



# Health Promotion and Occupational Health in Daycare Centres

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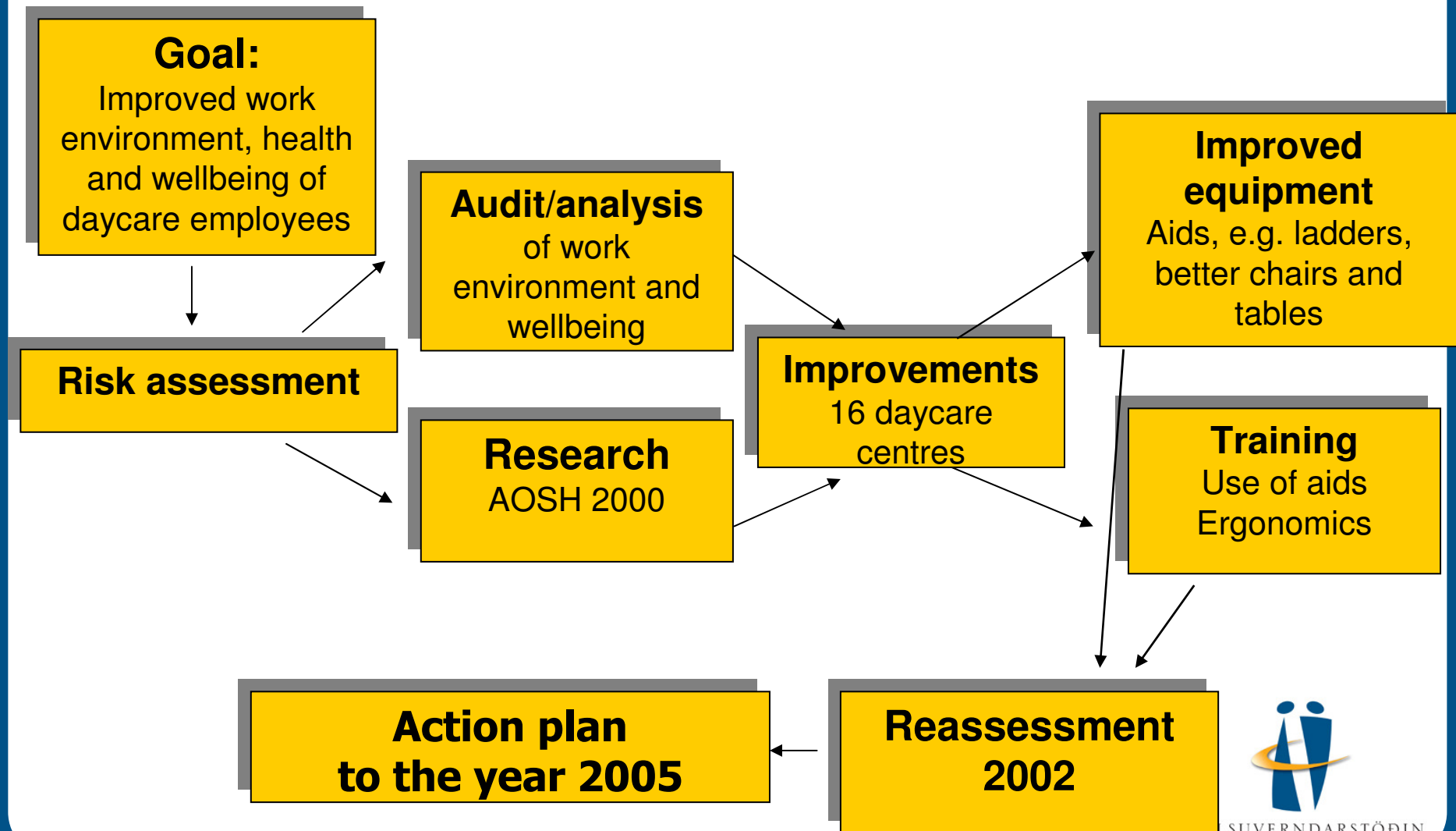


## Health promotion – the years 2000- 2006

1. 2000-2002. Experimental project (practical)
2. 2003. Nes Award
3. 2002-2006. Implementation of health promotion at the workplace in **all** preschools in Reykjavik (practical)
4. 2003. M.Sc. project started



