An International Perspective on Worker Mental Health Problems: Who Bears the Burden and How are Costs Addressed?

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Reference

Acknowledgements

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Purpose

- Discuss the nature of the two major types of burdens associated with poor mental health in workers
- Identify who bears the burden
- Examine how the rising costs associated with the burden are being addressed
Types of Burdens

• Unemployment
• Decreased productivity
• Spillover effects
• Early retirement
• Healthcare system use
Types of Burdens

- Unemployment
- Decreased productivity
- Spillover effects
- Early retirement
- Healthcare system use
Who Benefits Most from a Mentally Healthy Workforce?

- Public sector (i.e., government)
- Employers
- Workers
- Families
- Insurance companies in countries where they play a major role in healthcare services or disability benefits
Unemployment
Unemployment

• One of the major burdens of mental illness
• In the US, annually about 5-6 million people either lose, do not seek or cannot find employment due to mental illness (Marcotte & Wilcox-Gox, 2001)
• In England, employment rates are 40% lower among people with mental illness (Berthoud 2006)
• Among early intervention clients employment rates are between 13-40% (Marwaha and Johnson 2004)
Burden of Unemployment to Government

• Losses in income tax revenue
• Increased use of public safety net
  – Unemployment benefits
  – Disability insurance
  – Welfare programs
  – Healthcare
Examples of Burden

• In Finland, between 1990 and 2003, short-term sickness absence for formally diagnosed mental health problems increased by 93% (Javiasalo, et al. 2005)
  – 42% of all disability pensions were paid for mental health problems

• In the US, 25% of social security disability benefits were given to people on the basis of mental illnesses (US 2004)
Stigma - A Hurdle to Jump

• Strong negative responses to people with schizophrenia returning to their jobs (Marwaha and Johnson 2004)

• Reluctance to hire or promote people with histories of mental illness (Scheid 1999; Nicholas 1998)
Government Responses

• Enforce anti-discrimination or human rights legislation
• Offer financial incentives to counter reduced productivity costs that may be associated with reintegrating people into the workplace
Public Disability Benefits

- Inadvertently create employment disincentives
  - Observed relationship among:
    - disability benefit levels,
    - employment rates, and
    - unemployment benefit use (Westerhout 2001)
Government Dilemma & Response

• Encourage or not discourage employment while safeguarding those not capable of working

• A major fear is loss of necessary benefits (OECD 2003)

• UK Pathways to Work initiative (Corden & Nice 2006)
  – Establish a safety net to allow people who return to work to quickly obtain benefits should employment prove to be unsuccessful
Employer Responses

• Mental health literacy programs (Kitchener & Jorm 2004)
  – Evidence suggests
    • Decreased stigma
    • Increased worker confidence in helping people with mental illness
    • Increased participant mental health
Decreased Productivity
Decreased Productivity

In the workplace, decreased productivity (productivity loss) presents itself in two major forms:

1) **Presenteeism** = an unproductive day (e.g., an extreme effort day or a work cutback day) on which an individual went to work

2) **Absenteeism** = a day on which an employee did not report to work (e.g., a sick day)
Examples of Costs

- In Sweden, > 33% of costs of all mental health problems are due to lost productivity (Institute of Health Economics 1997)
- In The Netherlands, costs of employee absence and long-term disability related to mental illness estimated to be 0.5% of GDP or €1.44 billion annually (Jarviasalo et al. 2005)
- UK study indicated depression was related to €15.46 billion in losses -- most due to decreased productivity (Thomas & Morris 2003)
The Role of Stress

• Rather than being labeled with a mental disorder, much absenteeism and illness is described as “stress”

• In the UK, stress accounts for 30% of absences (Zijlstra 2006)

• Work-related stress affects one-third of the EU’s workforce (Ivanov 2005)
Figure 1. The relationship between different levels of disability days and chronic work stress, chronic physical problems, and psychiatric disorders among workers.

* Comparison group = no chronic work stress or chronic physical illness or psychiatric disorder

Worker Burden

- Reduced income while receiving disability benefits (Wang et al. 2004)
- Decreased probability of promotions or raises in their salaries (Scheid 1999; Nicholas 1998)
Government Responses

• EU ministers of health endorsed a detailed action plan calling for employers to “create healthy workplaces by introducing measures such as exercise, changes to work patterns, sensible hours and health management styles” and “to include mental health in programs dealing with occupational health and safety” (WHO 2005)
Examples of Employer Responses

- Electricite de France and Gaz de France implemented *Action de prévention des rechutes des troubles anxieux et depressifs* for its 140,000 workers to promote early intervention of anxiety and depression by its occupational health physicians.
Ontario Examples
### Outcomes per 100 individuals

(derived from)

