Suicides and homicides with service firearms. An analysis of the 'Security Guards' population in Italy.


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Abstract

Objective: The authors assessed the suicide/homicide rate of the Italian security guards population compared to other armed and general populations during a recent period. Methods: The authors reviewed the incidence of suicides and homicides among security guards from 1996 to 2006 and, where information was available, a comparison was made with Italian population adapted by age. Comparisons with the general population were also made. Results: The average rate of firearms related suicide among the security guards population during the established period was 11.7 per 100,000 persons-years (95% CI = 6.6 – 16.7) compared to a guns-related suicide rate of 0.7 per 100,000 person-years, (95% CI=0.6-0.7) and a non-guns related rate of 5.5 per 100,000 persons-years, (95% CI= 5.2 – 5.9) and a rate of 0.5 per 100,000 persons-years, (95% CI=0.2-0.8) for the general population adjusted for age. The overall homicide rate among security guards during the
period was 11.4 per 100,000 person-years (95% CI= 6.2-15.4) compared with the homicide rate for the Italian population of 5.4 per 100,000 persons-years, (95% CI= 7.3 – 15.4). Conclusion: The rate of suicide and homicide among the Italian security guards population was higher than the suicide/homicide rate in the general population. These results show that the phenomenon we have described needs attention and specific prevention activities.

Keywords: suicide; firearms; homicide; epidemiology

1. Introduction

Serious episodes of violence presumed to have been carried out by psychiatrically disturbed individuals holding a regular firearms license, are periodically reported by the media. There are very few epidemiological studies (Killias, 1993; Krug, Powell and Dahlberg, 1998) relating to these issues at a national level, especially for certain countries such as Italy, and data related to specific professional categories routinely adopting the use of firearms is also seriously lacking. Equally scarce are studies on the efficacy of the risk evaluation procedures being adopted in the firearms using professions.

Among the categories potentially more at risk are 'private sworn security guards' (from now on referred to in this paper as 'security guards') i.e. personnel specifically employed for armed patrolling and guarding of property with the authorized consent of the provincial prefect.

The current evaluation process in order to obtain a firearms license for security guards is based, in Italy, on the general practitioner's medical certificate and a subsequent certificate of psycho-physical health handed out by either the health officer of the Local Health Authorities, a military doctor or a State Police physician. It is important to note that no mental health specialist is involved in this evaluation process (Clerici, Veneroni, Invernizzi 2006). The efficacy of this procedure has been repeatedly questioned especially after episodes of violence, and various proposals have been put forward to change the related regulations.
The knowledge of firearms abuse, both with homicidal and/or suicidal intent is a necessary condition for the development of an effective institutionalized risk evaluation procedure and license regulation. However few studies have systematically assessed this rate.

This study describes the abuse of firearms in the security guards population in Italy compared to the general population and other armed populations. We sought to determine if the suicide/homicides rate of security guards exceeded that of the general population or showed changes over a recent period. The current research aims to contribute to our knowledge of how the ready availability of a firearm may be a potentially facilitating factor in self- or other-directed violent actions.

2. Methods

The incidence of suicides and homicides was recorded based on the systematic analysis of newspaper articles during a 10 year period between 1st January 1996 and 31 December 2006. On-line and paper archives of all the 3 national and 13 main local Italian daily papers and the database of national and regional news (DEA) of the National News Agency (ANSA- Agenzia Nazionale Stampa Associata) was used.

A descriptive analysis was carried out based on 260 news articles related to episodes of violence involving security guards. Wherever possible, each single episode considered, was analyzed from the moment of the violent act's occurrence to the court sentence (in the homicidal cases) or the filing of the suicidal cases. A conservative approach was adopted whereby potential suicides where in fact considered 'accidents', if confirmation of the suicide was pending further investigation and information regarding the conclusion was missing. Likewise in the case of potential homicides carried out by security guards, we excluded those cases in which the legal sentence confirmed self-defense as the underlying motive.