# Health promotion – experimental project



# Masters Project The Process



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# Printed material of the Project

- I. Report on the status assessment of the work environment in 16 daycare centres in Reykjavik in May and June 2000
- II. Surveys from 2000 and 2002 (90% response)
- III. Articles in the Icelandic Medical Journal:
  - I. Ágústa Guðmarsdóttir, Kristinn Tómasson. Health Promotion in Daycare Centres in Reykjavik – Risk Assessment in 2000. IMJ 2006; 92:599-607.
  - II. Ágústa Guðmarsdóttir, Kristinn Tómasson. Health Promotion in Daycare Centres in Reykjavik – Intervention and Action Results. IMJ 2007; 93:189-98.
- IV. M.Sc. Thesis: Health Promotion and Occupational Health in Daycare Centres 2007



# Purpose of the study

- To account for:
  - Risk assessment of the work environment in daycare centres in Reykjavik
  - Employee wellbeing
  - Improvements in accommodation
  - Improve training on occupational health
  - Compare employee realization of their wellbeing and the work environment before and after change
  - Emphasizing: Noise, accommodation, physical and psychosocial stress



# Material and Methods:

A prospective intervention study:

- Pre-evaluation: Year 2000
  - A survey of health, wellbeing and the work environment
  - Evaluation of the work environment - classified into 4 groups



# Ergonomic evaluation

## Daycare centres (I-XVI)

	Daycare centres (I-XVI)															
Variables	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI
Department accomod.	5	5	5	3	4	4	2	4	4	4	4	4	4	3	5	1
Work chairs	4	4	0	1	1	1	2	1	4	0	1	1	2	1	1	1
X	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Total	<b>57</b>	<b>55</b>	<b>47</b>	<b>47</b>	<b>46</b>	<b>44</b>	<b>43</b>	<b>40</b>	<b>39</b>	<b>38</b>	<b>37</b>	<b>36</b>	<b>35</b>	<b>35</b>	<b>34</b>	<b>32</b>
Average	4	3,9	3,4	3,4	3,3	3,1	3,1	2,9	2,8	2,7	2,6	2,6	2,5	2,5	2,4	2,3
Categories	<b>A</b>	<b>A</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>C</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>D</b>

# Ergonomic evaluation - classification

**Category A: 2 centres = work environ. very good**

**Category B: 5 centres = work environ. good**

**Category C: 5 centres = work environ. fairly good**

**Category D: 4 centres = work environ. fair**

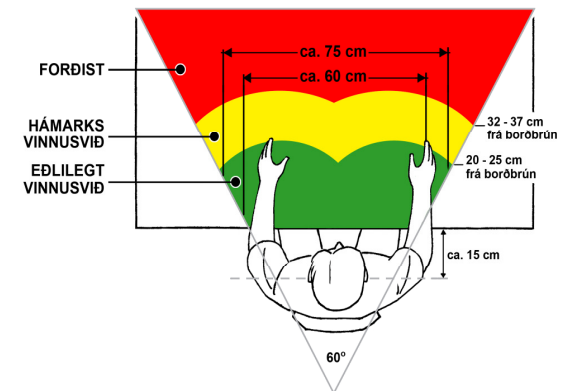
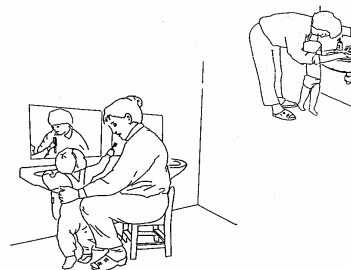
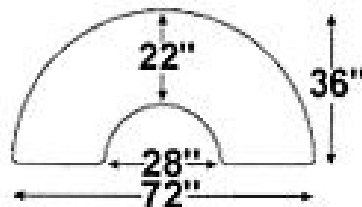


# Material and Methods:



## A prospective intervention study:

- Pre-evaluation: Year 2000
  - A survey of health, wellbeing and the work environment
  - Evaluation of the work environment - classified into 4
- Intervention to improve the working environment



# Material and Methods:

## A prospective intervention study:

- Pre-evaluation: Year 2000
  - A survey of health, wellbeing and the work environment
  - Evaluation of the work environment - classified into 4 groups
- Intervention to improve the working environment
- **Post-evaluation: Year 2002**
  - Same survey
  - Results were compared on the basis of the 4 group classification



# Results I: Occupational variables

90% response rate both in 2000 and 2002.

