

Kondition, fysisk arbetsbelastning och livsstilsrelaterade faktorer i yrkesgrupper

Företagshälsovårdsdata i forskning

Daniel Väisänen

Data

n≈70,000

n≈10,000

n≈1,000



Data

Hälsoprofilbedömning - Metod som kombinerar

- Questionnaire
- Physiological tests
- Interview with test leader



Data

Health Profile Assessments -
Method combining

- Questionnaire
- Physiological tests
- Interview with test leader

Questionnaire

Physical activity pattern

Other lifestyle variables

Perceived health and symptoms

Physiological measurements and tests

Cardiorespiratory fitness (Åstrand test)

Blood pressure

BMI

Register data

Cardiovascular disease (National Board of Health and Welfare)

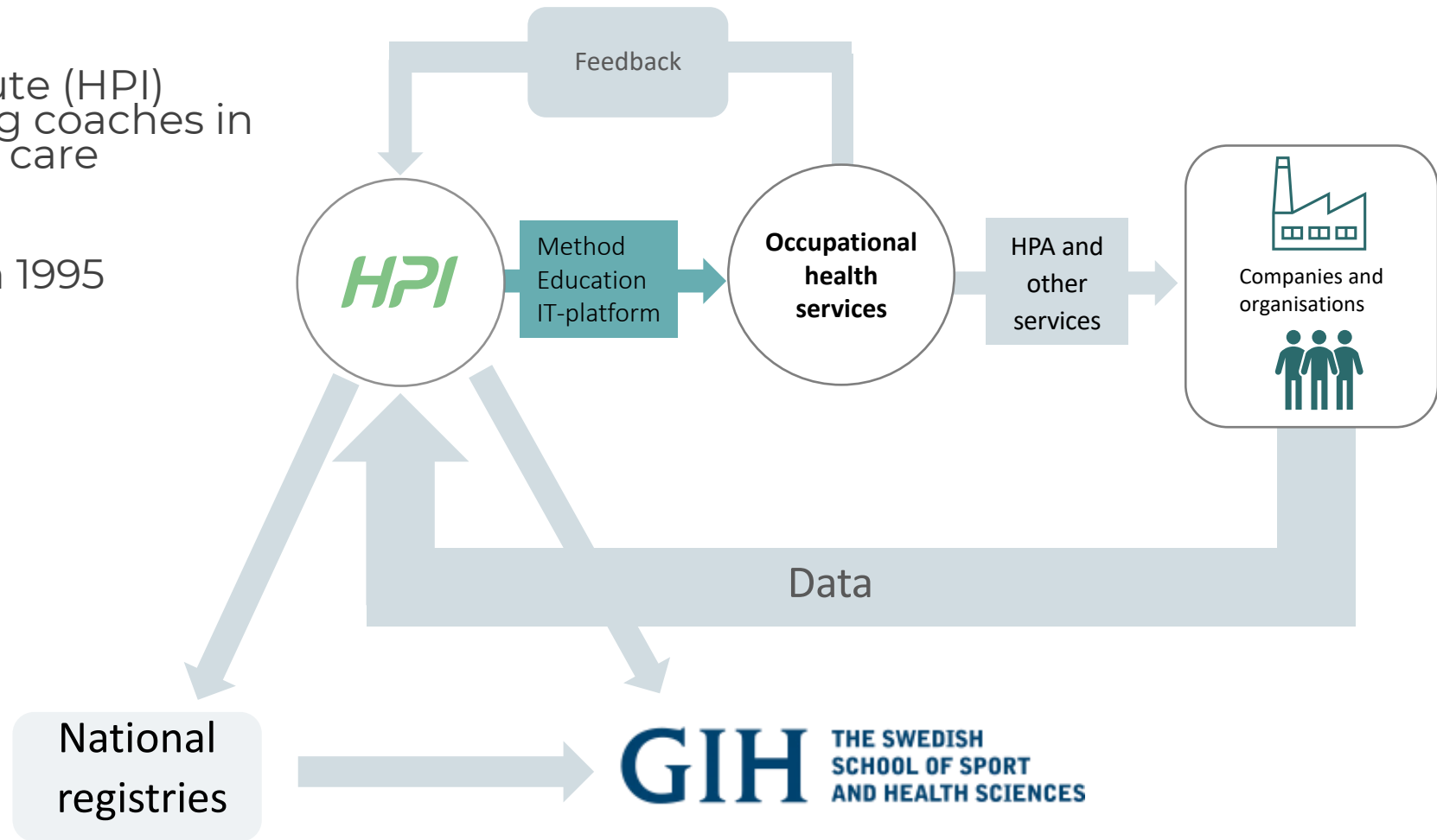
Sickness absence (Swedish Social Insurance Agency)

Occupational codes (Statistics Sweden)

Data

Health profile institute (HPI)
Started 1976, training coaches in
occupational health care
companies

