Customer-perpetrated work-related violence: prevalence and trends in Britain

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Introduction

Work-related violence (WRV) is an area of significant importance for employers, regulators, practitioners, policymakers, trades unions and employees [1–5]. In the UK, employers have a legal duty to protect the health, safety and well-being of employees, which includes protecting against WRV such as abuse, threats and assaults [6]. In 2013 [7], the Crime Survey for England and Wales (CSEW) estimated that there were 649,000 incidents of WRV, comprising 332,000 assaults and 317,000 threats. Assaults include minor assault, wounding and robbery, and threats include verbal threats and non-verbal intimidation.

Incidents of threats and assaults at work have increased [8–11], and the impact at both the individual and organization level can be extensive, including reduced job-related well-being, satisfaction and performance, and increased work-related stress [12–16]. Results from the CSEW (2012/13) showed that workers in caring and social professions and managers and senior officials have higher risk of WRV than the overall rate of 1% [7]. In the USA, the Bureau of Justice (2001) found that 18% of all violent crime occurred in the workplace.

The two largest studies of WRV in the UK are the CSEW (1982 to present) and the Workplace Behaviour Survey (WBS) in 2008. The CSEW is the new name for the originally named British Crime Survey (BCS). Although both surveys measure WRV, they have several different methodological characteristics that restrict comparison of results. For example, the CSEW measures customer violence, whereas the WBS measures interpersonal assaults at work. The University of Iowa Injury Prevention Research Center (IPRC) classifies these two different types of WRV as Type II (customer violence) and Type III (interpersonal violence).
IPRC classifies Type I violence as criminal acts in the workplace, such as robbery etc.

Additional methodological issues further complicate/weaken the field of WRV research (measurement, statistical analysis, design and sampling). Workplace violence responses collated from both the CSEW and the WBS are primarily binary/categorical data. This restricts the breadth of statistical techniques that can be used to interpret the data. Analysis of continuous data would allow more powerful multivariate statistical techniques to be applied.

Inconsistent measures of WRV across different studies have had significant effects on the outcome of results. The CSEW reports prevalence of WRV (assaults and threats) that occurred from members of the public within a 1 year period while the victim was at work. In contrast, the WBS provides a broader definition of WRV (assaults) that occurred from work colleagues (including managers) and members of the public within a 2 year period while the victim was working. Thus, the CSEW results are derived from a population of working adults who experienced a violent assault at work (victimization study). However, the WBS results are based on a population of working adults who experienced negative workplace behaviours, including violent assaults. See [3] for a summary of differences between the CSEW and WBS.

The aims of the current paper were to report up-to-date findings from the CSEW on the prevalence and trends of workplace customer violence in the UK using 12 years of data, to estimate the effects of demographic characteristics, work-related characteristics and perpetrators’ personality characteristics upon WRV and to test the causes of WRV using a broader set of variables than previously used (perpetrator’s temper, intake of alcohol/drugs and state of mental health).

Methods

The current study used year-on-year cross-sectional survey data from the CSEW. Data were collected from UK householders via interviews, using a standard modular questionnaire. The sample was designed to be representative of the population of households in England and Wales. The Postal Address File (PAF) was used to generate the best general population sampling frame in England and Wales. However, there were no specific sections in the questionnaire devoted to WRV; analysis was dependent on several flags within the data sets, such as where the incident occurred and whether or not the victim was currently employed. Participants were informed about issues concerning confidentiality. Data collected by the Home Office were filtered by the Health and Safety Laboratories (HSL) and the Office for National Statistics (ONS) so that the current study’s analysis could be conducted. Ethical considerations and data protection safeguards were approved by the Home Office and the ONS.

Data from the CSEW were filtered in the current study to specifically examine WRV. This allowed the analysis of a selective number of factors that may contribute to the likelihood of WRV. Based primarily on the recommendations from Jones et al. [3], a number of demographic, work and personality characteristic variables of interest within the literature were tested to examine their predictive influence upon WRV. This enabled the present study to both replicate/confirm previously measured factors that predict WRV and investigate new variables of interest that have not yet been tested. The analysis performed was therefore both confirmatory and unique.

The samples consisted of a working population of victims of crime. Workplace violence was the culmination of both reported assaults and threats. Chi-square and logistic regression statistical techniques were used to conduct the analysis using SPSS.

