Outcome measure

Oral health will be described as the outcome measures: caries, periodontal health and tooth loss.

Caries will be measured as number of teeth or surfaces with caries. We will also use DMFT measure defined as the sum of decayed, missed, filled teeth for each participant. The number of participants is 1325. The measure will be given as a continuous variable

Periodontal health (See: (Papapanou et al. 2018)
Case definition of periodontal health in an intact periodontium
PD ≤ 3 mm
No interdental REC ≥1 mm
BoP < 10% (mean at patient level)

Mild periodontitis
≥ 2 interdental sites with CAL ≥ 3 mm *and* ≥ 2 interdental sites with PD ≥ 4 mm (not on the same tooth)
or
≥ 1 interdental site with PD ≥ 5 mm

Moderate periodontitis
≥2 interdental sites with CAL ≥4 mm (not on the same tooth)
 or
≥2 interdental sites with PD ≥5 mm (not on the same tooth)

Severe periodontitis
≥2 interdental sites with CAL ≥6 mm (not on the same tooth) *and* ≥1 interdental site with PD ≥5mm
The measure will be given a categorical variable

Tooth loss will be given as number of lost teeth in each participant.

The measure will be given as a continous variable.(Saleem et al. 2021)

Oral health related quality of life

For measurement of OHRQoL, the instrument to be used is the eight item Oral Impacts on Daily Performances (abbreviated OIDP) which has proven appropriate as a discriminative and descriptive measure in cross-sectional studies (Adulyanon et al. 1996). This scale has also shown to have longitudinal validity. We previously (Astrom et al. 2005) used the OIDP scale in a national sample of adults and found it to be reliable and valid in the Norwegian context. All eight frequency OIDP items are included in our questionnaire and OIDP frequency SC score will be performed.

The eight item OIDP index refers to difficulty carrying out eight daily activities during the past 6 months – 'How often have you experienced difficulties with--- 1) eating and enjoying food, 2) speaking an pronouncing clearly, 3) cleaning teeth, 4) sleeping and relaxing, 5) smiling, laughing and showing teeth without embarrassment, 6) maintaining usual emotional state without being irritable, 7) carrying out wok and major social role, 8) Enjoying social contact without being irritable'. Each frequency OIDP item is assessed on a Likert scale; 0- never, 1- less than once a month, 2- once or twice a month, 3- once or twice a month, 4- once or twice a week, 5- every day or almost every day.

An overall OIDP impact score is constructed by adding the eight originally scored (0-5) and reported in terms of means and SD. The extent of oral impacts is also be calculated as a simple count score (range 0-8) by summing eight dichotomized frequency items in terms of (1) affected- including original categories 1,2,3,4 and 0 not affected – including the original category 0. The simple count score with a range 0-8 is most often dichotomized into 0= no impact and 1= at least one impact and reported as percentage of participants without oral impacts and percentages of participants with at least one oral impact.

Variables preclinical hearth disease

Preclinical heart disease: aterial stifness and left ventricular hypertrophy:

arterial stiffness will be measured as carotid-femoral pulse wave velocity, and >10 m/s will be set as arterial stiffness. Left ventricular hypertrophy is detected by echocardiography. Left ventricular mass >47 g/height 2,7 for woman and >50 g/height 2,7 for menn will be registrated aa left ventricular hypertrophy.

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