<table>
<thead>
<tr>
<th>Statistic by treatment assignment</th>
<th>Cost</th>
<th>Days lost per 100 individuals</th>
<th>Return-to-work per 100 individuals</th>
<th>Long term Transitions per 100 individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Averages</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Usual Care (n=51)</td>
<td>$2,378</td>
<td>7,600 days lost per 100 individuals (76 days lost per individuals)</td>
<td>63 returns per 100 individuals (32 returns per 51 individuals)</td>
<td>31 transitions per 100 individuals (16 transitions per 51 individuals)</td>
</tr>
<tr>
<td>Collaborative Mental Health Care (n=73)</td>
<td>$2,023</td>
<td>6,200 days lost per 100 individuals (62 days lost per individuals)</td>
<td>85 returns per 100 individuals (62 returns per 73 individuals)</td>
<td>7 transitions per 100 individuals (5 transitions per 73 individuals)</td>
</tr>
<tr>
<td><strong>Differences</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Unadjusted &lt;95% confidence interval&gt;</td>
<td>$355 less expensive &lt;$834 less, $124 more&gt;</td>
<td>1,500 less days lost per 100 individuals &lt;28 less, 1 less&gt;</td>
<td>22 more individuals return to work per 100 individuals &lt;7 more, 37 more&gt;</td>
<td>25 less transitions per 100 individuals &lt;37 less, 12 less&gt;</td>
</tr>
<tr>
<td>Adjusted by age** &lt;95% confidence interval&gt;</td>
<td>$503 less expensive &lt;$996 less, 11 less&gt;</td>
<td>1,600 less days lost per 100 individuals &lt;30 less, 2 less&gt;</td>
<td>23 more individuals return to work per 100 individuals &lt;7 more, 39 more&gt;</td>
<td>24 less transitions per 100 individuals &lt;37 less, 10 less&gt;</td>
</tr>
</tbody>
</table>

## Length of Episode for Those Who Returned to Work

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-1.63</td>
<td>(-11.429, 8.177)</td>
</tr>
<tr>
<td>Manager position</td>
<td>10.15</td>
<td>(2.637, 17.664)</td>
</tr>
<tr>
<td>Age (in years)</td>
<td>0.010</td>
<td>(-0.348, 0.368)</td>
</tr>
<tr>
<td><strong>Severity &amp; Complexity Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of symptoms</td>
<td>7.52</td>
<td>(6.225, 8.813)</td>
</tr>
<tr>
<td>Depression only</td>
<td>-5.28</td>
<td>(-11.453, 0.888)</td>
</tr>
<tr>
<td>One antidepressant fill only</td>
<td>29.88</td>
<td>(6.494, 53.269)</td>
</tr>
<tr>
<td>One antidepressant exclusively</td>
<td>41.70</td>
<td>(18.122, 65.281)</td>
</tr>
<tr>
<td>Switched antidepressants</td>
<td>60.24</td>
<td>(36.689, 83.781)</td>
</tr>
<tr>
<td>Augmented antidepressants</td>
<td>62.13</td>
<td>(35.458, 88.797)</td>
</tr>
<tr>
<td><strong>Guideline Recommended Use Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Used recommended 1st line agent</td>
<td>-8.48</td>
<td>(-30.000, 13.046)</td>
</tr>
<tr>
<td>% Used recommended dose</td>
<td>-4.87</td>
<td>(-17.355, 7.614)</td>
</tr>
<tr>
<td>% Used within 30 days of SDIS start</td>
<td>-24.18</td>
<td>(-34.952, -13.417)</td>
</tr>
<tr>
<td><strong>Company Fixed Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company 1</td>
<td>-38.58</td>
<td>(-55.051, -22.107)</td>
</tr>
<tr>
<td>Company 2</td>
<td>-21.59</td>
<td>(-28.381, -14.797)</td>
</tr>
<tr>
<td>Constant</td>
<td>47.19</td>
<td>(31.111, 63.065)</td>
</tr>
</tbody>
</table>

# An Example of a Workplace Intervention

<table>
<thead>
<tr>
<th></th>
<th>Used Pedometer (n=22)</th>
<th>Did Not Use Pedometer (n=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>1-month</td>
</tr>
<tr>
<td><strong>BMI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24.4 ± 3.1</td>
<td>24.5 ± 3.3(^b)</td>
</tr>
<tr>
<td></td>
<td>(23.0 – 25.9)</td>
<td>(23.0 – 26.0)</td>
</tr>
<tr>
<td><strong>Average time sitting/day (in min)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>505.9 ± 137.1(^a)</td>
<td>396.1 ± 165.7</td>
</tr>
<tr>
<td></td>
<td>(445.1 – 566.7)</td>
<td>(332.7 – 469.6)</td>
</tr>
<tr>
<td><strong>PPA</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>3129.1 ± 2171.6</td>
<td>3697.5 ± 2713.1</td>
</tr>
<tr>
<td></td>
<td>(2082.4 – 4175.8)</td>
<td>(2389.9 – 5005.2)</td>
</tr>
<tr>
<td><strong>Mental health status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>49.7 ± 7.0(^a)</td>
<td>54.2 ± 4.5(^c)</td>
</tr>
<tr>
<td></td>
<td>(46.4 – 52.9)</td>
<td>(52.2 – 56.1)</td>
</tr>
<tr>
<td><strong>Physical health status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>56.2 ± 3.8(^b)</td>
<td>54.5 ± 5.8</td>
</tr>
<tr>
<td></td>
<td>(54.4 – 58.0)</td>
<td>(51.9 – 57.0)</td>
</tr>
</tbody>
</table>

Note: 95% confidence intervals in parentheses.
- \(^a\) = significant difference between baseline and 1-month p<0.01.
- \(^b\) = significant difference between the group that used pedometer and the group that did not: p<0.05.
- \(^c\) = significant difference between the group that used pedometer and the group that did not p<0.01.

Conclusions

• Mental illness is associated with a wide range of costs distributed among multiple stakeholders
• Costs are interrelated -- attempts to decrease the burden on one will affect other stakeholders
• If benefits are divided among multiple stakeholders, no one stakeholder will have sufficient incentive to take on the entire problem
Implications

• There is a need to improve collaborations among stakeholders
  – Employer-government
  – Worker-government
  – Employer-worker
  – Healthcare-employer-worker
  – Within government
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* Stigma/Discrimination
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