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Gun utopias? Firearm access and ownership in Israel and Switzerland

Janet Rosenbaum

Maryland Population Research Center, University of Maryland, College Park, MD 20742

Abstract

The 2011 attempted assassination of a US representative renewed the national gun control debate. Gun advocates claim that mass-casualty events are mitigated and deterred with three policies: (1) permissive gun laws, (2) widespread gun ownership, (3) encouragement of armed civilians who can intercept shooters, and cite Switzerland and Israel as exemplars. We evaluate these claims with analysis of International Crime Victimization Survey (ICVS) data and translation of laws and original source material. Swiss and Israeli laws limit firearm ownership and require permit renewal 14 times annually. ICVS analysis finds that the US has more firearms per capita and per household than either country. Switzerland and Israel curtail off-duty soldiers firearm access to prevent firearm deaths. Suicide among soldiers decreased by 40% after the Israeli army's 2006 reforms. Compared with the US, Switzerland and Israel have lower gun ownership and stricter gun laws, and their policies discourage personal gun ownership.

Keywords

firearm; Switzerland; Israel; policy; systematic review

Introduction

The attempted assassination of a US Representative in Arizona in 2011 — in which 6 bystanders were killed and 12 injured — renewed interest in the question whether gun control improves or reduces public safety¹. Gun control advocates claim that permissive gun laws such as Arizona's increase the likelihood of such high-casualty violent events, as well as homicides and suicides within the households of gun owners^{2,3}. Gun advocates claim that gun ownership deters and mitigates the impact of violent events by increasing the likelihood of intervention by armed bystanders, without increasing firearm morbidity and mortality⁴⁻⁶. They cite Switzerland and Israel as countries where permissive gun control and widespread gun ownership have improved public health and safety and make three primary claims. First, Swiss and Israeli gun control laws restrict gun ownership only minimally⁷⁻¹⁰ or not at all^{8,11}. Second, gun ownership and licensing rates in these countries are at least as high as in the US^{5,8,11,12}. Third, these governments encourage citizens to own guns for crime and terrorism prevention^{5,8,13-17} and to carry private guns in public for personal defense^{5,18}. This paper evaluates these three claims with survey-weighted analysis of 4 waves of International Crime Victimization Survey data, literature search, and translation of Israeli and Swiss gun laws.

Methods

Literature search

The literature search included the following terms: Switzerland, Israel, Swiss, Israeli, guns, firearms, injury, suicide, homicide, regulations, legislation, military, civilian guard, civilian policing, and their Hebrew, French, and German translations. The databases included Proquest, Pubmed/Medline, JSTOR, Lexis/Nexis, and the Harvard University library catalog.

Legal translations

Swiss gun laws were obtained from the Swiss consulate of Boston (420 Broadway, Cambridge, MA) in French and German languages and translated by the author. Israeli gun laws were obtained from the Israeli Ministry of the Interior website (moin.gov.il) in Hebrew language and translated by the author.

Data and Analysis

Gun ownership data are from Israeli media reports, the Small Arms Surveys, and the International Crime Victimization Survey (ICVS). The ICVS includes a nationally representative sample of US and Swiss citizens and yields estimates on the prevalence and reasons for gun ownership in 1989, 1996, 2000, 2004–5. The ICVS questions were:

- “Do you or anyone in your household own a handgun, shotgun, rifle or air rifle?”
- “Could you tell me which sort of guns you own? (multiple responses allowed)”
- “For what reason do you own the gun(s)? (multiple responses allowed)”

Survey-weighted ICVS data were analyzed in Stata. Plots used Andrew Gelman’s “secret weapon” plotting method¹⁹ and were created using the plotCI function in the R gplots package²⁰.

Results and discussion

Gun control laws

This section assesses gun control opponents’ claim that Switzerland and Israel have permissive gun control laws.

Gun control laws in Switzerland

The Swiss federal government requires gun permit applicants to demonstrate need for protection against a specific risk and pass weapons safety and firearm use regulation tests (Swiss code RS 514.54, ch. 6, art. 27 (1997)). Permit holders may own only one handgun for 6 months, after which they must renew their permit every 3 months (Swiss code RS 514.54, ch. 2, §1, art. 8 (1997))

Gun control laws in Israel

Contrary to gun advocates’ claims that Israel places few or no restrictions on gun ownership⁷⁻¹¹, Israel rejects about 40% of gun permit applicants, more than any country in the western world²¹⁻²³. Israel requires all guns to have an Interior Ministry permit²⁴ and an identifying mark for tracing²⁵, and limits which citizens may apply for a permit, based on their residence, occupation, or role in national defense (Table 1)²⁶. Applicants are excluded if they take psychotropic drugs or have been arrested for drug use or domestic violence (even if not convicted), and must also pass a Hebrew language test²⁶⁻²⁸. Permit holders may

own only one handgun and must renew their permit annually or whenever their residence, occupation, or national defense role changes²⁶.