An analysis of motives behind the suicidal and homicidal acts as reported by the media was also carried out. The classification of motives used for analysis is that used by the ISTAT, (Istituto Nazionale di Statistica i.e. National Institute of Statistics) which reports different categories of motives for suicides and homicides. For the general population the motives for suicide are classified
as: physical illness, psychiatric disorder, passion-related motives, honor-related motives, economic reasons, unknown or unreported causes. No other further details are reported as regards firearms related suicides.

Instead, the motives for homicides are classified as: passion-related motives, quarrels/disagreements, psychiatric disorder, futile motives, raptus, victim’s welfare, benefit/money, infanticides, granting custody of children, violent reaction to long term abuse, accidental presence, defence of the principal victim, information non available.

The annual suicide/homicide rate for security guards was calculated as the number of suicides/homicides divided by the number of actively employed security guards expressed per 100,000 persons-years.

It is worth noting that there is no official data as regards the number of security guards in active service in Italy. Our own data is based on information given to us by the security guards workers' associations. Thus according to these sources of information during the time period being considered a maximum of 35,000 security guards were currently being employment in Italy (in 2006 they were distributed in 880 private companies).

The annual numbers of active security guards by age was not available thus the frequency of suicides/homicides per age could not be interpreted in relation to particular age related risks.

The ISTAT provided the annual numbers of city resident population (ISTAT, 2006).

The annual suicide rate for security guards was calculated considering the number of suicides divided by the number of actively employed security guards, expressed by 100,000 person-year.

The suicide rate among the general population was adjusted by age of the security guards population considered in the study. The adjusted suicide rate was calculated using the firearms related suicide data for the specific age groups considered, released by the ISTAT (ISTAT, 2000; ISTAT, 2002; ISTAT 2003; ISTAT 2004a; ISTAT, 2004b; ISTAT 2005; ISTAT 2006).

Ninety-five percent confidence intervals (CIs) were calculated for the rates. Paired Samples t-test was used to compare the rates between security guards and general population, Spearman’s rank correlation was used to evaluate the existence of temporal trends.
3. Results

Between 1996-2006 security guards were involved in: 50 cases of suicide (45 involving a firearm and 5 accomplished with other means), 8 attempted suicides (all involving a firearm), 36 homicides (including 8 cases involving also a suicide or attempted suicide) and 8 second-degree murders (manslaughter) caused by accidents whilst manipulating firearms, 19 attempted homicides (all involving firearms), 3 suicidal threats, 20 firearm related accidents involving 30 injured people.

3.1 Suicides in security guards

In the period being considered 50 suicides were recorded (mean age=37.4; DS=10.2; range=22-60). There was a higher incidence of suicides in 40 year-old guards. 49 episodes of suicide were carried out by men, and 1 by a woman. In 45 out of the total 50 cases (90%) the service handgun was used, in the remaining 5 (10%) cases other means were deployed.

As concern the causes, in the majority of cases (44%) the reasons for the suicidal act were either unknown or not reported by the media. Where a motive was given, 22% of cases indicated passion-related reasons, 18% psychiatric disorders, 10% physical illness and 6% economic reasons.

3.2 Attempted suicides in security guards

In the period between 1996 and 2006, 8 attempted suicides were reported (mean age=32.83%, DS=9.174; range=23-49), 7 involving men and one case in which gender was not specified. There was an increase in the frequency of attempted suicides at 33 years of age (33.3%) (Figure 2). In all cases a service handgun was used. The reasons for the attempted suicides were equally often induced to economic (37.5%) and passion-related reasons (37.5%). Psychiatric disorders and physical illness were also equally reported (12.5%) as motives for the act.

3.3 Comparative analyses
A comparison between firearms related suicide rates in security guards and in the Italian population was carried out. However the analysis includes data only from 1996 to 2004, since data from 2005 and 2006 have as yet not been released by the ISTAT (Table 1).

The average rate of firearms related suicide among the security guards population during the period was 11.7 per 100,000 persons-years (95% CI = 6.6-16.7) considerably higher when compared with the general population both as regards suicides committed with a firearm (0.7 per 100,000 person-years, 95% CI=0.6-0.7) and those committed by other means (5.5 per 100,000 persons-years, 95% CI= 5.2-5.9) and even when compared to the general population adjusted for age (0.5 per 100,000 persons-years, 95% CI=0.2-0.8).