	Category	Category	Category	Category	Statistical check
	A	B	C	D	Comparison btw 2000 + 2002, p=.001 $\chi^2$ crit 24,3
Number of employees					
2002	43 (16%)	95 (35%)	74 (28%)	55 (20%)	$\chi^2 = 21$
2000	33 (14%)	75 (31%)	91 (38%)	42 (17%)	
Average age of employees					
2002	34 ± 12,5	38 ± 13	42 ± 12	38 ± 11	
2000	33 ± 11	35 ± 12,5	37 ± 12	40 ± 12	
Number of non-professionals					
2002	27 (63%)	53 (56%)	41 (55%)	23 (43%)	$\chi^2 = 20$
2000	18 (58%)	43 (59%)	50 (55%)	13 (31%)	



## Results II: Working environment

The working environment improved and levelled out between groups.

	Category	Category	Category	Category		Statistical check
Accomod	A	B	C	D	N	Comparison 2000 + 2002 $p=.001$ $\chi^2=2$ crit 24,3
Accomodation in department allows mostly/mainly for good work positions						
2002	39 (95%)	83 (92%)	67 (93%)	45 (86%)	255	$\chi^2=2 = 83$
2000**	28 (90%)	45 (62%)	50 (57%)	27 (73%)	227	

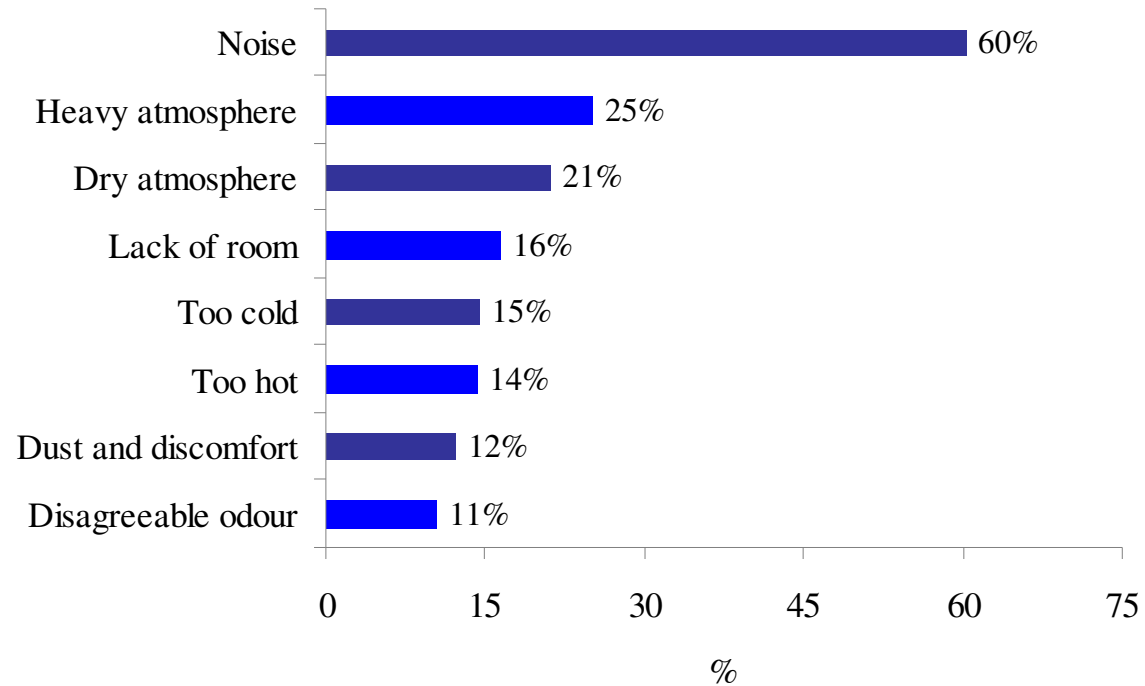
Significant between categories within a year: \*\* $p<0,01$



