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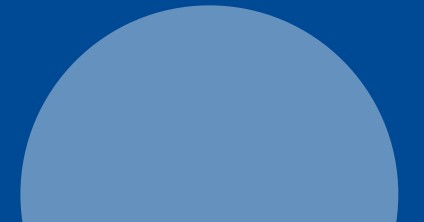
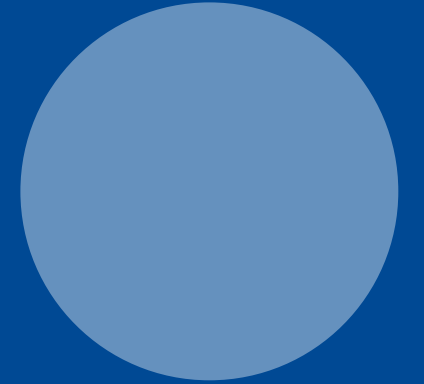
MSDs and education -

Preventing musculoskeletal disease
among childcare professionals in
nursery schools (ErgoKita)

Vera Schellewald

Institute for Occupational Safety and Health of the
German Social Accident Insurance (IFA)

Give musculoskeletal health to children and young
workers, 20-21 March 2019, Hotel Carlton, Bilbao.





ErgoKita – Background and aim of the study

- Exposure to musculoskeletal workloads largely unknown
- Environment predominantly designed to anthropometry of the children
 - unfavourable postures

