Sex-specific time patterns of suicidal acts on the German railway system. An analysis of 4003 cases.

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OBJECTIVE: To examine sex-specific time patterns of suicidal behaviour on railway tracks as basis of suicide preventive strategies. METHOD: Cases were derived from the National Central Registry of all person accidents on the German railway net (STABAG) between 1997 and 2002 satisfying the operational definition of suicidal behaviour and included sex, age, date, clock time and outcome of the incidence. RESULTS: Over the 6-year observation period, 4003 fatal and non-fatal suicidal incidences were documented. Male to female ratio was 2.70:1 (p<0.0001). The female subgroup was significantly older than the male subgroup (p<0.0001). The monthly distribution revealed a bimodal pattern (p=0.01), particularly in men younger than 65 years, with an excess risk in April and September. This circannual pattern attenuated in the second half of the observation period as shown by adjusted Poisson regression. Monday and Tuesday proved to be high risk days for both sexes. For males and females, a bimodal diurnal distribution pattern with a morning and an evening peak was observed. While both sexes followed the same pattern in the winter half year, in summer females showed a pronounced excess risk in the morning hours while for men the evening peak was substantially amplified (p<0.0001). Risk assessment revealed a marked broadening by approximately 6 h of the time window in the summer half year compared to the winter half year. LIMITATIONS: About 30% of cases were excluded because of missing data on sex specification. However, cases with and without sex information did not differ significantly in the variables under investigation. CONCLUSION: The analysis revealed marked seasonal, weekly and diurnal peaks of railway suicide intensity. Differences between men and women indicate sex-specific processes underlying their suicidal behaviour. The findings may increase alertness of railway and security personal for particular vulnerable time windows of excess risk for railway suicides.