

Scientific release
from the European
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Study:



Changes in prevalence of periodontitis in two German population-based studies

Schutzhold, S., Kocher, T., Biffar, R., Hoffmann, T., Schmidt, C.O., Micheelis, W., Jordan, R., Holtfreter, B.
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Relevant
background
to study:

There is little literature about the changes over time in the periodontal status of populations. Nevertheless, the periodontal condition of certain populations seems to have improved during the

last decade. Given the fact that the last 10 years has seen a decrease in smoking and an increase in diabetes in Germany, it is important to establish the current prevalence of periodontitis.

Study aims:

In the past two decades, several large cross-sectional epidemiological studies have been performed in Germany – e.g. the Studies of Health in Pomerania (SHIP; former East Germany) and the German Oral Health Studies (DMS; performed in former

West and East Germany). This series of studies provides the opportunity to evaluate possible changes over time in the prevalence and extent of periodontitis.

Methods:

Trends in periodontal status are investigated in SHIP-0 (1997-2001) and SHIP-Trend (2008-2012) as well as in DMS III (1997) and DMS IV (2005). SHIP-0 is a population-based survey containing a final sample of 3,551 subjects; the next independent cohort (SHIP-Trend) included 3,431 subjects (including an age range of 20-79 years in both studies).

DMS is a representative population-based study of oral health in two adult age cohorts (34-44 years and 65-74 years); sample size DMS III: 645 and 953 respectively, DMS IV: 914 and 797 respectively. For all population samples, probing depth (PD) and attachment level (AL) measurements were available.

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Results:

Overall a decrease was seen in the proportion of subjects with severe periodontitis. In SHIP, the mean prevalence of severe periodontitis in the total population changed from 18.3% to 15.7%. In DMS, such a difference was present only in the older sub-groups (≥ 65 years): West German sub-group 13.8% vs 9.8% and East German sub-group 12.9% vs 12.0%. Moderate periodontitis also showed a trend towards a decrease in the younger age groups of both SHIP and DMS West sub-groups.

In contrast, the prevalence of moderate periodontitis seemed to have increased in both SHIP and DMS West and East sub-groups for subjects ≥ 65 years, as well as in the 35-44 year East sub-group. Notably, in SHIP and DMS the number of teeth in dentates increased over time in all age groups while the prevalence of edentulous subjects decreased in SHIP for all age groups (SHIP mean: 8.7% to 6.1%) and in DMS only in the 65-74 year East sub-group (34.5% to 22.9%).

**Limitations,
conclusions
and impact:****Limitations:**

SHIP-0 and SHIP-Trend are study cohorts from the northern part of former East Germany and may not be representative of Germany as a whole. Direct comparisons between different studies are difficult because of the dissimilarities of the classification system and the periodontal examination methods used. The contrasting results between SHIP and DMS for 65-74 age groups illustrate the difficulty in deriving robust conclusions.

Impact:

The prevalence of periodontitis remains high in Germany, which may warrant a greater focus on preventive measures and suggests that high treatment needs remain.

Conclusions:

It is difficult to make an overall conclusion on trends in the prevalence of periodontitis in Germany because of the differences between studies, regions, historical perspectives, and time periods. Nevertheless, SHIP suggests a modest decrease in the prevalence of periodontitis; DMS shows a decrease in the prevalence of periodontitis only in the 35-44 age group in West Germany.