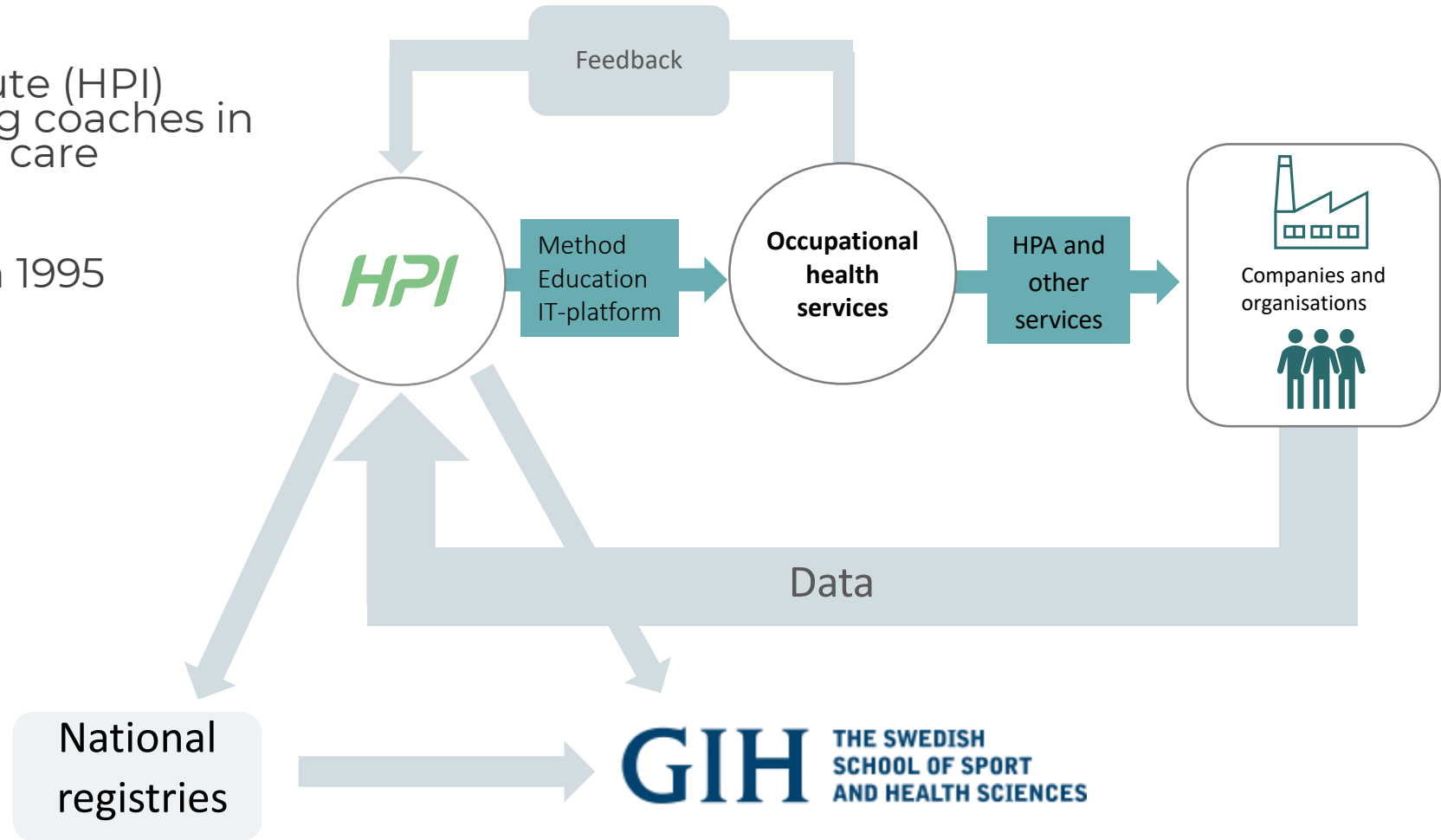
Central database in 1995



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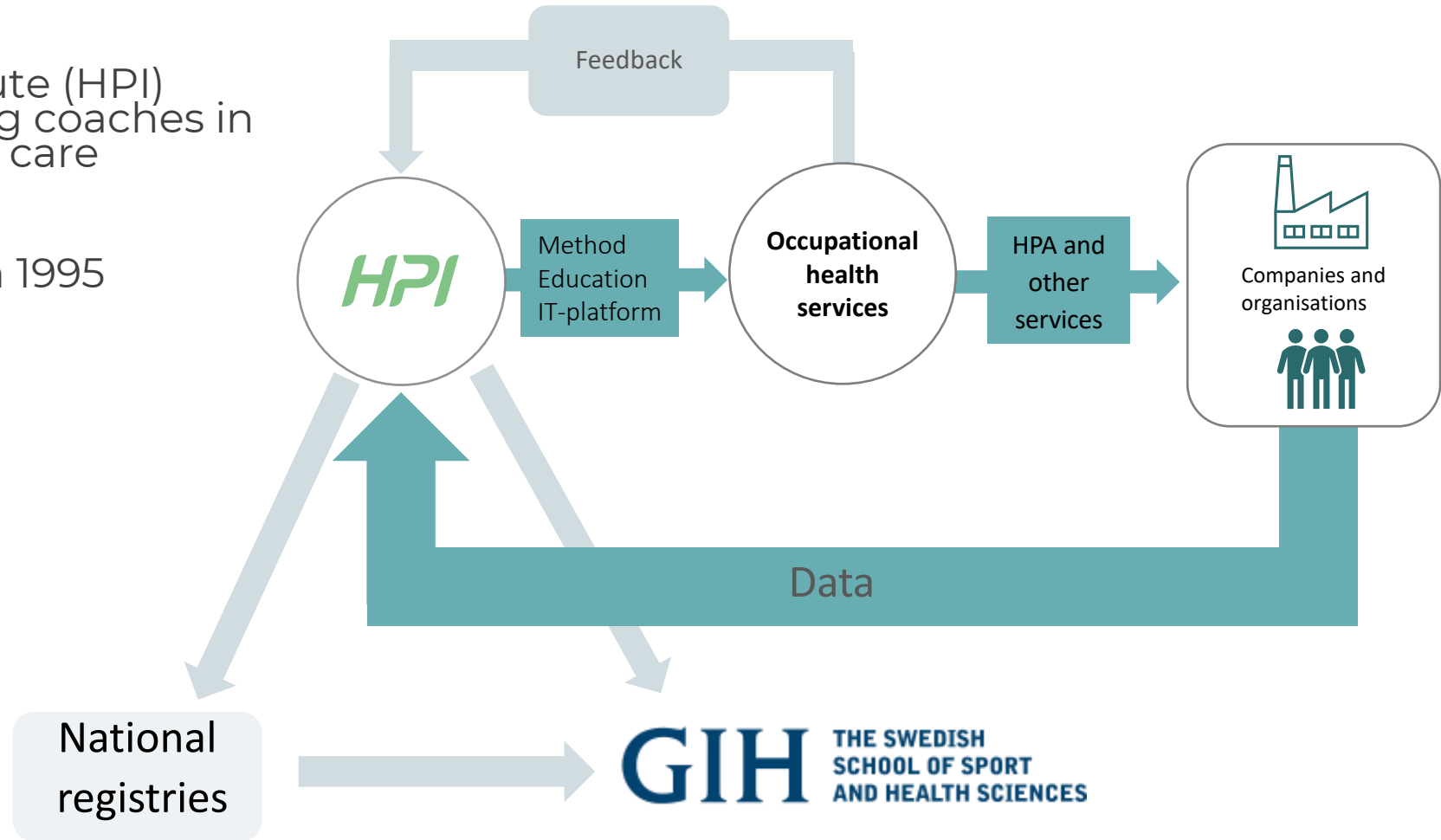
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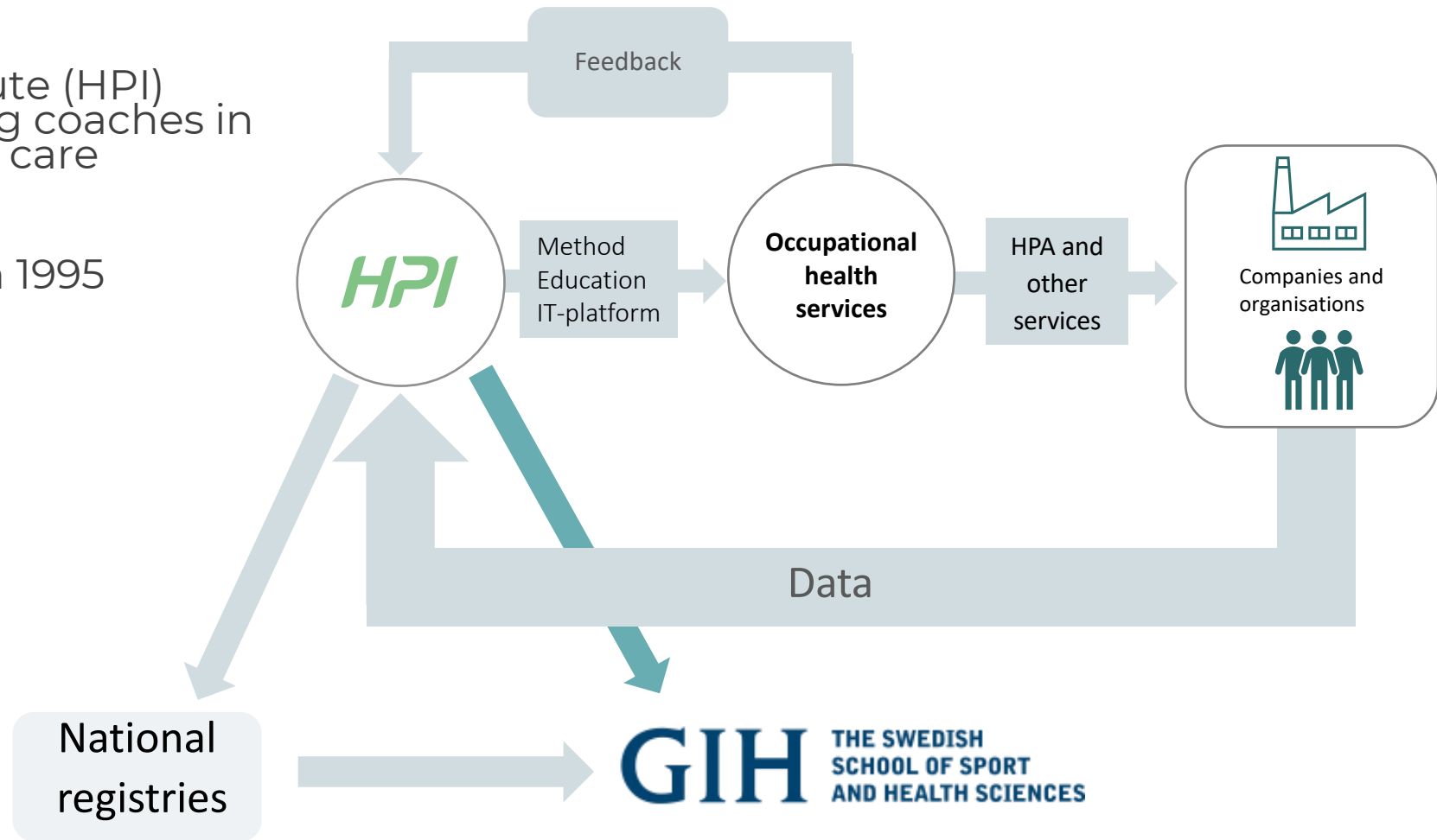
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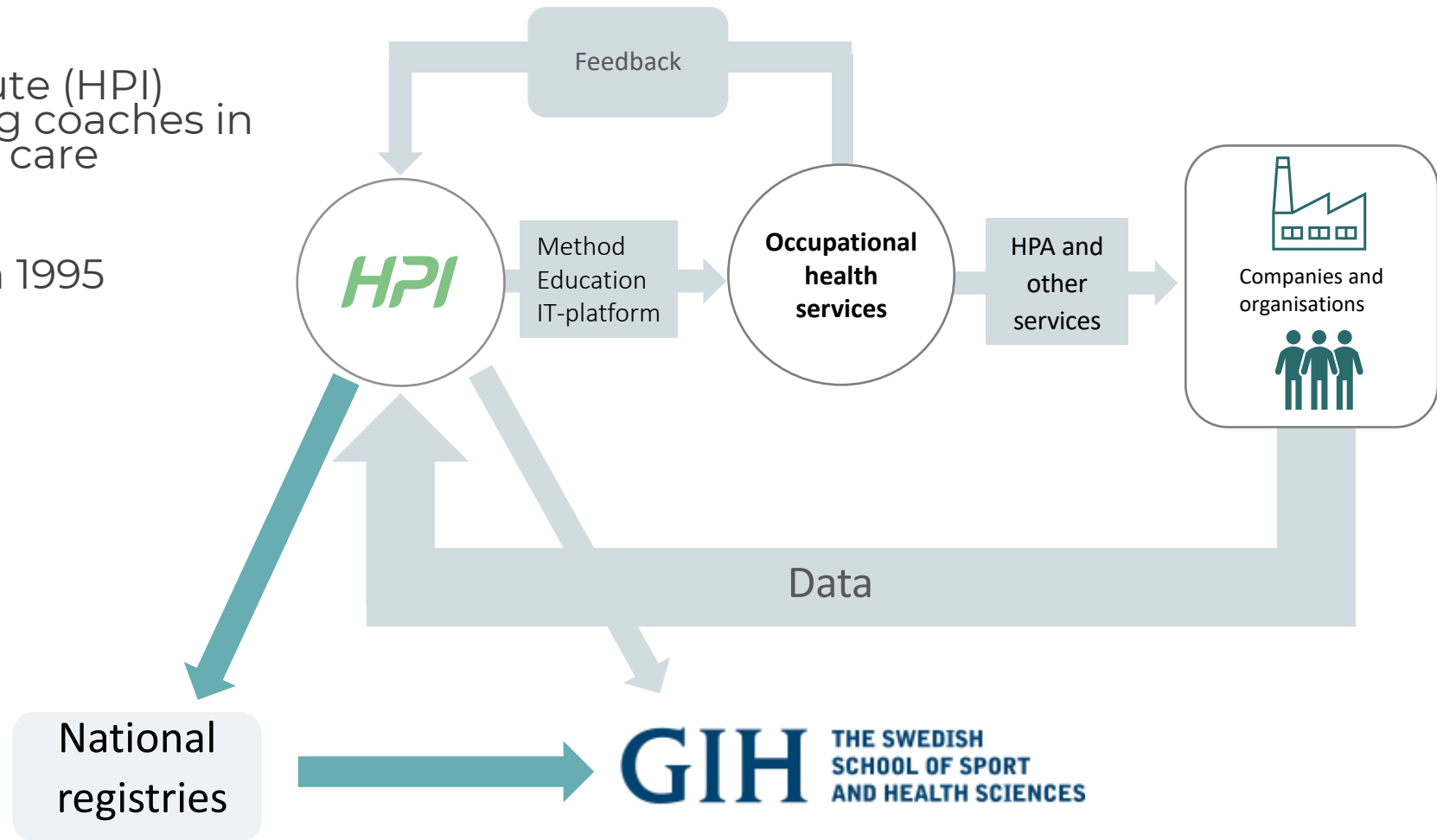
Central database in 1995