The demographic and work-related characteristics variables in Table 1 were modelled simultaneously to test their predictive influence on the likelihood of experiencing WRV.

Results

The mean average data set size across each of the 12 year annual periods (2001–13) was 2251, range 1469–2398. Using the current study’s sampling frame population from the CSEW of working people who were victims of crime in the past year, on a percentage average across a 12 year time period, 22% of all violent crimes committed occurred in the workplace (average for assaults and threats). This provides an alternative estimate of WRV as a percentage of overall violent crime in the UK.

Figure 1 shows the flow of WRV responses from 2001/02 to 2012/13. Prevalence rates of WRV generally decreased from 2001/02, until 2008/09, where they gradually increased, with a slight dip in 2009/10 and 2012/13. The greatest increase in WRV was between the years 2007/08 and 2011/12, with an increase of 20%.

Gender was a statistically significant factor in experiencing WRV across a number of years (×6), depending on whether the respondent was male (average 21%) or female (average 24%), with the most recent significant figures for 2011/12 producing the following chi-square results: $\chi^2 = 6.95$, df = 1, $P < 0.05$.

Age group from 2001/02 to 2012/13 consistently exhibited statistically significant differences in reported WRV (2012/13: $\chi^2 = 77.8$, df = 6, $P < 0.05$). The pattern of findings from the current study indicated that 45–54 year olds experienced the greatest incidence of WRV.

People who had supervisory or managerial duties at work were significantly more likely to experience WRV than those who did not (2012/13: $\chi^2 = 31.8$, df = 1, $P < 0.05$; 2011/12: $\chi^2 = 59.4$, df = 2, $P < 0.05$, respectively). On average across all years, 33% of supervisors and 35%
of managers reported WRV. Full-time employees were significantly more likely to experience WRV than part-time staff (2012/13: \( \chi^2 = 16.2, \text{df} = 1, P < 0.05 \)), with full-time workers across the years on average reporting 26% of WRV and part-time workers 15%. New data were extracted from the CSEW measuring respondents’ employment status and levels of WRV. The results were inconsistent across the years for employee or self-employed work. The number of people employed at an organization was also found to be a significant factor in the rate of incidents of violence reported (2011/12: \( \chi^2 = 10.4, \text{df} = 2, P < 0.05 \)). Across the 7 years where there were statistically significant differences in WRV, in general organizations that employed between 25 and 499 workers produced the highest number of violent workplace incidents (26%). The risk of experiencing WRV significantly increased according to different occupational groups (2012/13: \( \chi^2 = 45.6, \text{df} = 4, P < 0.05 \)), with managerial professions providing the highest number of violent episodes across the years reported (32%).

Logistic regression models across the years (2010/11–2012/13) repeatedly provided a good fit to the data, showing non-significant Hosmer–Lemeshow goodness-of-fit statistics, and \( r^2 \) values ranging from 0.11 to 0.20. The analysis revealed that gender and age probably had the most substantial effect on the likelihood of experiencing WRV, with work-related characteristics having slightly less of an impact.

Work-related characteristics variables exerted a significant effect on WRV, although significant results were not consistent across the majority of the years. Results showed that full-time managers with supervisory duties who worked in medium-size organizations had significantly greater likelihood of experiencing WRV.

Table 1 shows the respondents’ perceived causal factors for WRV. Of note, the temper of the offender was significantly perceived as a causal factor to why the violent incident occurred (2011/12: \( \chi^2 = 8.56, \text{df} = 1, P < 0.05 \)). On average, 29% of respondents reported that the perpetrator’s temper was a motivating factor in the WRV incident. Perceived mental health problems in the perpetrator were also thought to be a factor in why the violent incident happened (2012/13: \( \chi^2 = 40.8, \text{df} = 1, P < 0.05 \)). There was no consistent significant