Where data is available for both the security guards and the general population, the incidence of suicides for the security guards was significantly higher than the incidence of suicides in the normal population (Paired Samples t-test, t= -3.764, df=8; P=0.006). Whereas the incidence of suicide involving the use of firearms in the security guards population showed only a tendency to be higher than the total incidence in the general population too, but the difference is not significant (t= -1.978, df=8, P=0.083).

Statistical analysis could not be carried out for the age-adapted population, because informations are available only for five years. However the adapted incidence is extremely similar to the non-adapted incidence (see Table 1), which suggests that the results are most likely comparable.

The annual rate varied (see Fig. 1) across the time span being analysed. The number of suicides in the security guards population increased during the observed period (Spearman correlation Rs=0.662, N=11; P=0.026). But the total number of suicides in the Italian population decreased, although not significantly (Rs= -0.567; N=9; P=0.1). The reduction in the number of suicides involving the use of firearms in the Italian population was however significant (Rs= -0.850; N=9; P=0.004).
3.4 Homicides by security guards

In the period under investigation reports of 44 homicides were collated, 36 of which were of first degree and 8 of second degree. 8 of the 36 first-degree murders were followed by the suicide of the murderer (mean age=35.8%; ds 8.1; range=21-54). An increase in homicidal events occurred at 40 years of age (25%). Of the 44 homicides, 41 were committed by men, whilst for the remaining three no gender related information was available. In all 44 cases a service handgun was used. Frequency distribution of the causes indicate the majority of cases being reported as passion crimes (31.6%), followed by chance presence (20.5%), defense of the main victim (6.8%), psychiatric disorders and futile motives (4.5%) and an equal distribution of arguments/disagreements and raptus (2.3%). In 20.5% of cases information on motives was not available.

3.5 Attempted homicides by security guards

Between 1996 and 2006 19 attempted homicides involving security guards were reported (mean age 35.56%; ds=8.685 range=24-53 years). An increase in the frequency of such occurrences appears between 33 and 49 years of age. All subjects were male and in every incidence an handgun was used. The frequency distribution of the reported causes reveals a majority of passion driven crimes (31.6%); 26.5% caused by futile motives, 10.5% cause by defense of the main victim and also 10.5 % caused by arguments/disagreements; chance presence, psychiatric disorders and raptus were all indicated as causes 5.3% of the time. In 5.3% of cases information regarding the motives of the violent action were not reported.

3.6 Comparative analyses

A comparison was carried out between the incidence of homicides in the security guards population and the general population based on the data from ISTAT (see Table 2). The analysis included data from 1996 to 2004 since data from 2005 and 2006 are, as yet, not available. Furthermore, the age distribution of the perpetrators for the general population was not known, thus it was not possible to calculate the age-adapted homicide incidence rate for the general population.
The overall homicide rate among security guards during the period was 11.4 per 100,000 person-years (95% CI= 6.2-15.4) compared with the homicide rate for the Italian population of 5.4 per 100,000 persons-years (95% CI= 7.3-15.4).

We observed no temporal trend for homicide rates (see Figure 2).

Where data is available for both security guards and the general population, the incidence of homicides involving the use of firearms in the security guards population was significantly higher than the incidence of first degree murder and infanticide in the general population reported by ISTAT (Paired Samples t test, t= -2.694, df=8; P=0.027).

4. Discussion

In the current study we found that suicide and homicide rates were higher in the security guards population as compared to the general population. This was the case also when data from the general population was adapted for age.

4.1 Suicides

We found that the suicide rate among the security guards population was higher than the suicide rate of the city's population even when adjusted for age. We observed that the rates have risen recently for security guards but they have decreased for the general population.

Data on the incidence of suicide are of particular interest if compared with data from the general population (Table 1). It is also noteworthy that the incidence of suicides is greater than job-related deaths. In fact data from the security guards trade union related to the period between 1995 and 2005, report 35 incidences of guards being killed on the job when a bank or armoured van were assaulted (Savip, 2005).

