Stakeholders' role influences risk perception: a case study in a health care organisation

The stakeholders:
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Hazards and Risks in Health Care Settings: Perception among Stakeholders

Musculoskeletal Load

Biological Agents

Chemicals

Stress

Shiftwork

Aim

• To explore the risk perception of different stakeholders involved in the health protection and risk prevention of health care workers
• To evaluate the perceived health risk as an information source in risk assessment process
89/391 EU Framework Directive: the participation paradigm

- Stakeholders’ definition
- Art. 3. Definitions
- Stakeholders’ participation
- Introduction
- Art. 1. Objectives
- Art. 11. Consultation
Setting and Stakeholders

- **Teaching Hospital (Policlinico di Modena, National Health Service)** - School of Medicine of the University of Modena and Reggio Emilia, Italy
  - **Employer** = General Manager (Policlinico)
  - **Manager** = Head of the Department of Medicine and Medical Specialties (University)
  - **Supervisor** = Head of the General Surgery Unit (University)
  - **Manager (Health Community Protection)** = Head of the Department of Public Health of Reggio Emilia (National Health Service)
  - **Inspection Officer** = Head of the Occupational Safety and Health, Department of Public Health of Modena (National Health Service)
  - **Labour Union** = Local responsible of the Public Function, CGIL
  - **Workers’ representative** = Policlinico
  - **Occupational Physician** = Health Surveillance Service (Policlinico)
  - **Occupational Physician Trainee** = Postgraduate School of Occupational Medicine (University)
  - **Health Professional** = Head of the Protection and Prevention Service (Policlinico)
Stakeholders groups according the role

1. Financing preventive measures (Non experts)
   Employer (GM), Manager (MDM), Supervisor (HSU)

2. Control of the implementation of preventive measures (Experts and non experts)
   Manager (MDPH), Inspection Officer (IO), Labour Union (LU), Worker representative (WR)

3. Consulting role on applying preventive measures (Experts)
   Occupational Physician (OP), Occupational Physician Trainee (OPT), Health Professional (HP)
Methods: A questionnaire to explore risk perception

- Each partner was requested to indicate his/her risk perception rating each item from 1 (low risk) to 5 (high risk)
  - Factors existing in the physical environment (10 items)
  - Factors involving work organisation (7 items)
  - Factors related to the social environment (7 items)
Methods: A questionnaire to explore risk perception

• Factors existing in the physical environment (10 items)
  - biological agents
  - musculo-skeletal load
  - safety conditions
  - noise
  - vibration
  - lighting
  - microclimate
  - ionising radiation and non-ionising radiations
  - chemicals
Methods: A questionnaire to explore risk perception

- Factors involving work organisation (7 items)
  - wage payment
  - job content
  - work rhythms
  - repetitive work
  - autonomy
  - deviant working hours
  - duration of work
Methods: A questionnaire to explore risk perception

• Factors related to the social environment (7 items)
  - consultation and participation
  - training
  - equal opportunities
  - employment of disabled
  - relations with clients/public
  - relations with management
  - relations with colleagues
Risk perception of different stakeholders: Physical Work Environment

<table>
<thead>
<tr>
<th>Physical Work Environment</th>
<th>Financing</th>
<th>Controlling</th>
<th>Consulting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological agents</td>
<td>3.3</td>
<td>3.7</td>
<td>3.5</td>
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<tr>
<td>Musculo-skeletal load</td>
<td>2.0</td>
<td>4.0</td>
<td>3.0</td>
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<tr>
<td>Safety conditions</td>
<td>2.7</td>
<td>2.3</td>
<td>2.5</td>
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<tr>
<td>Noise</td>
<td>1.3</td>
<td>2.3</td>
<td>1.8</td>
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<tr>
<td>Vibration</td>
<td>1.0</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Lighting</td>
<td>1.3</td>
<td>2.7</td>
<td>2.0</td>
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<tr>
<td>Microclimate</td>
<td>1.7</td>
<td>3.3</td>
<td>2.5</td>
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<tr>
<td>Ionising radiation</td>
<td>1.0</td>
<td>3.3</td>
<td>2.2</td>
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<tr>
<td>Non-ionising radiations</td>
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<td>2.0</td>
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<tr>
<td>Chemicals</td>
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<td>3.3</td>
<td>2.8</td>
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<tr>
<td>Mean value</td>
<td>1.8</td>
<td>3.0</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Each item ranges from 1 (low risk) to 5 (high risk); p=0.0028
Risk perception of different stakeholders: Organisational Work Environment

Each item ranges from 1 (low risk) to 5 (high risk); p=0.0088
Risk perception of different stakeholders: Social Work Environment

<table>
<thead>
<tr>
<th>social work environment</th>
<th>financing</th>
<th>controlling</th>
<th>consulting</th>
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<tbody>
<tr>
<td>consultation and participation</td>
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<tr>
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<td>equal opportunities</td>
<td>2,0</td>
<td>3,0</td>
<td>2,5</td>
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<tr>
<td>employment of disabled</td>
<td>1,7</td>
<td>1,3</td>
<td>1,5</td>
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<tr>
<td>relations with clients/public</td>
<td>1,7</td>
<td>3,7</td>
<td>2,7</td>
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<tr>
<td>relations with management</td>
<td>2,3</td>
<td>4,0</td>
<td>3,2</td>
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<tr>
<td>relations with colleagues</td>
<td>2,0</td>
<td>2,7</td>
<td>2,3</td>
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<tr>
<td>mean value</td>
<td>2,3</td>
<td>3,3</td>
<td>2,8</td>
</tr>
</tbody>
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Each item ranges from 1 (low risk) to 5 (high risk); p=0.1113
Risk perception of different stakeholders: Mean perceived risk in different environments and overall perceived risk

Each item ranges from 1 (low risk) to 5 (high risk)
## Risk perception of different stakeholders

Items rated 4 or 5 in the 1-5 risk scale

- 2/10 physical work environment
- 6/7 organisational work environment
- 5/7 social work environment

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</tbody>
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Methods: A questionnaire to perform the SWOT analysis

- Each partner was requested to indicate
  - **Strengths** and **Weaknesses** of each phase of the working process including input, process itself, output (Organisation internal characteristics)
  - **Opportunities** and **Threats** to the professional activity linked to their role (Organisation external characteristics)
Recognition of stakeholders’ needs and expectations: result of the SWOT analysis

<table>
<thead>
<tr>
<th>Resources (S)</th>
<th>Participation (S)</th>
<th>Quality System (S)</th>
<th>Integration of QS and prevention(S)</th>
<th>Intervention evaluation (W)</th>
<th>Participation (O)</th>
</tr>
</thead>
</table>

- **Financing**
  - GM
  - MDM
  - HSU

- **Controlling**
  - MDPH
  - IO
  - WR
  - LU

- **Consulting**
  - OP
  - OPT
  - HP
Risk biases

- Emphasis on concrete -individual- experience rather than on general - statistical- information
- Emphasis on risks that catch attention
The reason why risk perception may be overvalued among controlling stakeholders

1. Not observable risk
   Old risk
   Risk known to science
   • Manager (Health Community Protection) and Inspection Officer

2. Involuntary risk
   Not easily reduced
   Risk increasing
   • Labour Union and Workers’ representative

Interpretation based on Slovic P, Science 1987;236:280-285
Concluding remarks

• Risk perception should be carefully, cautiously and judiciously considered as an information source in the risk assessment process