

## Self-perceived health space and geographic areas in Switzerland

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### Abstract

Self-perceived health is an important characteristic for the investigation of public health questions. Based on health characteristics from the 1997 Swiss Health Survey, the relationship between health perception and geographic areas in Switzerland was analysed. Using an explorative data analysis, categorical principal component analysis, a two-dimensional ‘health space’ was created, using 16 items of self-reported health. The first dimension of this health space represents ‘general health’, the second dimension contrasts ‘mental and physical symptoms’. Into this health space, five different Swiss area typologies were projected. The area types showed distinct ‘localities’ within the health space, which vary with regard to the magnitude of age and gender differentiation. This type of visualising or ‘mapping’ of area types within health space has not previously been conducted.

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### Introduction

In recent years, associations between health and education, socio-economic position and income inequality have been discussed in numerous studies (Gravelle, 1998; Subramanian and Kawachi, 2004; Sundquist and Johansson, 1997a, b). There is evidence that in addition to individual characteristics and behaviour, characteristics of the residential area are related to health (Hart

et al., 1997; Macintyre et al., 1996; Mitchell et al., 2000). Considerable research has been addressed to describing and explaining spatial patterns in the geography of health, for example regarding the spatial distribution of mortality rates. A large number of papers exist dealing with perceived health (Boyle et al., 2001; Gatrell et al., 2004; Macintyre et al., 2003, 2005; Malmström et al., 2001; Mitchell et al., 2000; Sundquist and Johansson, 1997a, b). Several studies support the choice of such self-rated health parameters as a valid measure of health, as self-reported health has been highly correlated with ‘objective’ health outcome measures such as mortality rate (Idler and Benyamini, 1997; Sundquist and Johansson, 1997b). General health surveys often include a broad spectrum of different health concepts, which attempt to be appropriate for groups differing by

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disease, severity of symptoms and co-morbidity (McHorney, 1999).

To describe and explain the relationship between health inequalities and the area of residence of the survey respondents, Gatrell et al. (2004) created a 'social space', according to the ideas of the French sociologist Bourdieu (1979). As variables for constructing the space, Gatrell et al. (2004) used socio-economic characteristics such as income, age, education and work status, articles of daily life in the household, and willingness to relocate. Applying correspondence analysis to these variables they produced a social space consisting of two dimensions – economic and social capital. Four localities were included in this social space: Lancaster and Salford, both of which include areas of high and low socio-economic status. Whereas the area 'Lancaster, high' is described by high economic and high social capital, the area 'Salford, high' is described by

high social capital only (Gatrell et al., 2004, p. 252). Additionally, 'loneliness' is related to economic capital, and 'long-standing illness' mainly to social capital.

To investigate the relationship between the health perception of respondents of the Swiss Health Survey and geographic areas of Switzerland, a two-dimensional health space was constructed based on 16 health characteristics from the Swiss Health Survey 1997 (SHS97) and using Categorical Principal Component Analysis (CatPCA). With reference to previous work (Keller-Lengen, 2005a, b; Lengen and Blasius, 2007), it is to be expected that the first dimension of the health space reflects general health, running from good to poor general health. The second dimension should mirror a composition of mental and physical symptoms (see Fig. 1).

In the next step, the categories of different Swiss area typologies were included in the given health space in

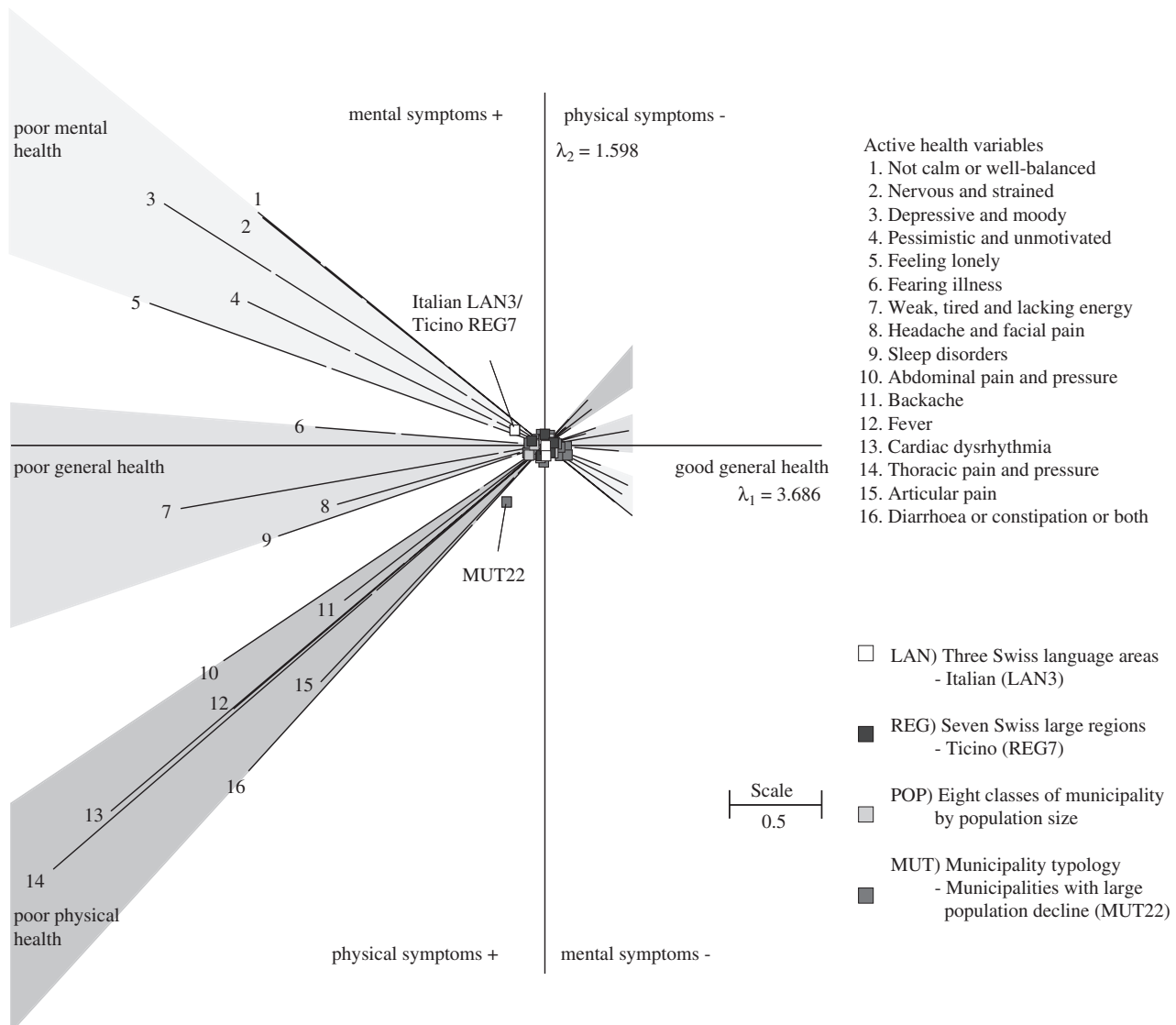


Fig. 1. The position of the Swiss area typologies in the Swiss health space.

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