Prevalence of gun ownership

This section assesses gun control opponents' claims about the numbers of guns and gun owners in Switzerland and Israel.

Gun ownership in Switzerland

Poe called Switzerland “the most heavily armed nation on earth, per capita,” with 2 million guns^{7,8}. At the time of his writing, Poe was not correct: the 2002 Small Arms Survey estimated 1.2 million civilian firearms in Switzerland, or 16 per 100 residents²⁹, versus 83–97 civilian firearms per 100 residents in the US for the same period²¹. Swiss firearm ownership increased between 2002 and 2007 Small Arms Surveys because military rifles were released to the public due to drastic army size reductions^{30,31}. In 2007, Switzerland had 31–60 total firearms per 100 residents, about the same as Finland, and less than the estimated 83–97 per 100 in the US and 29–81 per 100 in Yemen³¹.

On a per-household basis, the nationally representative ICVS data find that, compared with Swiss households, more US households own handguns and at least as many own firearms (Figure 1). A quarter of Swiss households reported that they own a gun for army service. Few Swiss households, less than 13%, own a gun for non-military reasons. Gun advocates claim that Swiss own guns due to tradition^{7,32,33}, but more than six times as many US households reported owning a gun because they’ve “always had one” (Figure 2). Gun advocates claim that Swiss own guns because shooting contests are the national sport^{32,33}, but only 5% of Swiss households reported owning guns for sport versus 12% of American households. Eight times as many American households reported owning a gun for “self-protection” as did Swiss.

Switzerland’s limited gun access does not prevent gun violence. Greater firearm ownership predicts greater firearm suicide, homicide of females, and murder-suicide³⁴. Swiss gun owners are more likely than non-gun owners to report having seriously injured others³⁵. Respondents who owned a handgun or more than one gun reported more violence than respondents who owned long guns or just one gun³⁵. These findings imply that either owning a gun makes these men more violent, or that more violent men choose to own guns and Swiss law does not screen out violent men.

Switzerland has a large proportion of firearm suicide relative to other European countries, and the proportion increased as household gun ownership increased between 1983 and 2000³⁶. Within Switzerland, Swiss cantons with greater household firearm ownership had more firearm suicide between 1998 and 2007, and firearm suicide decreased as household firearm ownership declined in this decade³⁷. Military weapons account for about 40% of firearm suicides in Switzerland³⁷ and at least a third of murder-suicides³⁴. Firearm prevalence in Switzerland is also proportional to the prevalence of firearm homicide of women but not men³⁸. These ecological studies are correlational, but Martin Killias notes that they are unlikely attributable to confounding by violent crime. High rates of violent crime might induce firearm ownership, but there is no “third variable which, simultaneously, might push people to buy guns, to kill female partners (but not male opponents), and to commit assault or suicide, but not robbery.”³⁸.

Gun ownership in Israel

Gun advocates claim that in Israel over 10% of Jewish adults have a permit to carry concealed handguns⁵. In 2009, Israel issued about 200,000 permits for any type of gun³⁹. In

2002, at the time of Lott's writing, Israel issued 265,000 permits for any type of gun, the largest number in the past decade²². Only a subset of these permits allowed handgun possession, so that less than 5-6.7% of the Jewish population over age 16 could have a handgun⁴⁰ (Table 2). The Small Arms survey estimates 500,000 total firearms (400,000 of which are registered), or 7.3 per 100 people, implying that less than 7.3% of Israelis own any type of firearm³¹. Israel ranks 81 out of 179 countries in per capita gun ownership³¹.

