

Occupational Health Psychology: Understanding the Psychosocial Factors behind Workplace Accidents, Injuries, and Musculoskeletal Disorders



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Occupational Health Psychology (OHP)

- Application of psychology to
 - Improving the quality of work life
 - Protecting and promoting the safety, health and well-being of workers

Major OHP topics

- **Accidents**
 - Often result in acute injuries
- **Illnesses**
- **Musculoskeletal disorders (MSD)**
 - Cumulative exposure
- Occupational stress
- Workplace violence
- Work-Family issues

Accidents and acute injuries

- Major workplace issue
- In 2006
 - 5,840 total workplace fatalities
 - 86% of them were due to accidents
 - 3.9 million cases of nonfatal workplace injuries
 - Nonfatal accidents and injuries resulted in an average of 7 days away from work annually for employees
 - Fatal and nonfatal accidents cost an estimated \$140 billion annually in the U.S. alone

Accidents and acute injuries

- Most dangerous occupations
 - Agriculture/forestry/fishing/hunting
 - Construction
 - Mining
- Safest occupations
 - Education/health service
 - Services

Causes of accidents

- Unsafe working conditions
- Unsafe behaviors

Making the workplace safer

- Physical concerns
 - Lighting
 - Noise
 - Equipment
 - Confined space
 - Extreme temperature
 - Typically covered by OSHA regulations

Making the workplace safer

- Behavioral safety approach
 - Focus on promoting the target safety behaviors by
 - Identifying the antecedents and consequences of the target behaviors
 - Design programs to change target behaviors by altering their antecedents, consequences, or both

Making the workplace safer

- Typical behavioral safety program
 - Training safety behaviors
 - Goal setting to encourage safe performance
 - Periodic monitoring
 - Providing feedback concerning safety performance
 - Offering rewards for meeting the safety performance goals

Making the workplace safer

- Psychological factors
 - Job skills
 - Ensure that employees have the right knowledge, skills, and abilities to perform the job safely
 - Selection vs. training
 - Personality
 - Low on conscientiousness
 - Low on agreeableness
 - High on openness to new experiences
 - Risk-taking, sensation seeking



Making the workplace safer

- Psychological factors
 - Self-efficacy
 - Employees' belief about whether they can successfully perform their job safely
 - Job attitudes
 - Dissatisfaction
 - Low organizational commitment
 - Stress
 - Hindrance stressors
 - Heavy workload
 - Ambiguous and/or conflicting work expectations
 - Stressful life events

Making the workplace safer

- Organizational factors
 - Balance between production speed vs. safety
 - Hourly-rate vs. piece rate
 - Safety climate
 - Shared perceptions among members of an organization regarding the safety policies, procedures, and practices
 - Positive when
 - Good organizational safety policies and procedures
 - Consistent application of policies and procedures
 - Supervisors' important role
 - Has positive effects on safety

Illnesses

- Infectious disease
 - Exposure in occupations dealing with public
 - Healthcare
 - Teachers
 - Police officers
 - Hairstylists
- Toxic substances
 - Acute exposure
 - Cumulative exposure over time

Illnesses

- Stress
 - Prolonged exposure
 - Linked to hypertension, heart diseases, and reduced immune functioning
 - Type A personality



Infectious Disease

- Some examples:
 - Hepatitis B: 12,000 cases/year from work
 - HIV: Major source of stress in healthcare
- Self-exposure is much like accident
 - Failure to follow protocols

Some universal precautions

- CDC Recommendations
 - Wearing gloves
 - Sharp containers
 - Washing hands
 - Clearing bodily fluid spills with disinfectant



Musculoskeletal disorders (MSD)

- Injuries or disorders of the muscles, nerves, tendons, joints, cartilage, and spinal discs
- In 2006
 - Disorders associated with repeated trauma accounted for 67% of all work-related illnesses in the US
 - More than 70 million physician office visits can be attributed to MSD

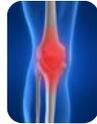
Different types of MSD

- Acute
 - Onset is sudden
 - Back injuries
- Cumulative exposure
 - Repetitive strain injury due to overuse
 - Carpal tunnel syndrome



Common MSD areas

- May depend on the type of jobs
- Low back
- Upper extremities
 - Neck, shoulders, elbow, hand/wrist, fingers
- Lower extremities
 - Toes, foot/ankle, knee, hip



Symptoms

- Numbness
- Pain
 - Muscle
 - Tendon
 - Joint
- Weakness
- Inflammation
- Fracture

Physical Vs. Psychological

- Physically verifiable symptoms
 - Fracture
 - Herniated disk
- Physically unverifiable
 - Soft tissue damage
 - Psychosomatic
 - Neuroticism and pain
 - Malingering
 - Counterproductive work behavior
 - Unfair treatment



Removing risk factors for MSD

- Physical environment
 - Better ergonomic designs
 - Use machines to aid physically strenuous work
 - Mandatory breaks



Removing risk factors for MSD

- Psychological factors
 - High job demands
 - Time pressure, unpredictable work schedule
 - Negative emotions and attitudes
 - Anxiety
 - Job dissatisfaction
 - Low autonomy
 - Lack of control over tasks
 - Lack of social support
 - These psychological risk factors may exacerbate the physical demands of the job and make the MSD symptoms worse

Conclusion

- Both physical and psychological factors are important
- Interventions targeting psychosocial factors are typically cheaper, and can have equal if not stronger effects
- Psychologists not only sit on chairs and write notes!



Finally...

- For further information about OHP, occupational safety, or programs available at USF, please contact:

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