When comparing data from the security guards population to the general population it is important to note the potentially different composition of the two populations since this armed
personnel is periodically subjected to psychiatric screening, which is of course absent in the general population. Thus the comparison between the security guards and the general population is somewhat problematic given that in the latter there is a higher representation of 'at risk' individuals such as past offenders, the unemployed, psychiatric cases and individuals periodically requiring mental assistance. Non-the-less, the incidence of homicides is higher in the observed population.

There is an increase in suicide rates in security guards at 40 years of age. This result may reflect the distribution of the security guards in active service, which may be higher in this age range, or it may be related to a particularly critical moment in a lifetime where all the most significant life choices have already been made (relational, professional, family-related). Dynamic psychology suggests that in certain situations the difficulty of embracing existential changes, may lead to suicide, viewed as the only way out.

The low incidence of women abusing of their allocated firearm mirrors their low presence within this population. In fact, according to the security guards' trade union, women represent only 3% of the security guards population.

The frequency distribution of the motives behind these violent acts shows suicides being caused predominantly for passion-related. This highlights the importance of exploring relational-emotional issues in the evaluation process of security guards in an attempt to prevent cases of violence.

Our study was unable to explore whether firearms related suicides really represent the majority of suicide cases in the security guards population, since media reports tend to focus on firearm use and suicides carried out by other means may not have reached media attention.

In our study a high number of firearms related suicides is accompanied by a relatively low incidence of suicides and attempted suicides employing other means. In fact in the 10-year period considered, only 5 cases out of 50 employed weapons other than firearms in the security guards population.

In relation to this issue Killias (1993) reported no corresponding reduction in non firearms related suicides with the increased frequency of firearms related suicides.
A direct comparison with other official firearms users in Italy (military, police and other security related personnel) is impossible due to the lack of official data. However, in November 2006, the media reported 74 suicide cases in the Financial Police (Custodero, 2006) during the previous 10-year period over a total active population for that year of 63,000 individuals. No official data are present for the 'carabinieri', a specific branch of the Italian Armed Forces, however a parliamentary inquiry reported 18 suicide cases in 2000 and 16 in 2001 in a reported active population of 112,000 (Senato della Repubblica, 2002). While data provided to the Defense Commission of the Senate reported 137 suicide cases between 1996 and 2000, 25 of which during the 12 month compulsory military service (Cocer, 2002). Data is completely missing for the remaining three state authorized firearms users i.e. State police, prison police, and forestry officials as well as for the military service.

Research from other countries shows very variable figures from the 5.8 suicides per 100,000 policemen a year in London to the 203.7 per 100,000 a year in Wyoming (Hem, Berg, Ekberg, 2001). However, similar to our own results, there a number of studies reporting a higher suicide rate in armed personnel compared both to the general population and to other professions (Heiman, 1997; Helmkamp, 1996; Kirckaldy, Cooper, 1992; Kirckaldy, 1993; Vena, Violanti, Marshall, 1986; Violanti, Vena, Marshall, 1996; Violanti et al, 1996).

Further studies on these issues are needed to allow for a comparison between suicide rates and arms' abuse in the police force, between the Italian reality (which has severe limitations on the use of firearms outside the work sphere) and other countries.

4.2 Homicides

We found that the homicides rate among armed guards was higher than the rate of the city’s population. A comparison with the general population is difficult due to the different composition of the two samples, in that within the general population we cannot exclude the presence of 'at risk' individuals such as past offenders, the unemployed, psychiatric cases and individually periodically requiring mental assistance.
Despite this caveat the incidence of homicides appears to be higher in the security guards than in the general population and a number of authors have suggested this may be due to the ready availability of guns in this sample.

Similarly to suicide rates, homicide rates seem to peak at the age of 40, possibly for the same reasons reported above.

Homicides seem to be mostly categorized as crimes of passion and this fact confirms the importance of exploring relational-emotional issues in the evaluation process.

No comparison can be made with other armed forces due to the complete lack of information which is considered 'classified/confidential' by all the armed bodies.

The motives for both suicide and homicides reported in the current study could not be directly compared to those in the general population due to the lack of information regarding motives for violent actions involving firearms in the general population. Data collection on these events often does not set out to distinguish between intentional and negligent crimes and rarely is the legality of the possession of the firearm involved in the homicide reported.