Table 1. Perceived causes of work-related violence from 2010/11 to 2012/13

<table>
<thead>
<tr>
<th>Variable</th>
<th>Values</th>
<th>2010/11, n (%)</th>
<th>2011/12, n (%)</th>
<th>2012/13, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnicity</td>
<td>Yes</td>
<td>22 (21)</td>
<td>17 (18)</td>
<td>17 (26)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>449 (20)</td>
<td>454 (23)</td>
<td>312 (23)</td>
</tr>
<tr>
<td>Temper</td>
<td>Yes</td>
<td>123 (29)**</td>
<td>107 (29)**</td>
<td>77 (26)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>352 (18)</td>
<td>373 (22)</td>
<td>258 (22)</td>
</tr>
<tr>
<td>Alcohol/drugs</td>
<td>Yes</td>
<td>123 (19)</td>
<td>140 (28)</td>
<td>90 (22)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>352 (27)</td>
<td>351 (23)</td>
<td>245 (23)</td>
</tr>
<tr>
<td>Mental illness</td>
<td>Yes</td>
<td>54 (45)**</td>
<td>66 (45)**</td>
<td>43 (51)**</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>421 (19)</td>
<td>414 (21)</td>
<td>292 (21)</td>
</tr>
<tr>
<td>Age</td>
<td>Yes</td>
<td>9 (10)**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>466 (21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td>Yes</td>
<td>6 (26)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>469 (20)</td>
<td></td>
<td></td>
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<tr>
<td>Disability</td>
<td>Yes</td>
<td>1 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>474 (21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexuality</td>
<td>Yes</td>
<td>4 (10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>471 (21)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Blank sections in Table 1 reflect missing data.
**Significant chi-square value (\( P < 0.05 \)).

Figure 1. Prevalence of work-related violence from 2001/02 to 2012/13.
evidence to suggest the offender was drunk or under the influence of drugs. Demographic characteristics also showed no significant influence (ethnicity, age, religion, disability, sexuality). Findings in Table 1 indicate that factors in the perpetrator, rather than any of the victim's demographic characteristics, were more likely to be the motivating factors behind WRV.

**Discussion**

Newly reported annual data from a sample of victims of customer-perpetrated crime from the CSEW across 12 years showed on average that over a fifth (22%) of all violent crimes committed in the UK took place at work. This figure is in contrast to previous research that reports prevalence rates of WRV from working populations [3,7,17–19]. For example, Jones *et al.* [3] calculated a WRV prevalence rate of over five times greater than the CSEW [7] at 5%. This inconsistency is likely to be due to differing methodologies, in particular issues related to definition, measurement, sampling frame and time period. Other similar studies to the WBS that draw on samples of working populations also report comparable WRV prevalence rates, such as the 2007 European Working Conditions Survey [17] and the 2008 Fair Treatment at Work Survey [18]. Although figures from the CSEW [7] indicate a downward trend in WRV over the past 10 years within the working population, now at 1%, there is an upward trend in recent years in WRV as a percentage of overall violent crimes committed in England and Wales (22%). Similarly, although it has been reported that overall crime committed in England and Wales has fallen by 7% in the year 2012/13 [19], in this study, the percentage of overall violent crime committed in the workplace has risen over the years.

Analysis of data from the present study revealed that differences in demographic and work-related characteristics were significantly associated with the likelihood of experiencing customer-perpetrated WRV. Age, employment status (employee/self-employed) and organizational size provide new information about factors that determine WRV. New data from the CSEW also show that the perpetrator’s personality characteristics were perceived causes of violent incidents at work.

Jones *et al.* [3] modelled the predictive impact of demographic and work-related characteristics on WRV. Two logistic regression models were run for WRV and injury from WRV. Both models produced a good fit to the data, with work-related characteristics exerting the strongest influence on WRV. Managers, full-time workers, trade union members, personal service jobs and smaller size organizations had significantly greater likelihood of experiencing WRV. However, demographic characteristics did not exert a strong effect on WRV, with the exception of disability (psychological). Most interestingly in light of the current study, the same models using customer violence data from the WBS, rather than interpersonal violence, were then tested. Results were very similar between the two different models. However, demographic characteristics this time exerted more influence than previously, with gender (female) being the strongest factor predicting incidents of WRV. These findings suggest that results reported from studies that measure Type II and Type III WRV (as classified by the IPRC) are comparable.

Factors in the perpetrator (temper and mental health) on why the violent incident happened were also revealed to be significant predictors of WRV in the current study. This information from the CSEW has not been reported previously. However, it should be noted that this finding could be the result of attribution error. It could be the case that the victim’s attribution of the actions by the perpetrator is incorrect. It should also be noted where numbers are very low for particular variables that results should be interpreted with caution.

The present study confirms previous research findings that show the predictive association between demographic variables (gender) and work characteristics variables (supervisory/managerial duties, working hours, organizational size and occupation) upon WRV [3,6]. However, the current study also produced new results showing that age had a significant influence upon WRV as well as the perpetrators’ perceived temper and mental health. The implications of these results provide further information about the causes of WRV, which allows researchers to design appropriate interventions for organizations to implement to reduce violence at work. These results begin to build a more accurate profile of the type of people and type of jobs that are most likely to encounter violent incidents at work.