# Results III - Noise



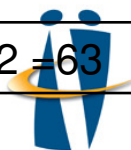
- 90% - discomfort due to noise



# Discomfort due to noise

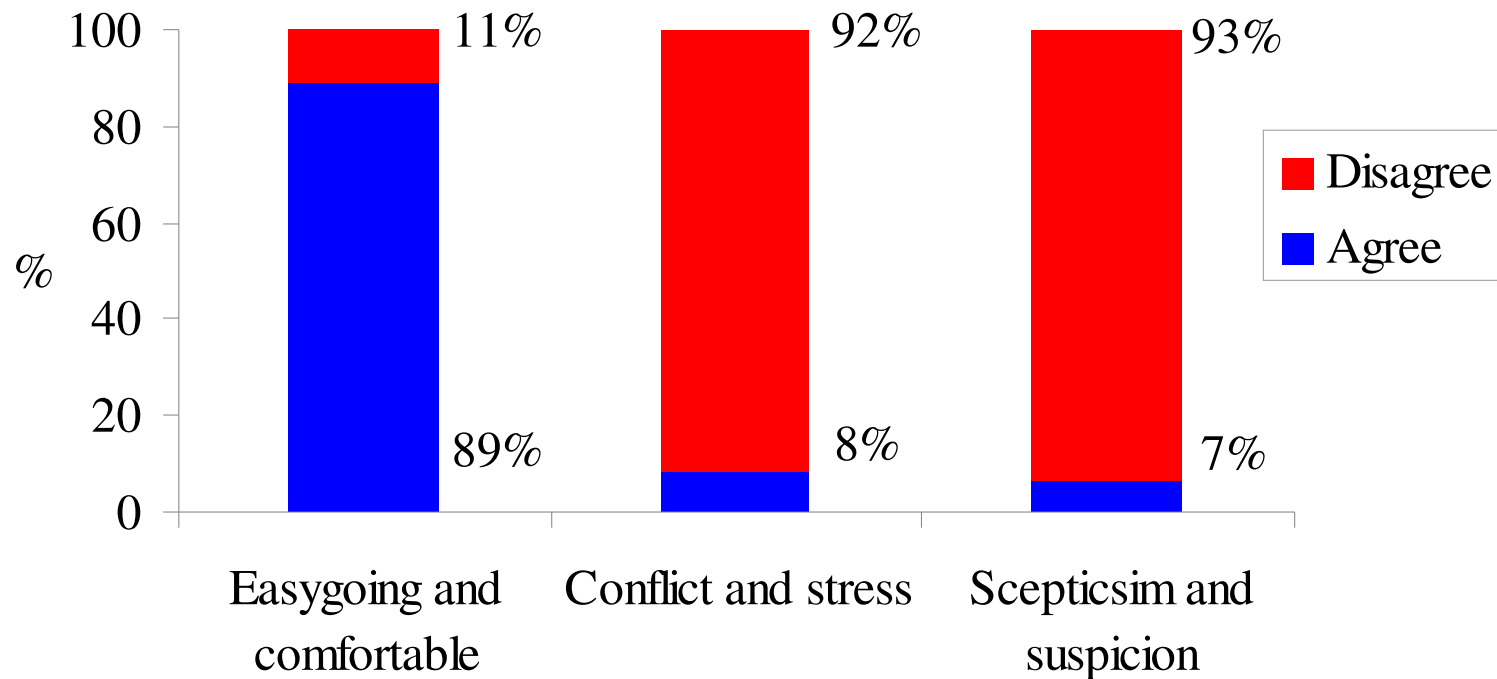
Employees' awareness of too much noise grew

	Category	Category	Category	Category		Statistical check
Noise	A	B	C	D	N	Comparison 2000 + 2002 p=.001 $\chi^2$ crit 24,3
Often or occasionally						
2002	39 (93%)	81 (91%)	65 (93%)	50 (94%)	254	$\chi^2 = 71$
2000*	29 (93%)	70 (99%)	78 (93%)	29 (78%)	223	
0-1 year, often						
2002	6 (55%)	9 (45%)	5 (42%)	9 (69%)	56	$\chi^2 = 46$
2000	11 (92%)	22 (63%)	25 (71%)	6 (67%)	91	
>1 year, often						
2002	19 (70%)	41 (59%)	39 (71%)	28 (74%)	189	$\chi^2 = 63$
2000	10 (56%)	24 (69%)	26 (53%)	14 (52%)	129	



# Results IV– Psychosocial wellbeing

- A great deal of job satisfaction



# Psychosocial wellbeing

- The psychosocial wellbeing - best in the smallest d.c. with the most professionals and higher age.
- The least job satisfaction - work.envir. the best.