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Paper I

Väisänen D, Kallings LV, Andersson G, Wallin P, Hemmingsson E, Ekblom-Bak E. Lifestyle-associated health risk indicators across a wide range of occupational groups: a cross-sectional analysis in 72,855 workers. BMC Public Health. 2020 Nov 4;20(1):1656.

Identifiera
livsstilsfaktorer i olika
yrkesgrupper



Paper III

Väisänen D, Kallings L, Andersson G, Wallin P, Hemmingsson E, Stenling A, Ekblom-Bak E. Mediation of lifestyle-associated variables on the association between occupation and incident cardiovascular disease. Prev Med. 2023 Feb 1;167:107411.

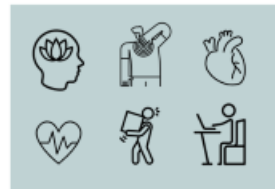
Kopplat till
patientregistret för att
undersöka hjärt och
kärllsjukdom



Paper IV

Väisänen D, Kallings L, Andersson G, Wallin P, Hemmingsson E, Stenling A, Ekblom-Bak E, Johansson P, Paulsson S, Nyman T, Svartengren M, Ekblom-Bak E. Cardiorespiratory fitness moderates the association between occupational physical workload and sickness absence. (Manuscript under review).

Kopplat till
patientregistret för att
undersöka
sjukskrivning



Paper II

Väisänen D, Kallings LV, Andersson G, Wallin P, Hemmingsson E, Ekblom-Bak E. Cardiorespiratory Fitness in Occupational Groups-Trends over 20 Years and Future Forecasts. Int J Environ Res Public Health. 2021 Aug 10;18(16):8437.

Undersöka sekulära
trender i kondition



Paper I

Väisänen D, Kallings LV, Andersson G, Wallin P, Hemmingsson E, Ekblom-Bak E.
Lifestyle-associated health risk indicators across a wide range of occupational groups: a cross-sectional analysis in 72,855 workers. BMC Public Health. 2020 Nov 4;20(1):1656.