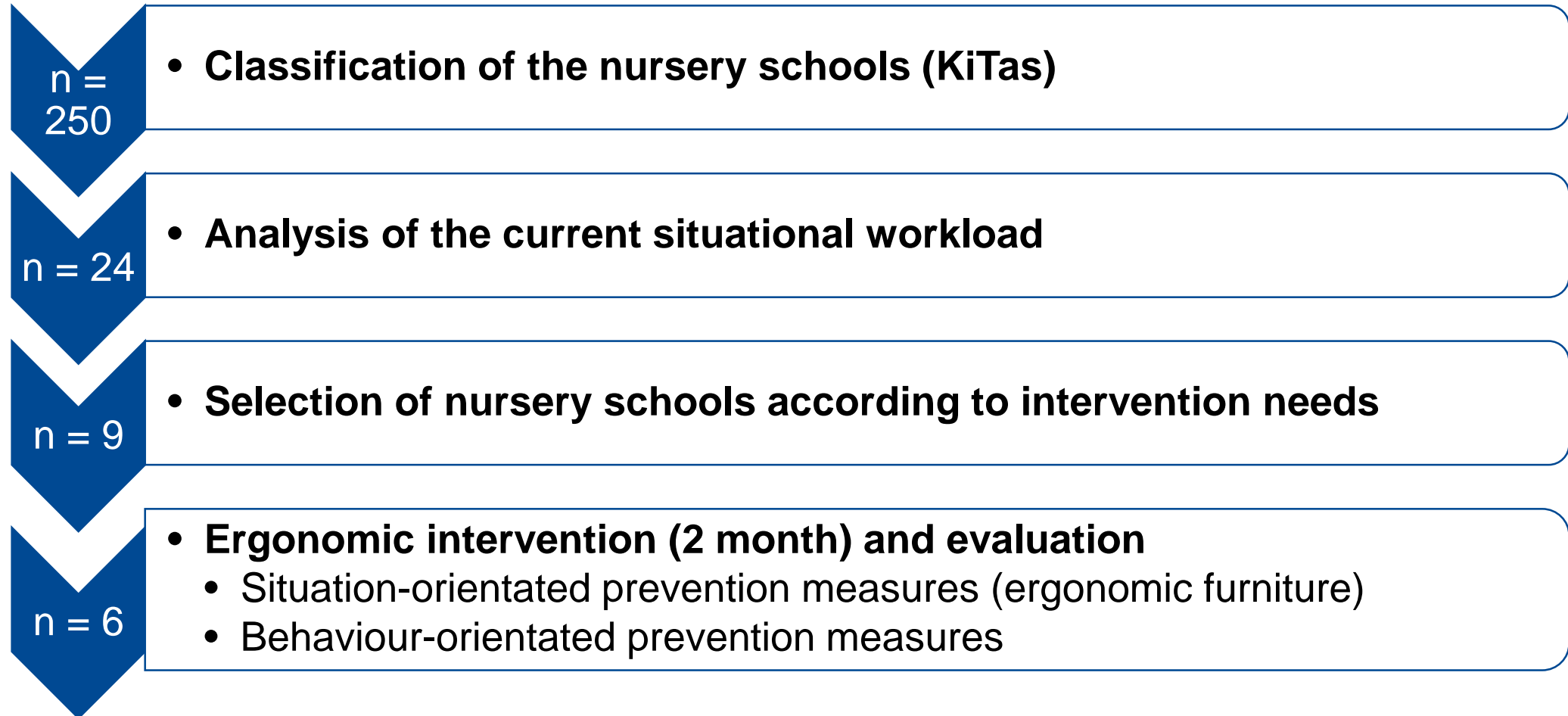
Aim

- Assessment of current situational workload
- Determine effect of influencing factors and structural parameters
- Identify and evaluate suitable prevention measures