	Category	Category	Category	Category		Statistical check
	A	B	C	D	N	Comparison 2000 + 2002 p=.001 $\chi^2=2$ crit 24,3
Rather/very cheerful work place						
2002	40 (98%)	89 (98%)	68 (94%)	53 (98%)	258	
2000	30 (91%)	72 (97%)	84 (95%)	41 100%)	236	

Significant, between categories within year: \*\*p<0,01; \*\*\*p<0,001



# Results V – Physical discomfort

- Physical discomfort was considerable.
- Significant change of back discomfort in the previous 7 days ( $p < 0,001$ ).
- The fewest complaints of physical discomfort where:
  - the work. envir. was best,
  - the average age was the lowest
  - the majority of the empl. were non-professionals (63%)



# Results VI: Posture

Difficult body posture at work has changed ( $p < 0,001$ ).

	Category	Category	Category	Category		Statistical check
	A	B	C	D	N	Comparison 2000 + 2002 $p = .001$ $\chi^2$ crit 24,3
Kneeling						
2002*	20 (50%)	39 (47%)	17 (28%)	28 (58%)	231	$\chi^2 = 54$
2000	19 (63%)	46 (66%)	53 (63%)	24 (62%)	223	
Torso very bent						
2002	14 (35%)	39 (46%)	31 (51%)	21 (45%)	232	$\chi^2 = 85$
2000	18 (58%)	51 (73%)	65 (78%)	23 (62%)	221	
Lifting, carrying upright medium load						
2002	18 (46%)	31 (37%)	24 (39%)	18 (37%)	233	$\chi^2 = 19$
2000	10 (33%)	27 (41%)	32 (39%)	15 (38%)	215	

Significant, between categories within year:  $*p < 0,05$



# Conclusion

- Both physically and mentally stressful.
- Job satisfaction is prominent
- Intervention can improve working methods and environment
- Risk assessment can lay the groundwork for further prevention
- The goals of health promotion and safety in the workplace can possibly be reached in this way.

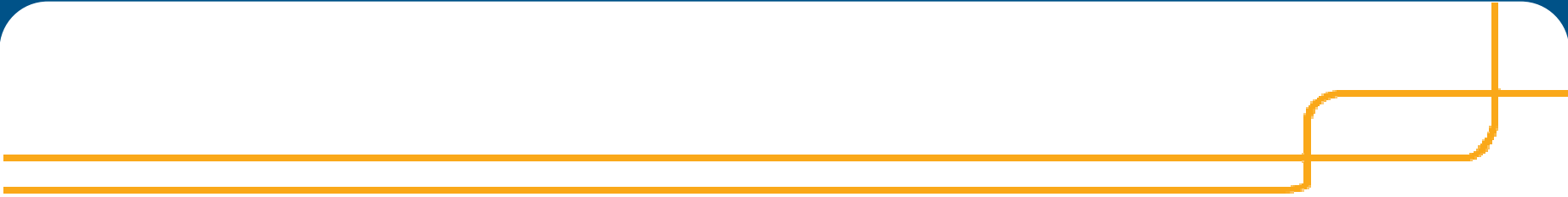


# Risk factors in daycare centres: Experience

**After 6 years of work in 2000-2006**

- Noise
- Low working height and posture (and close quarters)
- Lifting and carrying children
- Daily plan and management
- A great deal of communication





Psychosocial wellbeing  
does not compensate physical wellbeing over  
a long period of time

Thanks

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# Physical discomfort

- Great discomfort among daycare centre employees
- Hard to assess the discomfort from year to year by comparison based on the surveys
- Systematic work to minimize physical discomfort of employees is needed



# Project results

## Larger centres:

- Better space
- Younger employees
- Fewer professionals

## Causes:

- Better physical wellbeing
- Worse psychosocial wellbeing

## Professionals:

- More responsibility
- Increased stress related symptoms

## Causes:

- Good psychosocial wellbeing
- Positivity
- Worse physical wellbeing

Psychosocial wellbeing does not compensate physical wellbeing over a long period of time



# Health promotion – experimental project