Identifiera
livsstilsfaktorer i olika
yrkesgrupper



Design and characteristics

Cross-sectional observational study

Lifestyle-related risk factors

- No regular exercise
- High sitting in leisure
- Physically demanding work
- High sitting at work
- Daily smoking
- Poor diet
- Poor perceived health
- Low Cardiorespiratory fitness
- Obesity
- Hypertension

Year: 2014-2019

Participants: 72,855

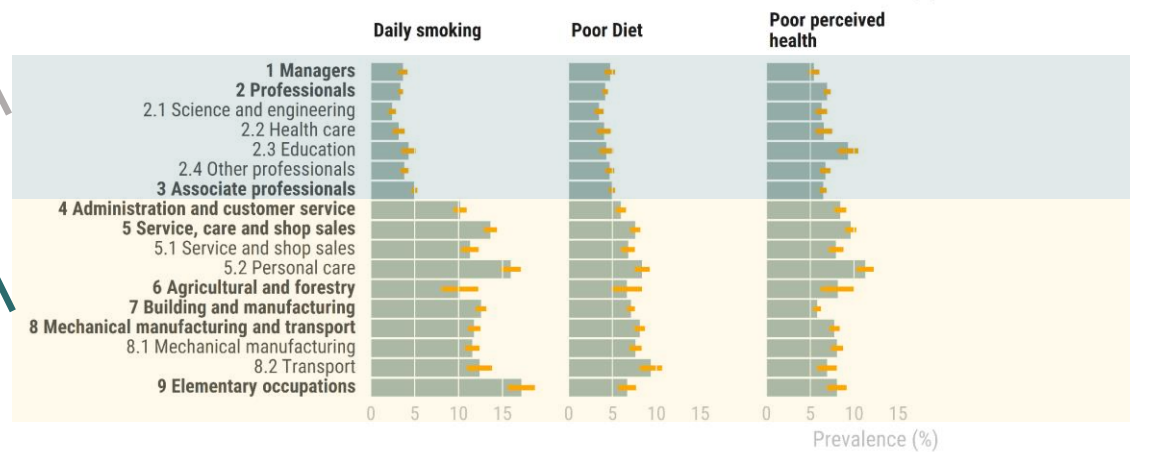
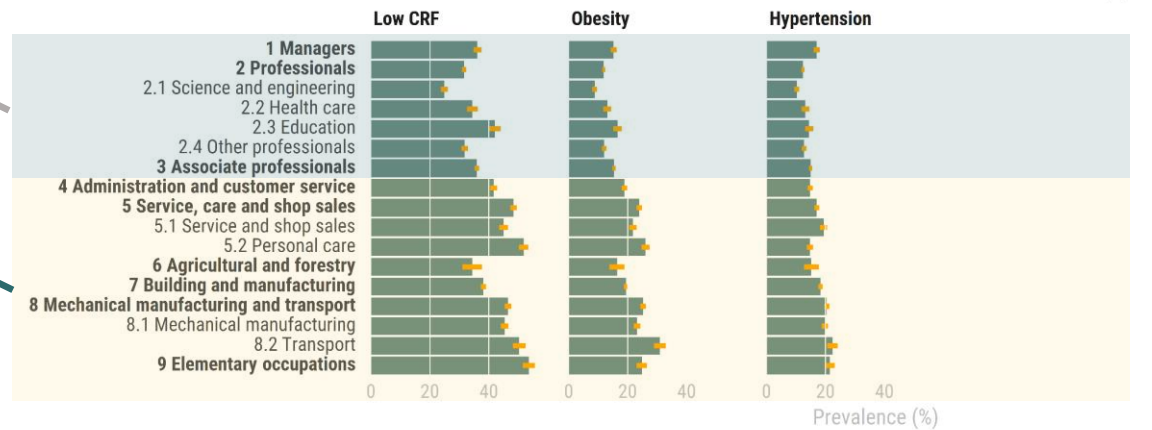
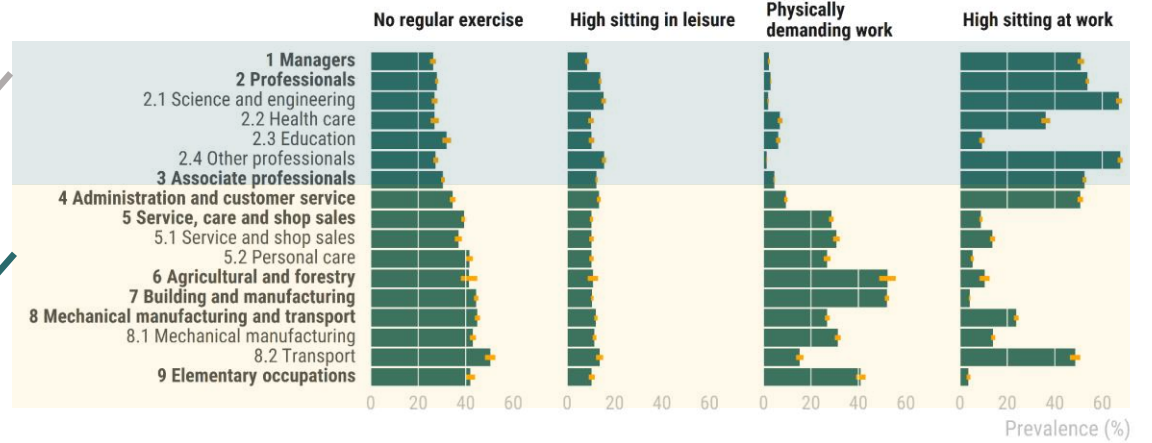
Men: 59%

Results

Prevalence of lifestyle related health risk factors

White-collar high-skilled

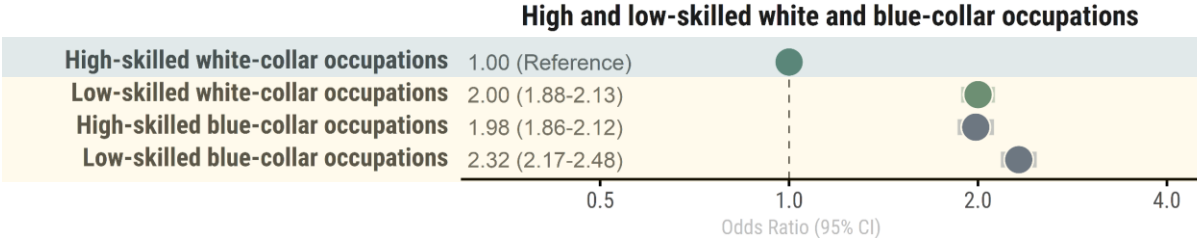
Blue-collar and low-skilled



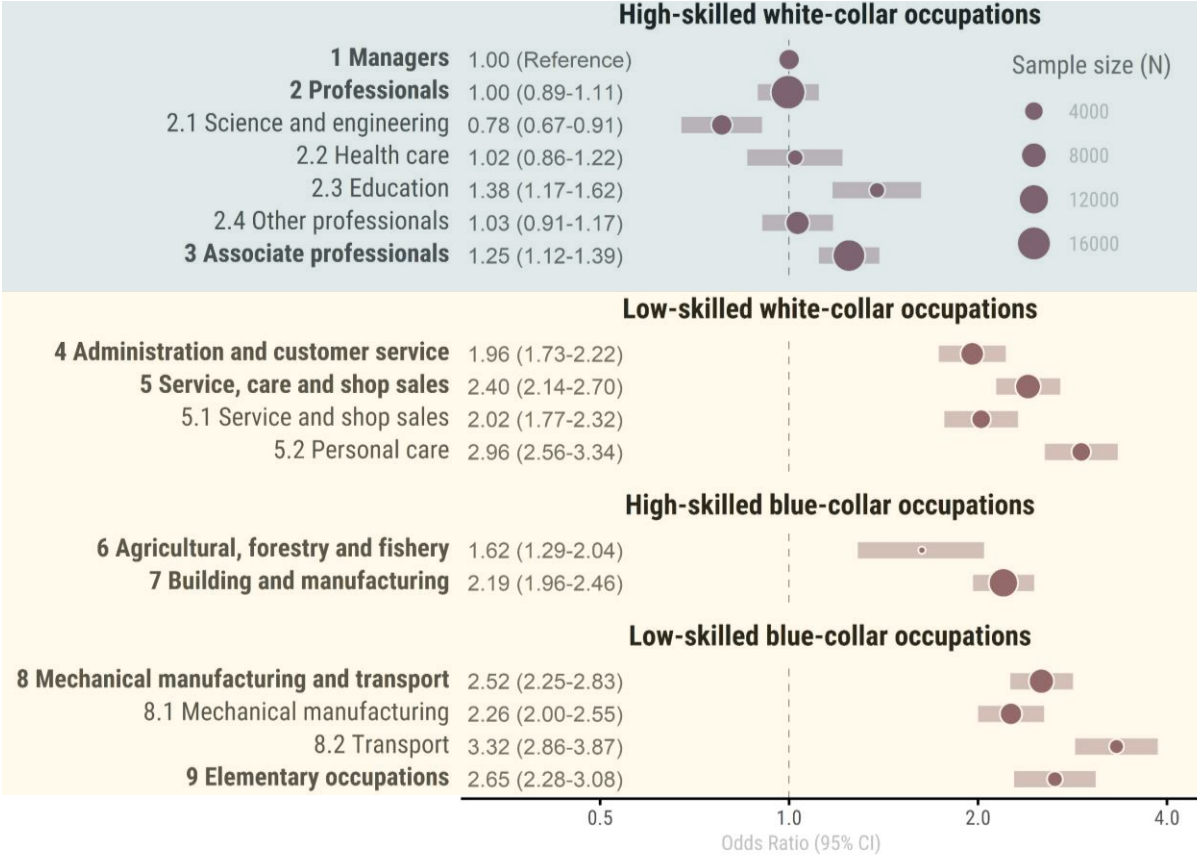
Results

Clustered risk of $3 \geq$ health risk factors.

