Stress in Healthcare –
Can we measure and prevent stress in healthcare

Albert Nienhaus
1 Development of Occupational medicine in Germany

2 Stress concepts and instruments

3 From analysis to action

4 Leadership and workers health

5 Violence against HCWs
The working group at the CVcare

Current projects

- TB, HCV MRSA in HCWs
- Risk factors for CTS
- Ergonomics in nursing
- Work in Kindergartens
- Health of nursing students
- Stress in doctors
- Nurses-Instability Scale
- Violence
- Leadership and workers health
Accidence Insurance for the Healthcare and Welfare Sector
OSH in Germany 25 years ago
Perception of working conditions

– A wall between OSH-experts and workers
  • Don’t trust workers – they always complain about working conditions
  • Don’t trust unions – they want pay rises for heavy, dirty or dangerous work

– Landmark ruling: Arbeitsschutzgesetz (Work Protection Law) in 1996

– Workers health can be impeded by physical, chemical and biological as well as organizational factors
– Risk assessment needs to consider organizational factors (psycho-social aspects of work)
– Employer needs to perform risk assessment and needs to start a continues improvement process
  • Analyze, plan, act, evaluate

– Workers and workers representatives need to be involved in this process

– Occupational safety and health experts all the sudden were obliged to listen to workers and unionists.
– Occupational heath is more than occupational medicine
– Physicians should work together with Psychologists and other OSH-experts
– Instruments for risk assessment were developed

– Nowadays workers started to refuse cooperation
Most instruments developed for risk assessment of work related stress are based on two concepts:

- Effort-Reward-Imbalance from Siegrist in Germany
- Job Demand-Control-Model from Karasek (and Theorell) in the US
Effort at the workplace | High
---|---
Reward * | Low

Effort-Reward-Imbalance | Adverse health effect, e.g. cardiovascular disease or MSD

Over commitment | Unfavorable

Personal factors

* salary, appreciation of leader or colleagues, sense of achievement, job security, promotion

Siegrist 1996, 2001
<table>
<thead>
<tr>
<th></th>
<th>Low Job Demand</th>
<th>High Job Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Control</strong></td>
<td>Passive Job</td>
<td>High-stress Job</td>
</tr>
<tr>
<td><strong>High Control</strong></td>
<td>Low-stress Job</td>
<td>Active Job</td>
</tr>
</tbody>
</table>
Copenhagen Psycho-Social Questionnaire

- Developed by Kristensen and Borg, Danemark
- Integrates different models of work related stress
- Takes risk factors and resources into account

- Exposure and resources  Outcome or effect
  • Demands
  • Influence and development
  • Social relations
  • Personality
  • Workplace specific questions can be added
Dimensions of COPSOQ

Demands
- Quantitative demands
- Emotional demands
- Demands for hiding emotions
- Work - privacy conflict

Influence and development
- Influence at work
- Degree of freedom at work
- Possibilities of development
- Meaning of work
- Workplace commitment

Further parameters
- Job insecurity

Interpersonal relations and leadership
- Predictability
- Role clarity
- Role conflicts
- Quality of leadership
- Social support
- Feedback
- Social relations
- Sense of community
- Mobbing

Strain (effects, outcomes)
- Job satisfaction
- Intention to leave
- General health
- Burnout
- Cognitive stress
- Satisfaction with life

Supplementary scales
- conflicts with clients
- shift work
- teacher items
-…
Psychosocial work load and stress in the geriatric care, Nübling et al 2010
Some COPSOQ examples

Psychosocial work load and stress in geriatric care,
Nübling et al 2010
COPSOQ in Nursing Compared to other industries

Social support

Mean all industries

Mean

Industry  Administration  Physicians  Physiotherapy  Emergency other HCWs  Priests  Municipal workers

1 homecare  2 nursing home  3 hospitals  4 all nursing professions
Meaningfulness of work

Mean all industries

72 73 68 70 70 77 80 76 76 88 80 82 72 79 88 82 82 68 76 86 83 82 83

1 Industry 2 Administration 3 Physicians 4 Physiotherapy
5 Emergency
6 Workers 7 Other HCWs 8 Priests 9 Municipal
10 Workers 11 12 13 14

1 homecare 2 nursing home 3 hospitals 4 all nursing professions
Positive in 4 Scales
- Quantitative demands
- Emotional demands
- Work-privacy conflict
- Social relations

Negative in 7 Scales
- Influence at work
- Decision latitude
- Carrier opportunities
- Leadership
- Feedback
- Mobbing / bullying
- Predictability

Risk assessment in dialysis
64 units compared to nursing in general
Leadership in 15 dialysis units

Mean of all Units

Dialysis units with > 10 nurses
– Second survey after risk assessment with COPSOQ
  • all dialysis units received report of COPSOQ results and advices for potential improvements of working conditions
  • Consultation by a psychologist was offered for free

– Study question of the second survey:
  • Did the dialysis units start the action circle?

