Should psychiatrists have a role in the gun control debate?

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Background

On December 14, 2012, Americans were horrified to learn that Adam Lanza had shot and killed 20 children and 6 adults at Sandy Hook elementary school in Newtown, Connecticut. This mass shooting occurred less than 6 months after James Holmes shot 70 people in a movie theater in Aurora, Colorado. It occurred only 2 years after Jared Loughner shot 18 people, including U.S. House Representative Gabrielle Giffords, in Tucson, Arizona, and 5 years after Seung-Hui Cho shot 57 people at Virginia Tech.

The latest mass shooting event happened on June 7, 2013, in the Los Angeles area. Authorities say that John Zawahri first killed his father, Samir, 55, and older brother, Christopher, 25, at their Santa Monica home before carjacking a motorist and forcing her at gunpoint to drive him to the Santa Monica College campus. Along the way, he fired on other vehicles, including a sedan, a bus, and a sport utility vehicle carrying Santa Monica College groundskeeper Carlos Franco, 68, and his daughter, Marcela, 26. Both died. Police identified his last victim as Margarita Gomez, a 68-year-old visiting the campus to collect cans.[1]

While this latest mass shooting was smaller in scope than the Newtown, Aurora, Tucson, or Virginia Tech shootings, it touched me in a very personal way. Not only did this violence occur close to both my home and workplace, but early reports also indicated that Mr. Zawahri had actually been previously treated in UCLA’s inpatient psychiatric ward where I work. Before his name was released, I recall wondering if he had been one of my patients.

Since the Newtown shooting, several editorials have appeared in both the general medical[2] and psychiatric literature[3] suggesting that the prevention of firearm injuries and deaths should be made a public health priority. Some of these articles have also suggested that physicians should take a more active role in research and policy efforts towards this end. Notably, one common link between all of the aforementioned mass shooting events was that each of the perpetrators appeared to suffer from a mental disorder.[4] With this context in mind, I began thinking about what role, if any, should psychiatrists have in the gun control debate.
How has the field of psychiatry historically approached social activism?

Confusion and controversy over whether psychiatry as a profession has a legitimate right to deal with larger social, economic, and political issues is hardly a new phenomenon. In fact, a crisis developed during the 1940’s within the American Psychiatric Association (APA) over precisely this debate. Around this time, some psychiatrists began to think that, as a profession, psychiatry should have a voice on issues such as war, poverty, racism, and quality of life. U.S. involvement in World War II reinforced the notion that a psychological and environmental approach to conceptualizing patients with mental health problems should be employed, and exposés drawing public attention to psychiatry and the poor conditions in state hospitals helped to create an environment that made the specialty more receptive to change.

However, not all APA members were enthusiastic about change, and many were actually overtly hostile to members that felt that change was necessary if the specialty was to remain relevant. Members advocating change formed a secondary organization called the Group for the Advancement of Psychiatry, which was dedicated to the creation of an expansive psychodynamic psychiatry that emphasized a broad environmental etiology and defined its mission in terms of social activism. Led primarily by William Menninger, this group insisted on the necessity of social psychiatry and produced documents on the social responsibility of psychiatry. Eventually, the two disparate groups were able to reconcile and work together under the umbrella of the APA, but this history may have created lingering concerns within the specialty that engagement in political issues can lead to internal fragmentation, after which reconciliation may not always be possible.

Some have also argued that the nature of a psychiatrist’s work, particularly for those practitioners with more extensive roots in psychoanalysis, has also historically been a hindrance to engagement in social activism. As Terry Kupers points out, “Diagnosing and interpreting, to a great extent, serve to support the reigning order by ignoring ways we twist ourselves to accept what we actually know to be wrong with social arrangements, and then selectively offering symptom-reduction to alleviate the discomfort of our inequitable circumstances.”

The scope of the problem

According to the Centers for Disease Control and Prevention (CDC), 31,672 people in the United States were killed by firearms in 2010, which is a rate of 10.3 deaths per 100,000. To put this statistic into perspective, more people in the U.S. die every 2 years from firearm related injuries than all U.S. military casualties during the Vietnam War. Firearm homicides accounted for 11,078 of all firearm deaths in 2010, which is more than all U.S. troops killed throughout the last decade in Iraq and Afghanistan.

While discussions about gun violence in the U.S. typically focus on crime and homicide, and media coverage focuses even more specifically on mass shooting events, the most common type of death by firearms, suicide, is often neglected. The CDC reports that suicide was ranked as the 10th leading cause of death in 2009 among people ages 10 and older, accounting for 36,891 deaths. They also report that during the time period between 2005 and 2009, the greatest percentage of suicides among men occurred by
firearms (56.3%). Guns were the second leading suicide mechanism among women (30%).[11] Though not the most common means used in suicide attempts, firearms are certainly the most lethal. 76.6% of all suicide attempts involving firearms lead to death. [12]

Do guns kill people, or do people kill people?