A



B



Paper II

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**Cardiorespiratory Fitness in Occupational Groups-Trends over 20 Years and
Future Forecasts.** Int J Environ Res Public Health. 2021 Aug 10;18(16):8437.

Undersöka sekulära trender i kondition



Design and characteristics

Cross-sectional

Secular trends

Estimated VO₂max

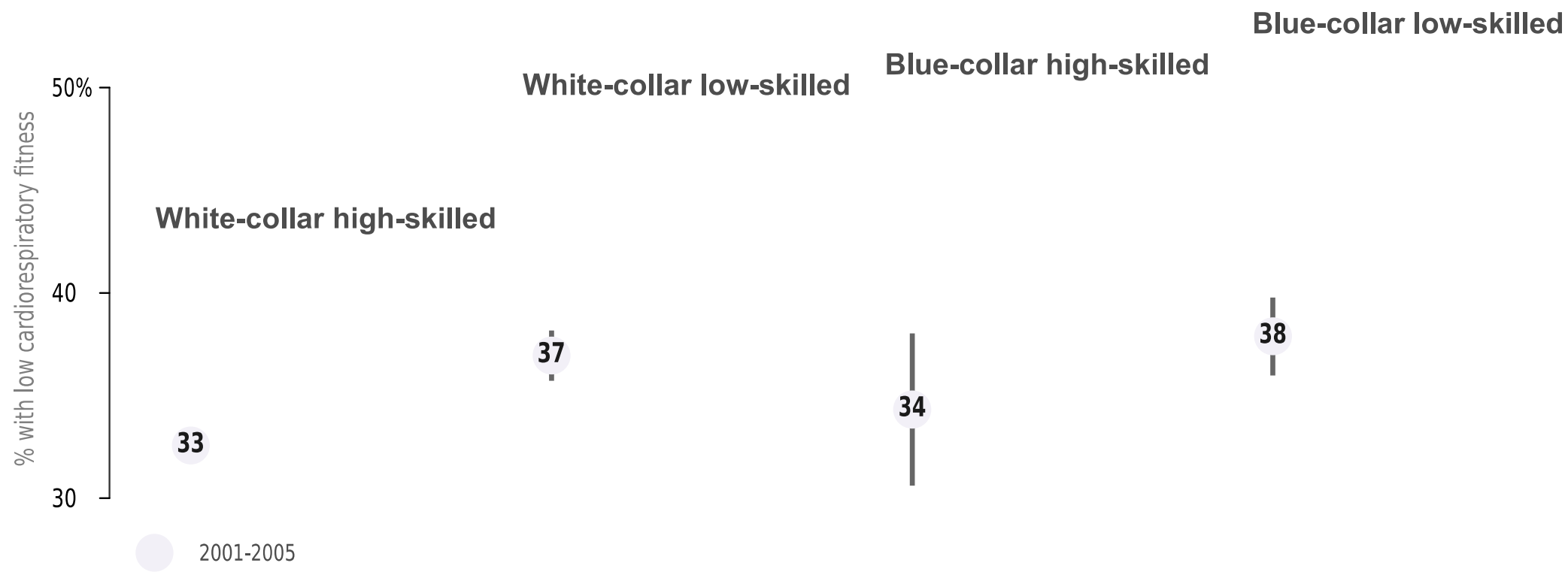
Åstrand test

Years: 2001 to 2020

Assessments: 516,122

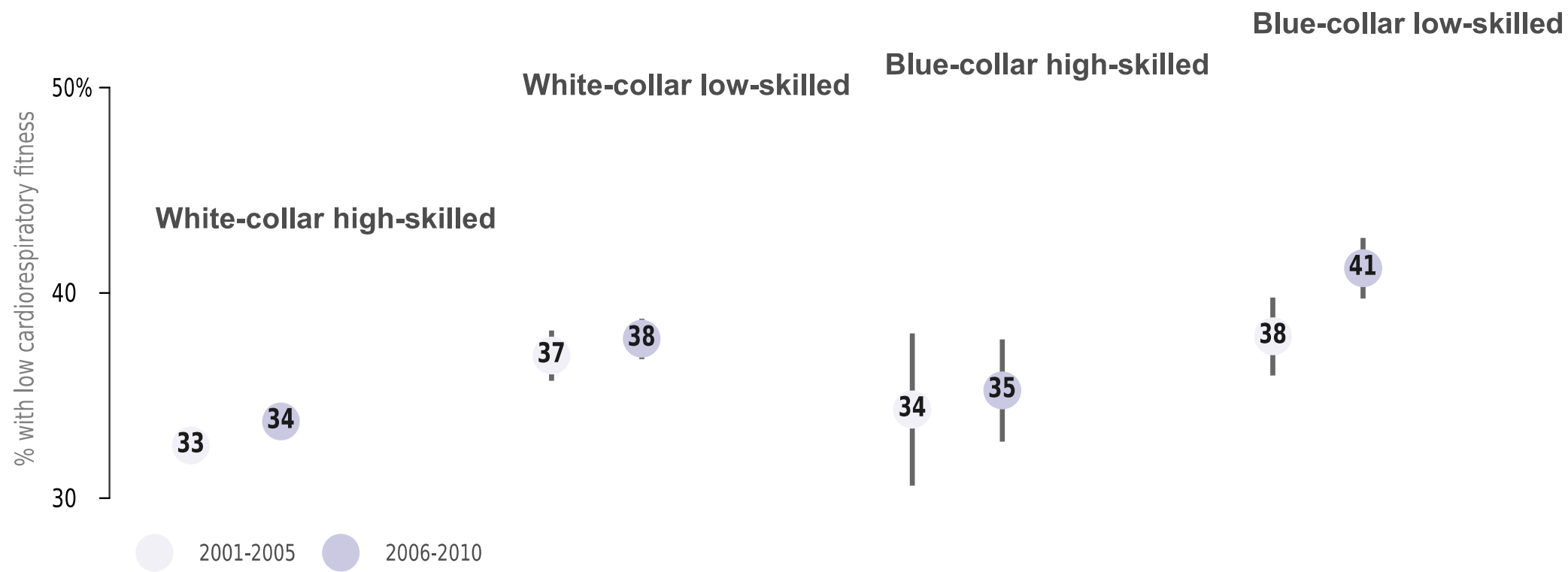
Results

Proportion with, and relative change of proportion with low cardiorespiratory fitness (<32 ml/min/kg)