The low rate of gun ownership in Israel is associated with a low rate of firearm suicide, which is rare in the general population. In the general Israeli population, suicide by strangulation is more common than suicide by firearms: 2.45 per 100,000 versus 1.6 per 100,000⁴¹. Among soldiers, the only subpopulation for whom guns are easily accessible, personal firearms were the most common suicide instrument, but decreasing soldiers' access to guns when off-duty seems to have decreased their firearm suicide rate. In the mid-1980s, the annual suicide rate was 19.3 per 100,000 soldiers, and 84% of suicides used their army-issued firearm⁴². The IDF reported subsequent suicide data in total number of suicides per year, rather than suicides per 100,000. In 2003–05, there were an average of 28 army suicides per year, of which 90% used a firearm⁴³. In 2006, the IDF decreased soldiers' access to firearms on weekends, and the suicide rate decreased by 40% to 16.5 suicides per year in 2007–08; weekend suicide using firearms decreased from 10 per year to 3 per year, but weekday suicide did not change⁴³.

Government gun-related programs

This section assesses gun control opponents' claims that the governments of Switzerland and Israel deliberately try to increase civilian gun ownership for security purposes.

Government gun-related programs in Switzerland

Gun advocates cite the Swiss Army as a Swiss government program to encourage citizens to use guns for self-protection. Swiss men serve in the army until age 35 (age 50 for officers)⁴⁴. In spite of this universal service, the ICVS data find only a quarter of Swiss households reported having a gun in their home due to Army service (Figure 2). Media reports large numbers of households keep their guns³⁰, but the nationally representative survey data finds that only 2% of households opt to keep an army gun post-service. Some cantons allow reservists to keep their service-issued guns in local gun depots and unit arsenals rather than inside their homes²⁹, but reservists in cantons without local depots were required to keep their guns at home.

Government gun-related programs in Israel

The Small Arms survey estimates that the Israel Defense Forces has 1.8 million guns⁴⁴. As in Switzerland, army service in Israel is nearly universal — non-Ultra Orthodox Jewish, Bedouin, Druze, and Circassian males serve 3 years and secular Jewish females serve 21 months, with men on reserve duty 4–6 weeks per year until age 40^{40,45}. Unlike Switzerland, Israeli army service does not result in substantial civilian gun access. Soldiers are issued guns only for their period of service, and most live on base during this time. Soldiers used to carry guns to civilian settings when off duty to prevent weapons theft and kidnapping^{21,46,47}, but in 2006 the IDF decreased soldiers' access to firearms on weekends as a successful suicide prevention measure⁴³.

Gun advocates make extensive claims about non-military gun programs by the Israeli government, claiming Israeli citizens carry private guns in public for personal defense^{5,18} and that the Israeli government encourages citizen gun ownership to prevent crime and terrorism^{5,8,13-17}. The Interior Ministry bans citizens from using their personal guns for terrorism prevention guard duty⁴⁸ and does not issue gun permits for the prevention of

ordinary crime⁴⁹. The Israeli government has deliberately tightened gun restrictions with the goal of decreasing the number of civilian guns, such as after Prime Minister Yitzchak Rabin's assassination. At periods when the government has liberalized gun regulations, such as after the Second Intifada, the liberalization applied only to high-ranked army and police officers (captain or higher)⁵⁰.

Gun advocates also claim that Israel has formal programs to encourage citizen arm-bearing, "routinely loan[ing] guns to millions of civilians"¹⁷ (page 254)⁹, that "Any law-abiding Jew who needs an Uzi, or a handgun, may borrow it, like a library book, from an Israeli police armory."⁵¹, and that the Civil Guard includes many armed civilians⁵² (pages 332–3). The Israeli army provides 32,000–56,000 weapons, mostly automatic rifles, in arsenals for communities in potentially dangerous areas, such as the Disputed Territories and along borders, areas with approximately 300,000 total residents (adults and children)^{21,53}, substantially less than the millions claimed¹⁷ (page 254). The communal arsenals are withdrawn during periods of fighting⁵⁴.

The Civil Guard comprises 70,000 civilians supervised by the national police with the mission of terrorism prevention, although it's unknown whether the Civil Guard prevents terrorism⁵⁵⁻⁵⁸. At its peak in the late 1970s, 3% of Israelis participated in the Civil Guard, but some Civil Guard members carried out vigilante activities, spurring increased police supervision^{55,57,58}. Most Civil Guard members are unarmed because their duties do not require guns (e.g., patrolling, traffic control, tourist support, rescue of injured or lost hikers, and bomb detection and disposal)^{55,57,58}. Armed members carry weapons only during their shifts⁵⁸.

