

Abstract no.: 58

A stress index based on ambulatory claims data: individual versus ecological aspects in the relationship between stress and demand for health services

Rouche A., Erhart M., von Stillfried D.

The objective of this study is to develop an index reflecting individual psychological stress based on claims data that allows to examine the relationship between persisting psychological stress and overall demand for health services/specific health complaints.

The index is based on the ambulatory claims data of all people with statutory health insurance in Germany who have consulted a physician in 2016. It includes 400 ICD-10-diagnoses of minor significance as indicators of psychological stress (based on theoretical and clinical considerations). Those are divided into 21 categories. For each category within which at least one diagnosis applies, the patient receives one point on the index. Thus, the index reaches from 0 to 21 for each patient.

Using regression analysis, the relationship between individual stress and more serious health complaints/demand for ambulatory health services was examined. The same analysis was conducted on an ecological level for all 402 districts in Germany.

In all 21 categories of the index significant variation across age, gender and region can be seen. This variation is significantly reduced by applying the entire index. Major psychological complaints rise by approximately 15% if the index increases by one point. Correspondingly, premature age-related complaints rise by 20%. Overall healthcare demand increases first linearly, then exponentially across stress-levels. The number of confirmed diagnoses, for instance, rises by 40% on average if the index increases by one point.

In the discussion, we will examine to what extent and why results on the individual and ecological level differ. We will also address the question, whether the index is as suitable for ecological analysis as it is on the individual level.