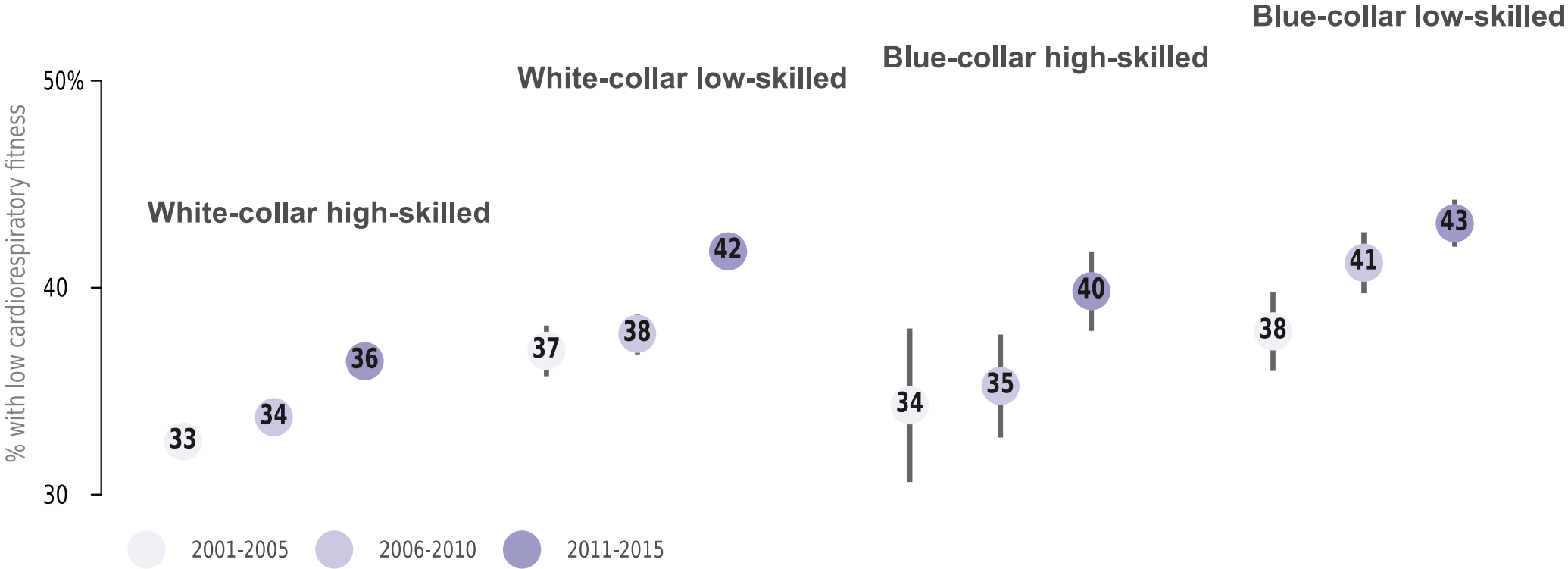
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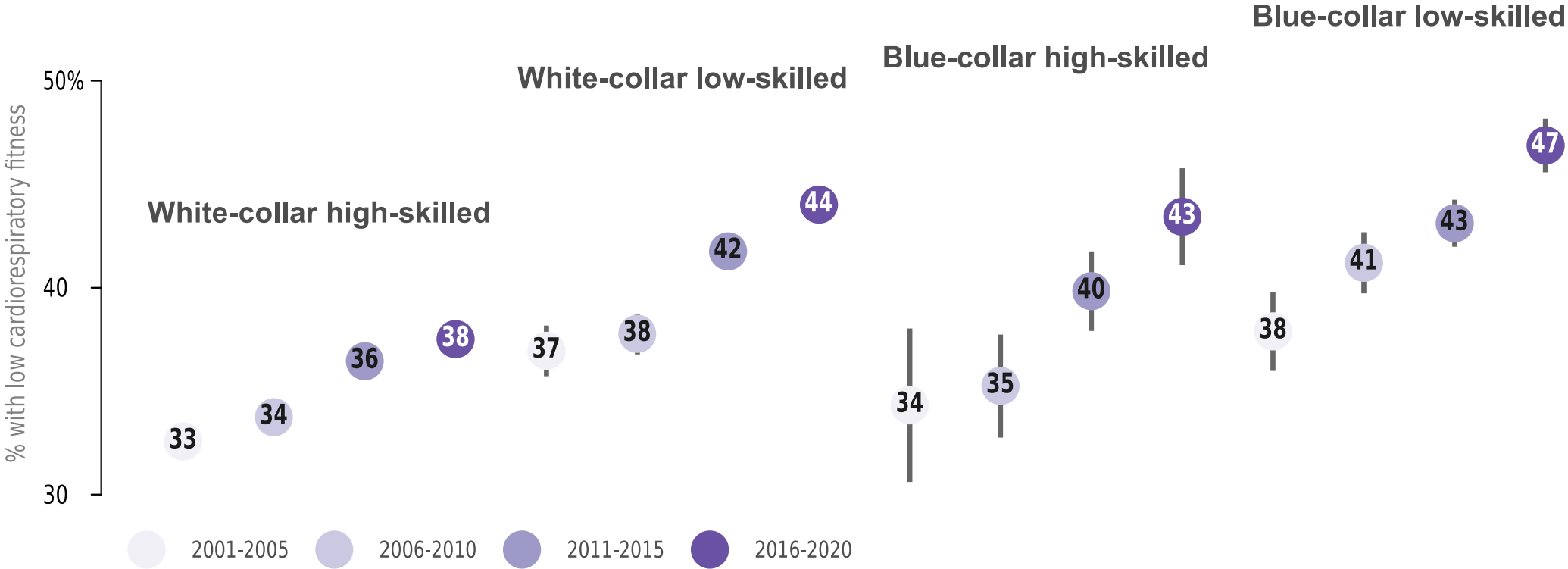
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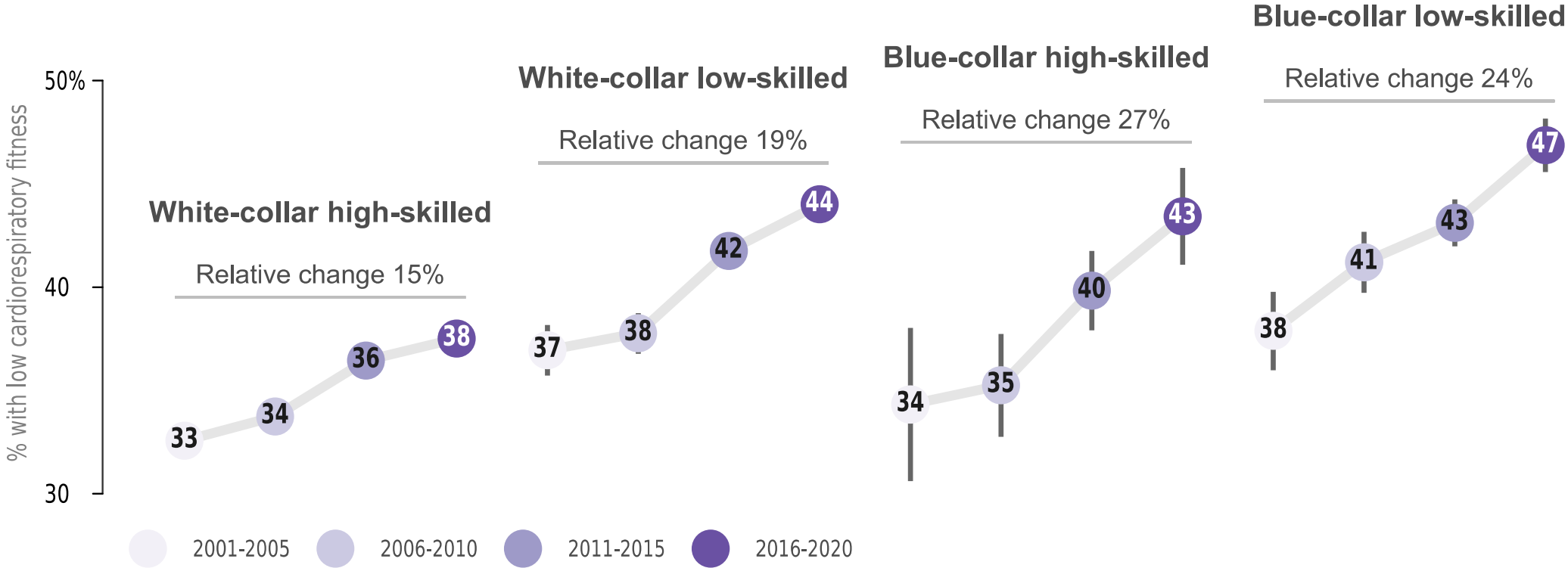
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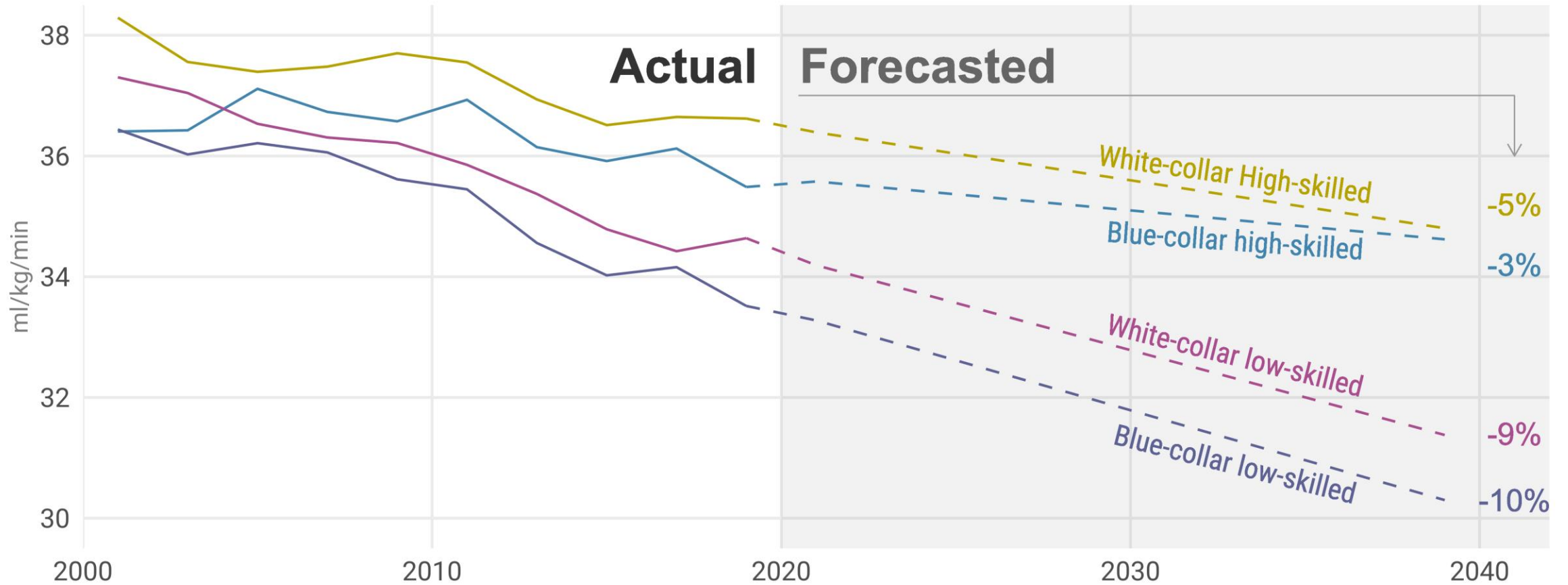
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Results