Results from this study now allow the development of a proposed working model of WRV. **Figure 2** provides a graphical representation of the associations between variables.

The current research is not without limitations. For example, customer violence (Type II) only was measured from the CSEW (assaults and threats). In future, a broader definition and measurement is needed within a single study that encompasses many different aspects of WRV, including interpersonal colleague violence, like the WBS, and verbal abuse. This will allow a greater depth and refinement of analysis so that a broad range of violent activities at work can be explored and compared.

Future research could be designed that addresses the above-mentioned limitations, so that a greater
depth of understanding can be generated from the analysis of Figure 2. Perhaps both quantitative and qualitative methods could be applied, and the use of continuous measurement for statistical purposes? Comparison of different occupational groups (including both the public and private sectors) would provide interesting information regarding differences in levels of WRV. The Health and Safety Executive (HSE) put together a guidance leaflet that outlines what can be done to manage WRV [2]. However, the information relates only to licensed and retail premises. A generic WRV management toolkit that can be used by all employers in the UK would allow continuous monitoring and assessment of inappropriate workplace behaviours. By doing so, this will enable employers to function in a more productive manner and reduce levels of organizational inefficiency, which can lead to high employee stress and organizational turnover. A fully monitored standardized approach to diagnosing, reporting and preventing WRV would be of use to employers, practitioners, policymakers and researchers alike.

**Key points**

- Violence in the workplace accounts for 22% of all violent crime in the UK.
- Employers need to be aware that employees need adequate protection in their working lives, and need to examine their organizational structures to understand specific areas of conflict, and in particular the potential vulnerability of those in supervisory roles in regard to work-related violence.
- Further work is recommended to assess how current guidance can be updated in a more robust manner to provide organizations with clear regulation on how to manage customer-perpetrated work-related violence.

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**Conflicts of interest**

None declared.

**References**

New Stress Check Programme in Japan’s workplace

In December 2015, the Japanese government established a legal backing for workers’ mental health based on the Stress Check Programme [1]. This programme was instituted by an amendment of the Industrial Safety and Health Law in 2014 and is implemented at least once a year at all workplaces with 50 or more employees. The employers cannot access the results of the Stress Check of any individual employee without the employee’s consent and must provide the employee with the opportunity for an industrial physician interview if the employee requests one. In 2005, the Japanese government had already established a legal backing for workers’ health based on the number of extra working hours, to prevent cardio- and cerebrovascular diseases. This combination of legal backing for improving the physical and mental health of the employees is expected as a useful health promotion activity in the Japanese workplace.

However, there is no clear academic evidence yet of the usefulness of the legally established mental health programme in preventing suicide or psychiatric illness in Japanese workers. Wada et al. conducted a cohort study of the stress response measured by the Brief Job Stress Questionnaire (BJSQ) to identify the onset or depression [2]. Among 1810 participants, 14 developed depression during a mean follow-up period of 1.8 years, and the hazard ratio (HR) (95% confidence interval) in the subjects with a BJSQ score for depression in the highest quartile was 2.96 (1.04–8.42); the adjusted HR showed the same tendency. As the number of events was only 14, it was difficult to obtain a reliable estimate of the risk for mental disorders such as depression after adjusting for several independent variables. I have experience of using the BJSQ in cross-sectional studies but have found no clear evidence of the association between the score on the BJSQ and the risk of work-related mental disorders.

In an attempt to resolve this query, Madan and Williams systematically reviewed the evidence for the effectiveness of pre-employment health questionnaires in predicting health and employment outcomes [3]. Unfortunately, the authors found no papers in the literature addressing mental health outcomes and recommended assessment of the prospective benefit of health screening questionnaires.

In addition, no screening process for high-stress workers or a standard management procedure has been established yet. Nevertheless, each company is expected to allocate a budget and is obliged to provide an annual report to the government. Although the Stress Check Programme is a unique method, industrial physicians have to make efforts to communicate with any highly stressed workers to improve workers’ mental health. As there are no reports of experience of using a legally backed Stress Check Programme for workers from other countries, useful information could be obtained on the effectiveness of the new health promotion system established in Japan for improving the mental health of workers.

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References