4.3 Limitations of our study

Overall there is a risk of underestimating the violent actions carried out by security guards (retired, sacked or moved to other employment), even when involving the service weapon because of the lack of media interest in this type of news.

An additional limitation of media based research is the potential underestimation of the issue being analyzed because of the lack of detailed information (for example the death of a person previously classified as 'injured' during the incident) which after some time may no longer be reported because of the lack of audience interest in the issue.

One more limit is the lack of important information such as the stratification by age of the active security guards population.
4.4 Conclusions

Media reports often give intense but passing attention to the potential abuse of firearms by legally licensed carriers. However media reports are particularly useful where no official information is available on the topic.

Prevention is a topic that still requires attention. An issue often debated also in trade unions revolves around the restitution of the firearm when retiring from service. At present in Italy the firearm is bought by the security guards and remains his/her property even when his/her job assignment ends. A potentially useful regulation may be to move ownership of the firearms to the security agency with the guards being allowed to use them only whilst in service.

A number of motives have been suggested as causes related or favoring the inappropriate use of firearms in this population, amongst which the lack of professional training, low pay and related economic problems, brief work contracts, the high incidence of extra work hours to supplement the payroll, lack of sleep, lack of skills in firearms use. Almost all these issues could be addressed with proper training and prevention programs.

There is still a strong need for an analysis of the motives behind these violent acts, which may indeed be linked to the profession (e.g. stress, exposure to high risk situations, inefficient and constantly changing shifts, mobbing etc.).

Experts - criminologists, psychiatrists, psychologists etc. - have often pinpointed the ready availability of firearms to people who may be suffering from psychologically stressful situations. Thus the best preventative measure would be a close monitoring of the subjects at risk. A further aspect that needs to be considered is the potential emulation episodes which may derive from the original act of violence. The easy access to firearms alone cannot explain these phenomena; it is not reasonable to put the blame on an inanimate object as opposed to its bearer.

How can these issues be confronted? The answer cannot be the sole use of penal actions after the act has taken place. Violent acts are often the result of a lack of education that is intrinsically linked to societal responsibilities. There is a cultural trend that beautifies violence and encourages the manifestation of aggression for its own sake. Prevention is the only weapon to tackle these issues.
Results from this study underline the need to develop a culture of prevention.

References


Table 1: Incidence of suicides and attempted-suicides in the general and security guards population in 1996-2006

<table>
<thead>
<tr>
<th>Year</th>
<th>Suicides per 100,000 inhabitants in the Italian population*</th>
<th>Firearms related suicides per 100,000 inhabitants in the Italian population</th>
<th>Firearms related suicides per 100,000 inhabitants in the age-adapted (20-30 year old) Italian population</th>
<th>Firearms related suicides in the security guards population per 100,000 (20-30 year old)</th>
<th>Firearms related attempted suicides in the security guards population per 100,000 persons</th>
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<tbody>
<tr>
<td>1996</td>
<td>6.03</td>
<td>0.75</td>
<td>n.a.</td>
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<td>5.71</td>
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<tr>
<td>1997</td>
<td>6.00</td>
<td>0.73</td>
<td>0.67</td>
<td>2.85</td>
<td>0.00</td>
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<tr>
<td>1998</td>
<td>5.90</td>
<td>0.74</td>
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<td>8.57</td>
<td>2.85</td>
</tr>
<tr>
<td>1999</td>
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<tr>
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<td>0.62</td>
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<td>0.61</td>
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<tr>
<td>Years</td>
<td>First and second degree murders and infanticides per 100,000 inhabitants*</td>
<td>Firearms related homicides in the security guards population per 100,000 persons</td>
<td>Firearms attempted homicides in the security guards population per 100,000 persons</td>
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*ISTAT, statistics based on penal and judiciary hearings

Table 2 – Incidence homicides and attempted homicides in the general and security guards population
Figure 1: Annual Suicides Rates in 1996-2006

Figure 2: Annual Homicides Rates in 1996 – 2006