

# Occupational factors in suicide

Dr Birgit Greiner

Senior Lecturer, Director MSc Occupational Health

Department of Epidemiology & Public Health

University College Cork

## This presentation

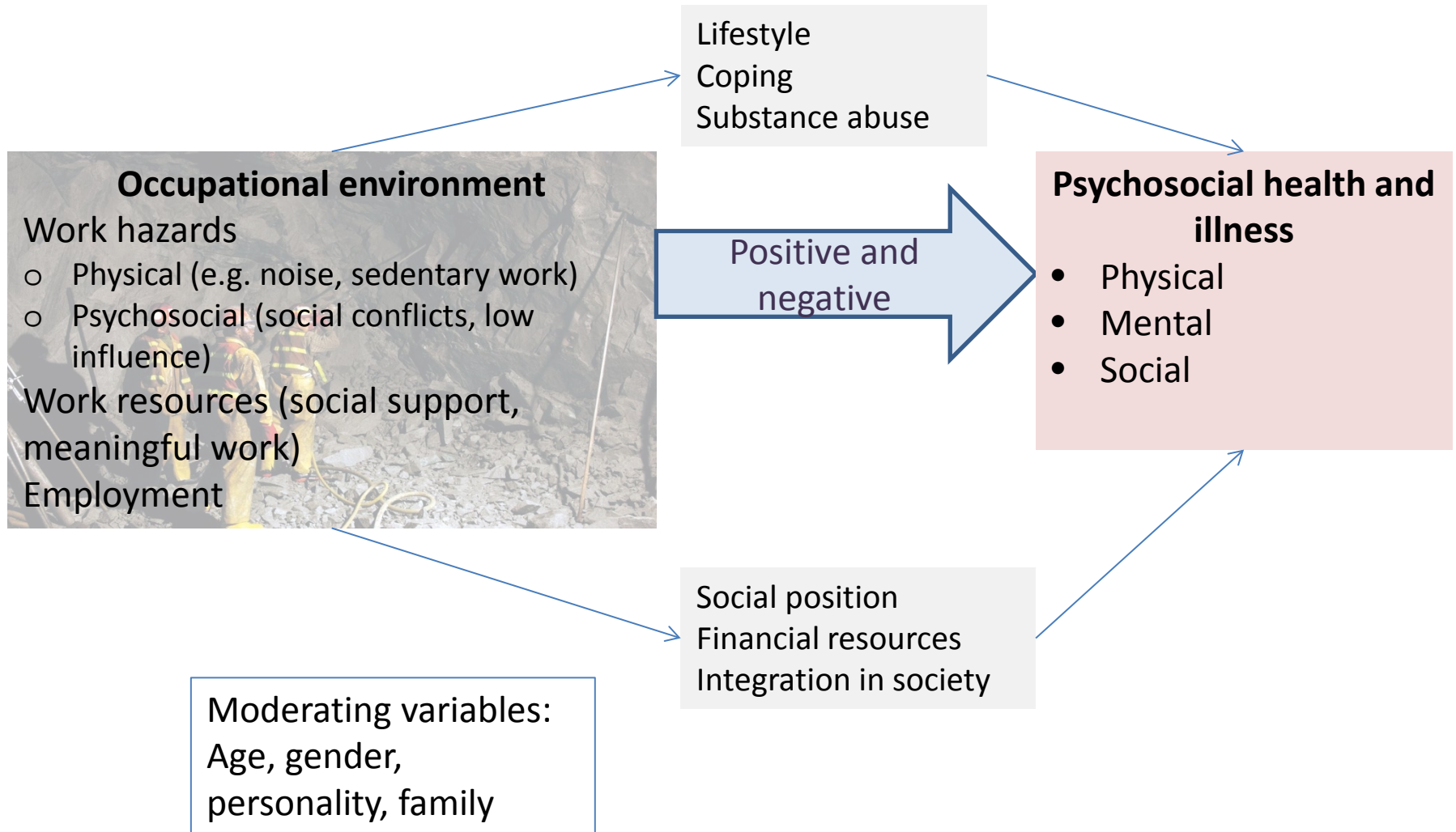
- Relevance of occupational factors to mental health

Provide a brief overview of research evidence

- Unemployment and suicide: Employment as protective factor?
- Are suicides more common in particular occupational groups?
- Are working conditions associated with suicide?