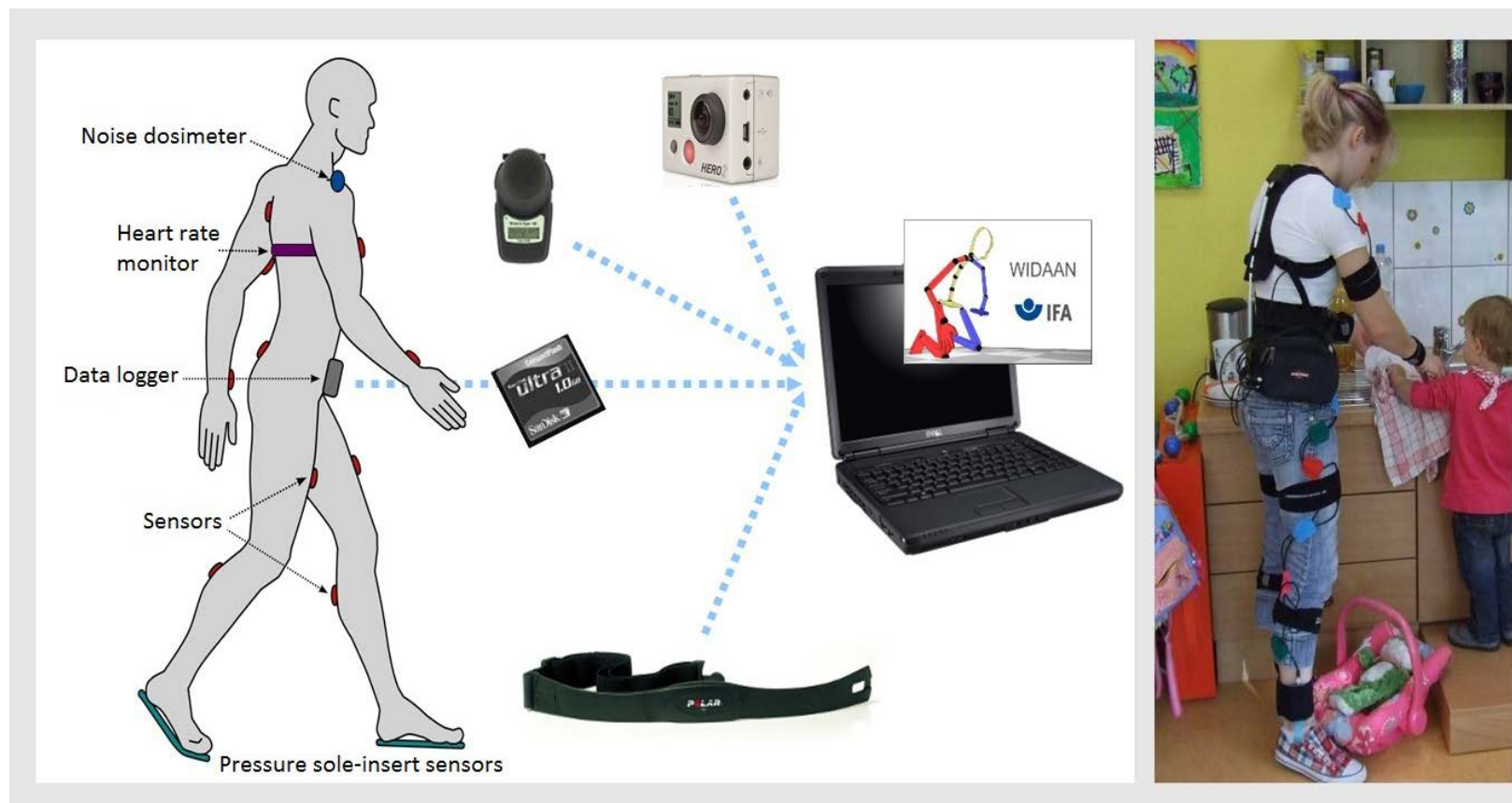




Research Design

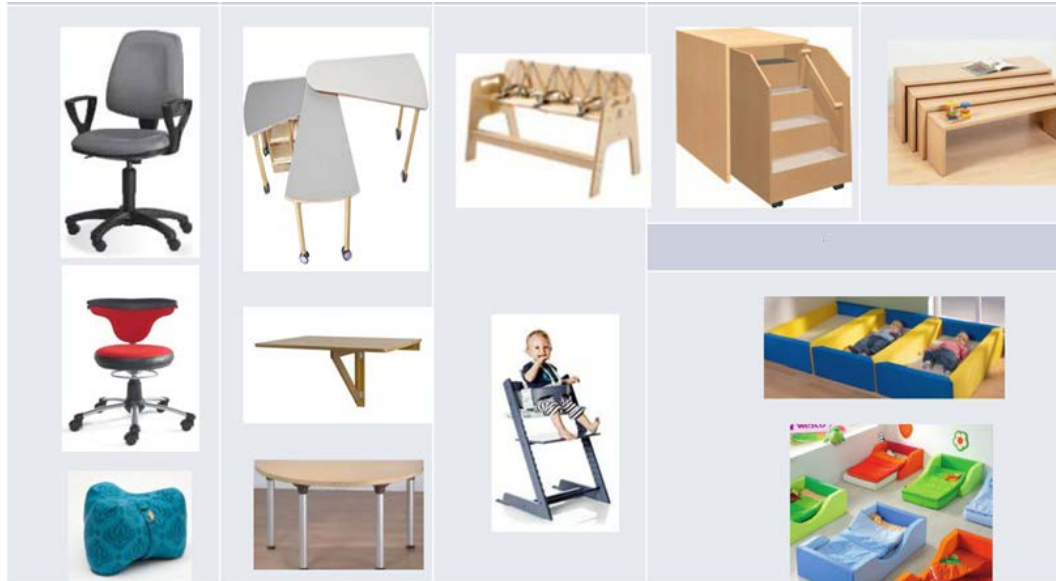


Method: CUELA-System (objective workload analysis)



Method: Development of intervention measures

Situation-oriented (Basis-Package furniture)



Behaviour-orientated Workshop

- „Healthy“ sitting
- Correct lifting and carrying
- Healthy back postures
- Reduction of knee-straining postures