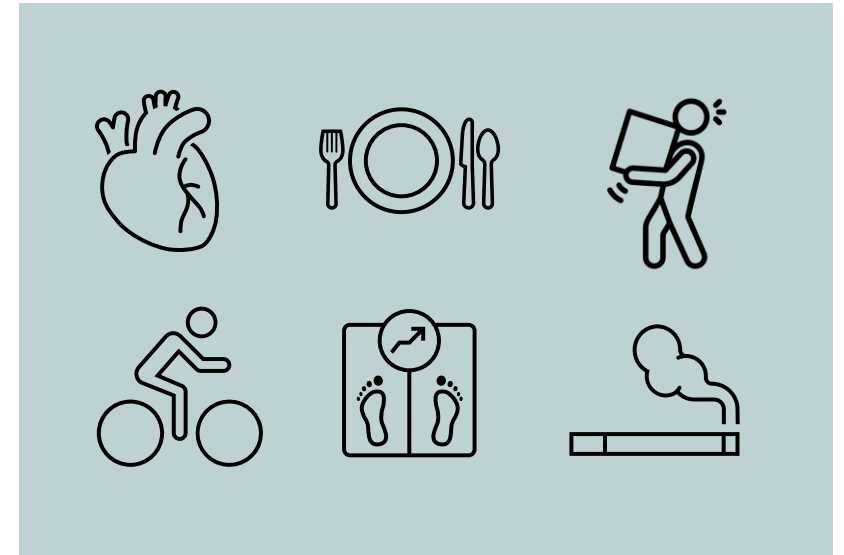
Trends in fitness in occupational groups and future forecast



Paper III

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Mediation of lifestyle-associated variables on the association between occupation and incident cardiovascular disease. *Prev Med.* 2023 Feb 1;167:107411.

**Kopplat till
patientregistret för att
undersöka hjärt och
kärllsjukdom**



Design and characteristics

Cohort-study

Exposure: Occupation

Outcome: Cardiovascular disease

Mediators:

Cardiorespiratory fitness (ml/min/kg)

Cardiorespiratory fitness (ml/min/m²)

BMI

Smoking

Exercise

Diet

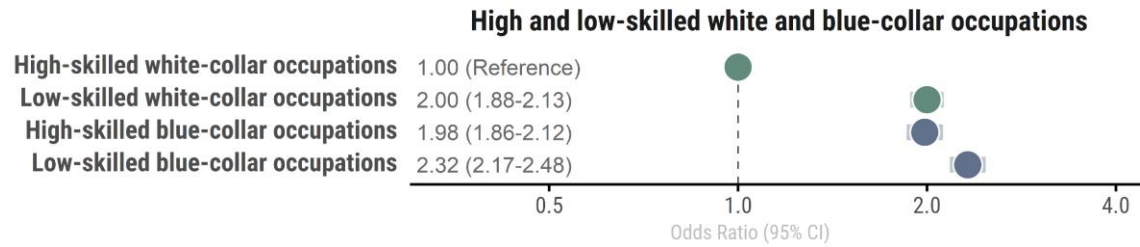
Participants: 304,702

Age: 42.5 years (18–75)

