**SHORT REPORT**

Suicide mortality among electricians in the Swedish construction industry

B Järvholm, A Stenberg

**Abstract**

A recent study indicated an increased risk of suicide among electric utility workers. Men employed as electricians and linemen were at an increased risk whereas the risk in power plant operators was decreased. According to the authors, these results indicated that occupational exposure to low frequency electromagnetic fields (EMFs) is associated with an increased risk of suicide. Other studies from the United States and Canada have also indicated a decreased risk of suicide compared with the general population with adjustments for sex, age, and period.

**Methods**

This is a cohort study. Electricians were identified through a computerised register of construction workers who had participated in health examinations in 1971–92. In this register, 33 719 male electricians were identified together with a reference group consisting of 72 653 male glass or woodworkers. Through a linkage with the Swedish Death Register, the cause of death was identified to the end of 1997. Mortality as a result of suicide was also compared with the general population with adjustments for sex, age, and period.

**Results**

The risk of mortality from suicide was decreased for electricians (standardised mortality ratio (SMR) 0.58, 95% confidence interval (95% CI) 0.47 to 0.71) and for the reference group of construction workers (SMR 0.81, 95% CI 0.72 to 0.91) compared with the general population.

**Conclusion**

Contrary to some other studies, risk of suicide was not increased among electricians in the construction industry.

**DISCUSSION**

United States construction workers seem to be at an increased risk of suicide. A study from Alabama compared 11 different industries and found construction workers to be at the highest risk of suicide. Furthermore, another United States study found that electricians in the construction industry were at an increased risk of suicide (proportionate mortality ratio (SMR) 0.72, 95% CI 0.58 to 0.87).

**Abbreviations:** SMR, standardised mortality ratio
The exposure during the work shift was on average 0.31 µT (SD 0.23 µT). Wood workers (n=10) had a mean (SD) exposure to 0.27 µT (0.26 µT) and the corresponding value for glass workers (n=10) was 0.29 µT (0.21 µT). The use of electrical tools did not influence the averages over the shift for any of the occupational groups. However, there was some correlation with the distance from transformers and power lines. The construction workers in our study were probably a representative sample of all electricians working in the construction industry during the period of 1971–92. However, it is unclear if the few workers measured in the other study represented a representative sample of all electricians as their exposures—for example, to electromagnetic fields—may vary.

Main messages

- Electricians in the construction industry seem to have no increased risk of suicide; the conclusions cannot be extended to all electricians as their exposures—for example, to electromagnetic fields—may vary.

Policy implications

- This study does not indicate that there is a need for special measures to prevent suicide as a result of occupational exposures for electricians working in the construction industry.

In conclusion, our study indicates that electricians in the construction industry are not at an increased risk of suicide.

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REFERENCES


Table 1 Observed and expected number of suicides between 1971 and 1997 in male electricians and glass and wood workers, 20–74 years of age, compared with the general population

<table>
<thead>
<tr>
<th>Group</th>
<th>Observed</th>
<th>Expected</th>
<th>SMR (95% CI)</th>
<th>Person-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricians</td>
<td>95</td>
<td>164.2</td>
<td>0.58 (0.47 to 0.71)</td>
<td>544547.0</td>
</tr>
<tr>
<td>Glass and wood workers</td>
<td>296</td>
<td>364.9</td>
<td>0.81 (0.72 to 0.91)</td>
<td>1156298.0</td>
</tr>
</tbody>
</table>