Results: reduction of musculoskeletal strain

seated posture

knee-straining posture

trunk flexion

lift and carry

Before



After

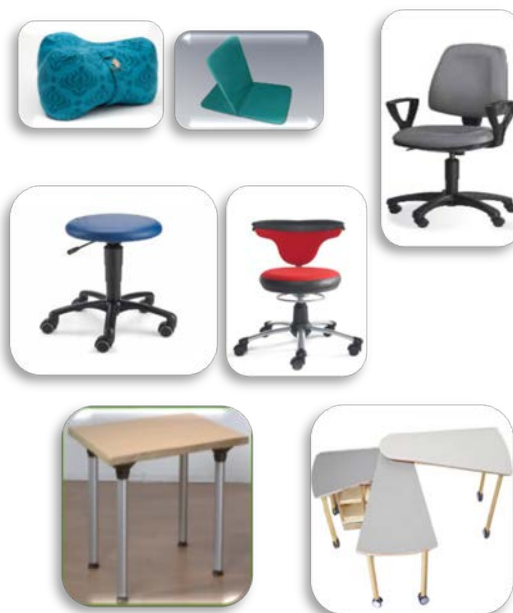




Results: intervention measures

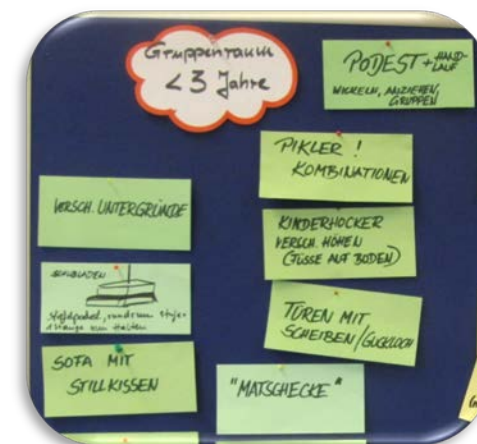
Situation-oriented: ergonomic furniture

- Unfavorable postures = less frequently
- ergonomic furniture as work facilitation = needs + educational concept of nursery school
- favorable tendency towards reduction of health complaints



Behavior-oriented: Workshop „acceptance“

- positive impact on work behavior, health awareness, work processes
- favorable effect of support by research team
- positive effects on
 - working behavior
 - outside the workplace





Conclusions

- Overall concept of project-related changes assessed as positive
 - Participation of educators
- Enabling children to be more independent = relieve burden of educators
 - Design equally health-promoting for children and educators
- **effective, participative ergonomic intervention approach to reduce work-related musculoskeletal + psychological risk factors**





Knowledge put into practice

- Suitable concepts for work design, e.g.
 - height adjustment
 - Age(s) appropriate work design and operational health management
 - Education and training on ergonomics and staff health
- **Conversion of a nursery school**
- **Follow-up evaluation (3 years later)**

MusterKiTa



References „ErgoKita“ and „MusterKita“ for further information:

- Burford, E.M.; Ellegast, R.P.; Weber, B.; Brehmen, M.; Groneberg, D.; Sinn-Behrendt, A.; Bruder, R.: The comparative analysis of postural and biomechanical parameters of preschool teachers pre- and post-intervention within the ErgoKiTa study, Ergonomics 60 (2017) Nr. 12, 1718-1729.
- Sinn-Behrendt, A.; Sica, L.; Bopp, V.; Bruder, R.; Brehmen, M.; Groneberg, D.; Burford, E.M.; Schreiber, P.; Weber, B.; Ellegast, R.P.: IFA Report 2/2015. Ed.: Deutsche Gesetzliche Unfallversicherung (DGUV), Berlin 2015. ISBN: 978-3-86423-148-3.
- Eul, M.; Beisser, R.; Köhmstedt, B.; Schelle, F.; Schmitz, M.; Schwan, M.; Wittlich, M.; Ellegast, R.P.: Gesundheitsförderung am Arbeitsplatz Kita - Die MusterKiTa als Beispiel guter Praxis -, IFA Report 4/2017. Ed.: Deutsche Gesetzliche Unfallversicherung (DGUV), Berlin 2017. ISBN: 978-3-86423-166-7.
- Hauke, A.: Prävention durch ergonomische Arbeitsgestaltung. Ergonomisch denken und arbeiten - ein Mittel zur Gesunderhaltung von Kita-Personal, kita-aktuell spezial (2018) Nr. 5, S. 176-178.



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Questions?

Vera Schellewald

vera.schellewald@dguv.de

Phone: +49 30 13001-3004