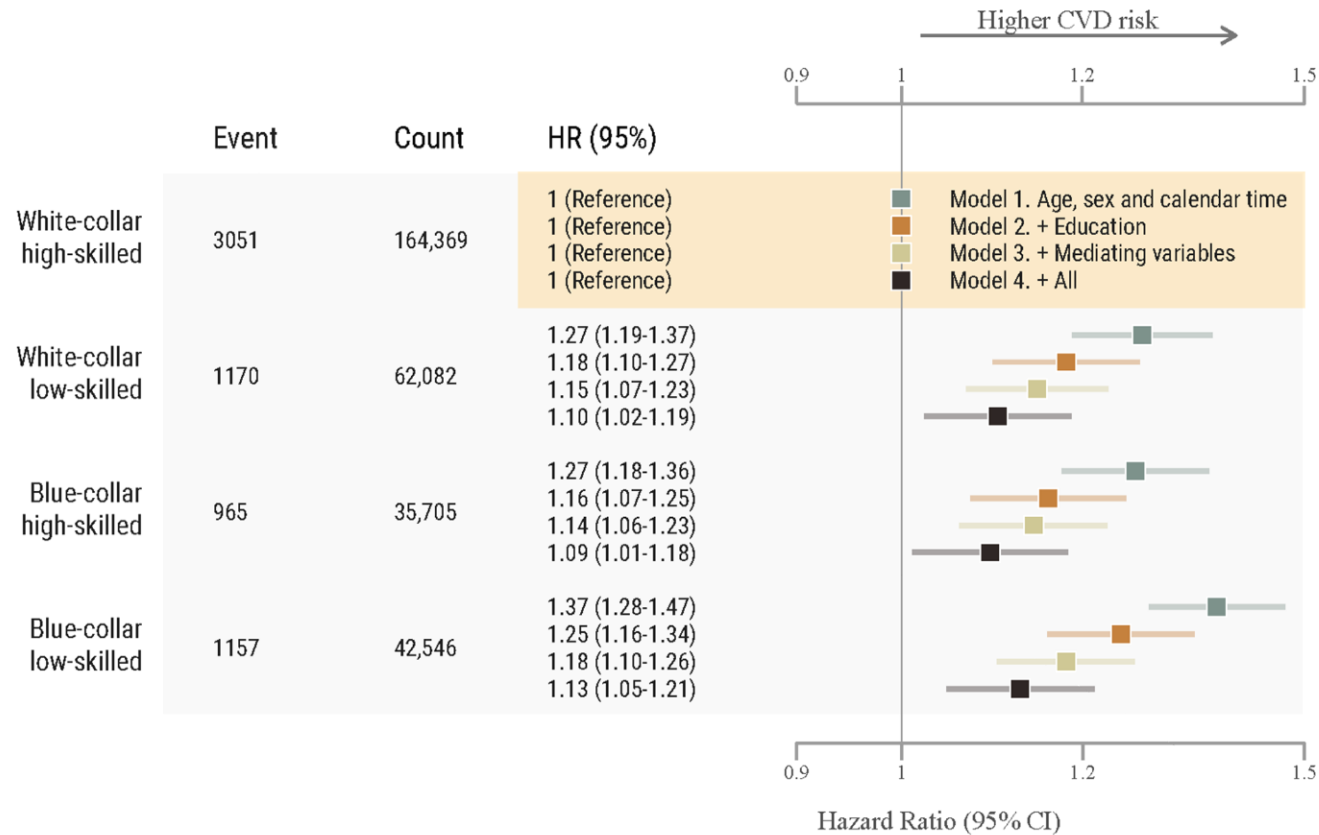
Women: 47%

Results

A



Associations between occupational group and cardiovascular disease

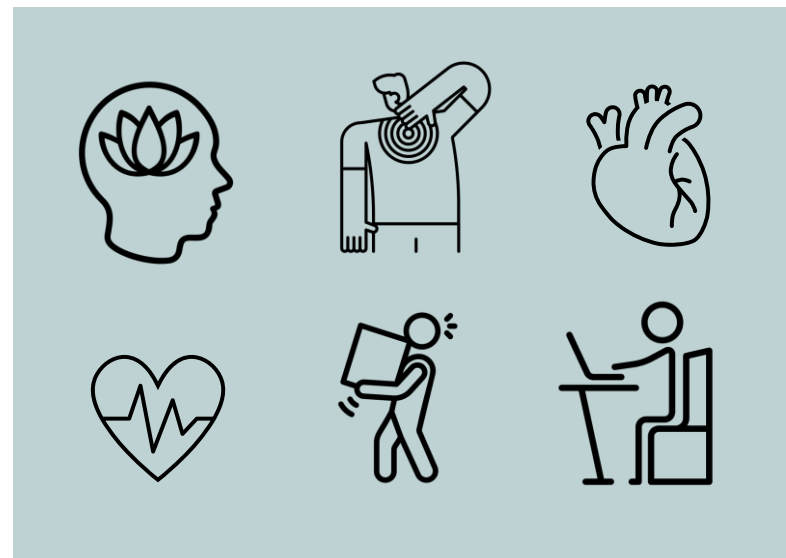


Paper IV

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Cardiorespiratory fitness moderates the association between occupational physical workload and sickness absence. (Manuscript under review).

**Kopplat till
patientregistret för att
undersöka
sjukskrivning**



Design and characteristics

Cohort study

Inclusion criteria:

- Mainly low education occupational groups
- Variation in occupational physical workload

Exposure: Occupational groups

Outcome: Sickness absence in

- Psychiatric
- Musculoskeletal
- Cardiorespiratory

Year: 1982-2020

Participants: 77,366

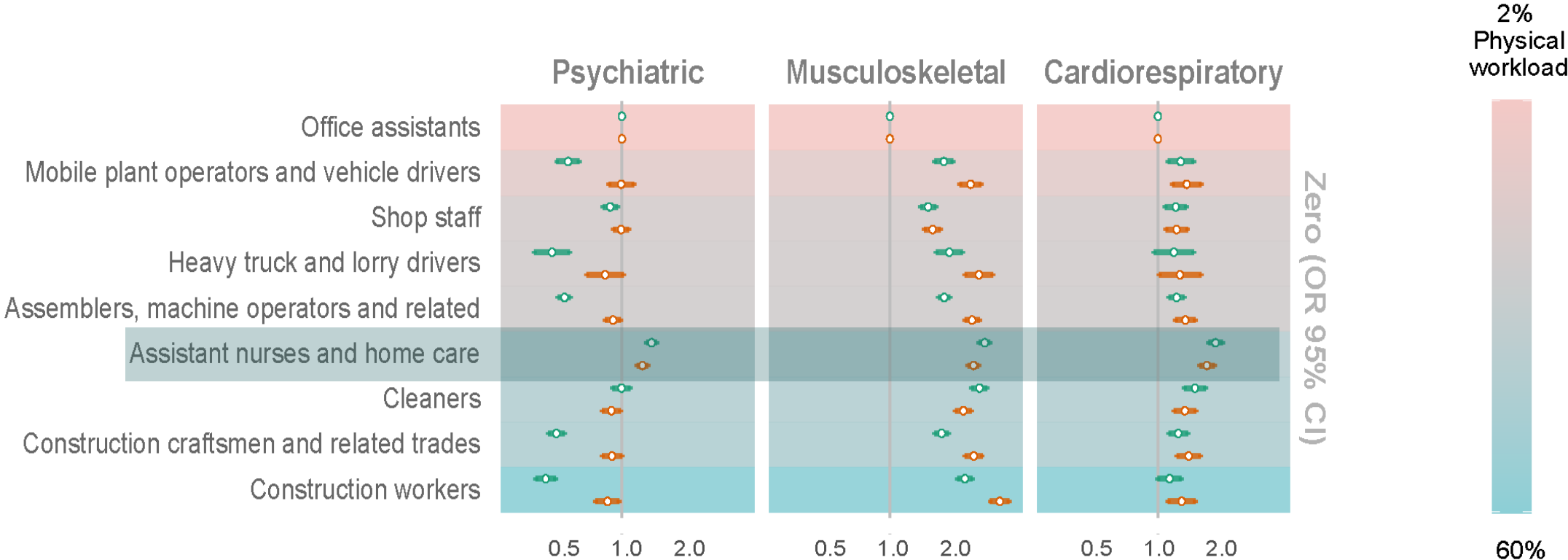
Incidence rate: 31%

Sick days: 4,852,589 during a median of 10.8 years

Results

Incidence of sickness absence

- M1. age + calendar time + earlier event
- M2. + sex + BMI + smoking + exercise + work stress + educat



Konklusion



Data från företagshälsovården är användbar för forskning på den arbetande befolkningen



Efter etiskt godkännande är det fritt fram att använda registerdata



Det handlar om stora mängder data där det finns stora möjligheter att studera olika forskningsämnen.



Thank you

GIH

FORTE

HPI

Thank
you

Supervisors

Occupational
health care
companies
and health
coaches