Study of Health in Pomerania (SHIP):
a health examination survey in an east German region: objectives and design

Summary

Objectives: The reason for the Study of Health in Pomerania (SHIP) is the lack of epidemiological studies with a broad range of health indicators. Furthermore, in Germany there is a need for studies that take into account the particular situation of life after the reunification. One objective of SHIP is to provide prevalence estimates on a broad range of diseases, risk and health factors for a defined region in the former GDR.

Methods: A sample of 7008 women and men aged 20 to 79 years in a north-east region of Germany, 4900 expected participants. The sample was drawn in two steps: First, 32 communities in the region were selected. Second, within the communities a simple random sample was drawn from residence registries, stratified by gender and age. The data collection and instruments include four parts: oral health examination, medical examination, health-related interview, and a health- and risk-factor-related questionnaire. The oral health examination includes the teeth, periodontium, oral mucosa, craniomandibular system, and prosthodontics. The medical examination includes blood pressure measurements, electrocardiography, echocardiography, carotid, thyroid and liver ultrasounds, neurological screening, blood and urine sampling. The computer-aided health-related interview includes cardiovascular symptoms, utilisation of medical services, health-related behaviours, and socioeconomic variables. The self-administered questionnaire comprises housing conditions, social network, work conditions, subjective well-being and individual consequences from the German reunification.

Key-Words: Health examination survey - Germany - Prevalence - Oral health - Carotid arteries ultrasound - Echocardiography.
Background of the Study of Health in Pomerania (SHIP) is, first, the need for population-based health surveys with a broad range of health and quality of life indicators. Particularly in Germany, most population studies focus on single diseases and related risk factors, mostly cardiovascular disease. There is a lack of epidemiological studies with a broad range of health indicators that allows for extensive analysis of comorbidity and the study of combined risk factors for different health problems. Second, there is a need for studies that take into account the specific social situation of Germany after the reunification and contribute to explaining still existing disparities between the health of former East and West Germans. Since 1989, the Eastern part of Germany has been in a major social transition process including economic, political and social shift, and the change of social attitudes and norms. Through this process, morbidity and mortality have been affected. Due to the reunification of Germany, former East Germans faced profound changes in their living situation, the health insurance system and health services. Although differences in the health of former East and West Germany seem to narrow, there are still disparities in the prevalence rates of several health disturbances, including cardiovascular and neurological diseases, allergies, and subjective health. Differences are usually attributed to differences in psychosocial and environmental factors, in health behaviours or in medical treatment. However, these explanations are usually not based on a detailed analysis of the different determinants. Third, for a community medicine approach which is being developed in North-East Germany, population health data is needed to serve as a basis for multi-disciplinary studies including follow-ups and interventions within a community medicine research network. This network involves different medical disciplines, such as physiology, genetics, immunology, cardiology, neurology, psychiatry, environmental and occupational medicine, different disciplines of dental health (periodontology, orthodontics, restorative dentistry, gnathology), and other disciplines such as psychology, legal sciences, and biochemistry. One goal of the community research network is to overcome limitations of single-discipline studies and to examine health in a multidisciplinary perspective.

Objectives
SHIP is a population-based study in West Pomerania, a north-east region of Germany (Fig. 1). The first objective of the study is to provide prevalence estimates on a broad range of diseases and risk factors for a defined area. The second objective is to establish quality-controlled baseline data about population health in the region, representative for three former districts and the cities of Greifswald, Stralsund, and Anklam, and to provide information about the most prevalent diseases and their potential predictors for further research projects that will focus on specified diseases, risk and health factors in cohort, intervention or case-control studies. Thus, the overall objective is to provide epidemiological results. In order to get a comprehensive picture

Figure 1 Study region in Germany