Gun advocates also claim that schools are guarded by armed retirees¹⁰ and armed school staff members⁵⁹. Armed civilians have not performed school guard duty since the 1970s⁵⁸. Licensed commercial security firms guard schools, and unarmed parents and teachers inspect schools for bombs^{58,60}. School field trips in Israel are often accompanied by an armed civilian, but few civilians are eligible for this role⁶¹. Armed field trip chaperones must have completed army service and either participate in the Civil Guard or have a military long-gun permit for at least two years, implying fewer than 270,000 eligible chaperones: the sum of the 70,000 Civil Guard members (only a subset of whom are post-army) and 200,000 total gun permits (only a subset of which are for military long guns, have been held for more than 2 years, and do not overlap with the Civil Guard.)

Gun advocates claim that Israel encourages citizens to use personal or borrowed guns to prevent crime and terrorism. Official government policy bans armed civilians from performing guard duty with personal arms, and maintains close control over the Civil Guard; only 70,000 civilians are Civil Guard members, and most are only armed during shifts while supervised by police; the Civil Guard may not be effective in preventing crime or terrorism; and fewer than 270,000 civilians are eligible to guard school field trips.

In addition to the arguments addressed above, some gun advocates' claims are contradicted by the sources that they cite. For example, Kopel claimed that legal Swiss guns are not used in crime⁷ page 286 and cited a Swiss history book⁶² (page 772). This book did not support Kopel's claim and, in fact, described gun control regulations as "inadequate," gun control laws' enforcement as "lax"⁶² (page 771), and noted that terrorists own legally-obtained military weapons⁶² (page 772). Similarly, LaPierre and Baker cite an Israeli newspaper article to support their claim that armed Israeli civilians prevent terrorist attacks¹⁸ (pages 86–7). The article was actually about terrorist attacks foiled by soldiers and security guards and included a case where a civilian was "seriously wounded" by Israeli soldiers after shooting at what he thought were terrorists⁶³.

Conclusions

Swiss and Israeli gun ownership is rare, regulated stringently such as by putting the burden of proof on permit applicants to demonstrate a specific need for a gun, and neither country encourages gun ownership. The extensive gun control in both countries do not prevent guns from being associated with violent deaths, but increased gun control in the Israeli army may have reduced gun suicide. The evidence from Switzerland and Israel seems to concur with the public health literature finding³.

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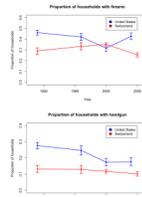


Figure 1.

Proportion of households that report owning at least one firearm. Source: International Crime Victimization Survey 1989, 1996, 2000, 2004. Means calculated using Stata survey-weighted means and linearized standard errors. Plotted using R gplots package. Answer is to question “Do you or anyone else in your household own a handgun, shotgun, rifle, or air rifle?” “Could you tell me which sort of gun or guns you own?”

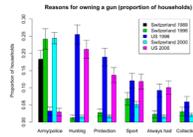


Figure 2. Proportion of all households with each reason for owning a gun. Source: International Crime Victimization Survey 1989, 1996, 2000. Means calculated using Stata survey-weighted means and linearized standard errors. Plotted using R gplots package. Answer to question “For what reason do you own the gun (guns)?” In 1989, the question “Is this a private gun, an Army gun, or both?” was asked in Switzerland but not the US.

Table 1Israel: Individuals eligible for gun permit (Ministry of Interior 2010, <http://www.moin.gov.il/>)

	Category	Criteria
Residence	current resident of Judea or Samaria	3 months permanent residence
Employment	employment in Judea/Samaria	permanent job
	public transportation driver	≥ 5 passengers per vehicle
	explosives transporter	Bureau of Labor certification
	jeweler	income tax certification of work
Security	former army, police	rank at least lieutenant colonel
	former prison authority	rank at least lieutenant colonel
	police officer	active duty, at least one year
	fire fighter	active duty, at least one year
	ambulance worker	active duty, at least one year
	civil guard volunteer	continuous participation, 5 years
Recreation	inherited gun	gun must be disabled
	hunter	current hunting permit, 2 hunting guns

Table 2

Israel: (1) Proportion of population with valid personal gun permit; (2) Legally held guns per 100 population, excluding estimated 100,000 unlicensed guns

Year	Number Permits	Permits per 100 population	Source	Notes
1995	285,000	5.25	22	
2002	220,325	3.55	23	excludes 45,000 expired
2002	265,153	4.28	22	
2002	265,325	4.28	64	
2007	500,000	7.3	31	
2009	200,000	2.72	49	
2009	200,000	2.72	39	5.04 per 100 Jewish adults

Year of Estimate	Number Guns	Guns per 100 population	Source
1993	308,955	6.51	65
pre-1996	400,000	7.36	66