– Methods:
  • Telephone interview with 64 dialysis units

– Results:
  • 32 units discussed results with nurses
  • 12 units were interested in consultations, 8 actually booked it
  • Only 16 (25%) units took actions
If you want to rise a pig, you will have to feed it.
By putting the pig on a scale, it will not grow
– Risk assessment of psycho-social working conditions is not easy.
– The step from analysis to action seems to be difficult to take
– Make sure you want to act before you analyze !!!!!!!
– A survey with no reaction will disappoint employees
How can workers get more involved

− Risk assessment concerning stress at the work place can be performed in different ways
  • Standardized general questionnaire /survey (Mitarbeiterbefragung), e.g. COPSOQ
  • Job specific standardized questionnaires
  • Moderated discussions about risk assessment
Moderated risk assessment

- Discussion groups at work floor level
  - What is nice about my job
  - What worries or disturbs me about my job
  - How can we improve things
  - What actions can we take
  - What actions need to take the employer

- Moderator can be internal or external

- Start with building a steering committee with members who have decision-making power
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Leadership and workers health
Leadership in 15 dialysis units

Mean of all Units

Dialysis units with > 10 nurses

Leadership in 15 dialysis units

Mean

62 71 50 41 47 33 58 48 79 36 49 64 59 55 53
• Lead with values
• Persuade with positive aims
• Be role model
• Improve team spirit
• Support
• Allow development
• Intellectual challenge
### Results Transformational Leadership

Relationships of All **Well-Being** Outcomes with **Transformational Leadership** (based on 86 studies and 34,000 participants)

<table>
<thead>
<tr>
<th>Negative outcome</th>
<th>k</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depersonalization</td>
<td>12</td>
<td>-.29</td>
</tr>
<tr>
<td>Emotional exhaustion</td>
<td>32</td>
<td>-.27</td>
</tr>
<tr>
<td>Negative affect</td>
<td>14</td>
<td>-.24</td>
</tr>
<tr>
<td>General stress</td>
<td>39</td>
<td>-.19</td>
</tr>
<tr>
<td>Somatization</td>
<td>26</td>
<td>-.15</td>
</tr>
<tr>
<td>Positive outcome</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational self-efficacy</td>
<td>12</td>
<td>.21</td>
</tr>
<tr>
<td>Personal accomplishment</td>
<td>10</td>
<td>.23</td>
</tr>
<tr>
<td>Affective well-being</td>
<td>24</td>
<td>.33</td>
</tr>
<tr>
<td>Work engagement</td>
<td>15</td>
<td>.40</td>
</tr>
</tbody>
</table>

15 to 40% of the variance of the well-being variables is explained by leadership.

Vincent S, et al. under review
• Survey concerning verbal and physical aggression
  – Hospitals
  – Nursing homes
  – Ambulatory care
  – Care for persons with disabilities
  – Standardised questionnaire following SOAS-R
  – Response rate: 29-58%
  – N = 1,891

  – A. Schablon et al. BMJ 2013
Violence in the last 12 months

- **Verbal**
- **Physical**

<table>
<thead>
<tr>
<th>Setting</th>
<th>Verbal (%)</th>
<th>Physical (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>Ambulatory care</td>
<td>70</td>
<td>50</td>
</tr>
<tr>
<td>Nursing homes</td>
<td>80</td>
<td>60</td>
</tr>
<tr>
<td>Workshops for persons with disabilities</td>
<td>70</td>
<td>50</td>
</tr>
<tr>
<td>Residential home for persons with disabilities</td>
<td>90</td>
<td>70</td>
</tr>
</tbody>
</table>
Scale from 0 to 10
Categorien: 0-3 low; 4-7 middle; 8-10 high

- **Stress (all)**
  - low 33%
  - middle 36%
  - high 32%
### Violence against nurses and other care givers

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Odds Ratio (OR)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequently victim of violence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Age &lt;30 years</td>
<td>1.8</td>
<td>1.3-2.5</td>
</tr>
<tr>
<td>- Longterm care / nursing home</td>
<td>1.6</td>
<td>1.2-2.0</td>
</tr>
<tr>
<td>- <strong>Institution is well prepared</strong></td>
<td>0.7</td>
<td>0.6-0.9</td>
</tr>
<tr>
<td><strong>Highly stressed due to violence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Physical aggression weekly</td>
<td>2.1</td>
<td>1.4-3.2</td>
</tr>
<tr>
<td>- Longterm care / nursing home</td>
<td>0.5</td>
<td>0.4-0.8</td>
</tr>
<tr>
<td>- <strong>Institution is well prepared</strong></td>
<td>0.6</td>
<td>0.4-0.8</td>
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Schablon et al BMJ 2013
• Be prepared to act before you analyze
• Keep it simple
  – There are very good tools available
• Leadership and violence might be important topics of the risk assessment
We care for those who care

Thank you for your attention