North Karelia and treated the community as a social and physical environment. It is critical to appreciate the context: a post World War II nation where many of the lifestyle factors being targeted were considered “small pleasures.” But the team persisted, and prevailed! Population-level smoking decreased, blood pressures fell, cholesterol levels reduced, and diets became healthier, all eventually resulting in significant reductions in CV mortality!

The project built quite a comprehensive and solid evaluation infrastructure to learn from the experience. The

project spread from its North Karelia focus of the first 5 years to the rest of Finland, with the National Public Health Institute (currently the THL) as the focal point. Among the most highly visited public health programs worldwide, its results and numerous activities inspired a lot of preventive work in Finland, through both significant media interest and impactful policy actions. The project inspired much attention beyond the scope of CVD, in the form of national health monitoring and tackling related health problems like cancer, diabetes, dementia, and allergic diseases, among others. The extensive epidemiological materials collected both in the form of questionnaire data and biological samples have been a rich source of academic output for generations of investigators.

For all countries, but especially for the developing world, the NKP is a valuable demonstration that lifestyles can be influenced in a cost-effective and sustainable way through broad health promotion and policies. It comes as no surprise that the World Health Organization has modeled much of its recent international fight against noncommunicable diseases along the lines of the NKP. Not one to rest on their laurels, decades later, the NKP continues its crusade against CVD and newer emerging challenges related to growing sedentarism and obesity.

For students of CV epidemiology, the NKP is a treasure trove. Innumerable factors make this a remarkable study: extending the then nascent knowledge regarding CV risk factors into an actionable plan; convincing large populations, regulators, and lawmakers alike of the value of primordial, primary, and secondary prevention; creating a massive structure of healthcare prevention delivery; piloting studies of novel methods, such as using physician extenders to provide care; and even conducting randomized trials of preventive therapies, such as that with nicotine gum. This issue is a tribute to a study that began with a modest goal to help its local people but changed the health landscape of a country and, over time, the rest of the world.

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