Approach of the SSIS-ACE study

# Work shapes our health in various ways



# Occupational factors

## What do we mean?

- **Employment status:** Suicide more common in unemployed?
- **Occupational group:** Suicide more common in specific professions or industrial sectors?
- **Working conditions:** Suicide more common in individuals working under particular conditions, e.g. unskilled work

## Why is that important?

- Focus prevention on unemployed/long-term unemployed?
- Target prevention to particular occupational group?
- Focus on people working under stressful working conditions?

# Unemployment and suicide: national level studies

## National suicide rates compared with national unemployment rates over time

- Relatively consistent evidence internationally that suicide rates raise in period of economic crisis (growing unemployment rates), raise is higher in unemployed than in employed.<sup>1</sup>
- Raise in unemployment- related suicide rates higher during periods of low national unemployment rates <sup>1,2</sup>
- Most common interpretations:
  - Precipitating rather than causative factor
  - Financial pressures
  - Loss of work relationships
  - Undermines resources needed to cope with adverse life events
- Limitations
  - Ecological fallacy: use of aggregate data rather than individual level data (were the cases the ones who were unemployed?)
  - Third factor: mental health as causative for unemployment and suicide

<sup>1</sup> Shu-Sen Chang et al. Impact of 2008 global economic crisis on suicide: time trend study in 54 countries. *BMJ*, 2013;347, 15239. doi:10.1136/bmj.

<sup>2</sup> Corcoran P & Arensman E. Suicide and employment status during Ireland's Celtic tiger economy. *European Journal of Public Health*, 2010, 21,2,209.

# Unemployment and suicide: individual level studies

Are individuals who committed suicide more likely to be unemployed? Or: Are individuals who become unemployed more likely to commit suicide?

Relatively consistent evidence:

- 70% added risk for those who became unemployed (Relative Risk 1.70)
- First 5 years most important: relative risk 2.50
- Risks similar for men and women

However this does not seem to apply for clinical populations being in clinical care due to mental health issues before losing the job

Milner A, Page A, LaMontagne A. Long-term unemployment and suicide: A systematic review and meta-analysis. Plos one, 2013; 8 (1), e51333.

# Are suicides more common in specific occupational groups?: Commonly found groups

## High rates

Medical doctors  
Nursing professionals  
Elementary (unskilled manual)  
Plant and machine operators  
Construction workers  
Drivers

## Low or average rates

Education and teaching  
Managers  
Business professionals

## Males, high rates

Construction  
Agriculture  
Elementary occupations  
Plant and machine operators

## Females high rates

Health professionals  
Elementary occupations:  
cleaners

# Are suicides more common in specific occupational groups?

Meta-analysis with 34 international studies.

- A stepwise gradient in risk, with the **lowest skilled occupations** being at greater risk of suicide than the highest skilled occupations
- **Elementary professions** (e.g. labourers and cleaners) at the highest elevated risk compared with the working-age population: RR = 1.84, 95% CI 1.46–2.33),
- followed by machine operators and deck crew (RR = 1.78, 95% CI 1.22–2.60) and
- agricultural workers (RR = 1.64, 95% CI 1.19–2.28).
- Lowest rates in **managers** and clerical workers

Millner A, Spittal MJ, Pirkis J & LaMontagne AD. Suicide by occupation: A systematic review and meta analysis. British Journal of Psychiatry, 2013, 203:409-416.



# Job characteristics and suicide

Commonly found factors independently of industrial sector or occupational group in follow-up studies:

- Low control at work
- Lack of social support from co-workers and supervisors
- Long working hours
- High psychological demands
- Imbalance between effort and reward

Evidence is scarce

# SSIS-ACE Study Approach

## Information to be obtained in interviews

### Occupational group

Detailed occupation/profession

Sector of employment

Employed – self employed

### Employment security

Permanent, temporary, sporadic hourly

Threat of becoming unemployed

Recent Job loss

### Job characteristics:

Social support and work atmosphere, social conflicts

Psychological work demands

Skill utilisation and decision latitude

## Implications for prevention practice

- Focus on **unemployed** soon after job loss, don't forget insecurely employed
- Focus on **unskilled workers** and **health care workers**
- Target workers in **highly stressful jobs**
- **Construction workers** as emerging group in Ireland?

**Thank you for your attention!**

**[b.greiner@ucc.ie](mailto:b.greiner@ucc.ie)**