While the statistics reviewed above are no doubt alarming and may suggest a call to action for psychiatrists and other healthcare professionals, many have argued that focusing efforts on gun control will not lead to a reduction in deaths by suicide or homicide. Some arguments have suggested, for example, that the United States does not suffer from an inflated rate of homicides perpetrated with guns, but rather from an inflated rate of homicides in general. Furthermore, statistics have generally failed to show a correlation between tighter gun regulations and lower rates of homicides in other countries.[13]

If these arguments are true, it would be difficult for psychiatrists to make specific recommendations about gun control from a public health policy perspective. It is most certainly the case that data suggesting a clear answer to this question is limited. Notably, in the early 1990’s, a series of CDC-funded studies seemed to suggest that more ready access to firearms at home was associated with increased homicide and suicide rates.

After these studies were published, though, the National Rifle Association began a major lobbying effort to cut $2.6 million from the CDC budget, which was the amount of money slated to be spent on gun violence research at the agency’s National Center for Injury Prevention and Control that year. Shortly thereafter, legislation was actually passed that prohibited the CDC and National Institute of Health from conducting research that might “advocate or promote gun control.”

Until President Barack Obama officially directed the CDC and other agencies to study the causes and prevention of gun violence earlier this year, in the wake of the Sandy Hook shooting, there had been little support for such efforts. The field of gun violence prevention was forced to operate on private funding alone from 1996 until now. Not surprisingly, rates of academic papers published on gun violence fell by 60% from 1996 to 2010 as a result.[14] This has significantly limited the data available to guide our path in terms of implementing evidence-based approaches to reducing gun violence.

However, though limited, the data currently available in the literature does not support the assertion that gun control legislation will have no impact on suicide and homicide deaths. In fact, the psychiatric and medical literature has primarily provided data that challenges this claim. For example, one study using administrative records of handgun sales examined the association between the personal ownership of a handgun and suicide. It found that persons who purchase a handgun are at substantially elevated risk of suicide, and risk was especially high in the first week after purchase—57 times that of the adjusted rate for the general population.[15] Another study that compared changes in suicide rates with changes in household firearm prevalence found that, independent of age, unemployment, poverty, per capita alcohol consumption, and region of the country, decreases in household firearm ownership over time were associated with decreased rates of suicide.[16] More specifically, for every 10% decline in household firearm ownership,
there was an associated 4.2% decline in firearm suicides and a 2.5% decline in overall numbers of suicides.

Additionally, a number of studies have examined the impacts of specific types of gun legislation on rates of firearm deaths. One example is a study published in 2012 in Preventive Medicine that investigated the impact of state background checks for gun purchases and firearm deaths. It found that more background checks were associated with fewer homicide and suicide deaths. It also found that firearm homicide deaths were lower when states had checks for restraining orders and fugitive status, and firearms suicide deaths were lower when states had background checks for mental illness, fugitive status, and misdemeanors.[17]

While these studies suggest that the available data does support an association between firearm ownership, specific gun control legislation, and deaths by firearms, the data is correlative, not causal, and may not be considered by some to be significant enough to direct policy change. However, data from other countries that have enacted aggressive gun control legislation may prove more compelling.

What can we learn from Australia?

In 1994, the Brady Handgun Violence Prevention Act established a nationwide requirement in the U.S. that licensed firearm dealers observe a waiting period and initiate a background check for handgun sales.[18] The aim of the legislation was to interrupt firearm sales to persons who were legally prohibited from purchasing them. While most states had to institute more stringent procedures in order to comply with the law, 18 states and the District of Columbia already met the requirements. It was hoped that the law would result in a reduction in both firearm suicide and homicide rates.

Most assumed that the greatest reduction in firearm suicides and homicides would be in the states that were required to institute new waiting periods and background checks. However, a study that was published in JAMA: The Journal of the American Medical Association in 2000, which controlled for population age, race, poverty and income levels, urban residence, and alcohol consumption, contradicted this assumption, showing no significant reduction in homicide or overall suicide rates in these states.[19] These findings contributed significantly to the framing of the debate over the efficacy of gun control legislation thereafter. Unfortunately, there were multiple limitations to the study. These included the study’s use of total firearm suicide and homicide rates as outcome measures, rather than rates of firearm suicides and homicides amongst the populations actually targeted by the law,[20] and the short period of time utilized to evaluate trends in suicide and homicide rates prior to the law’s implementation.[21] For unclear reasons, the authors arbitrarily truncated their evaluation to the years 1990 to 1997, although mortality data was available back to 1968.

Shortly after the implementation of the Brady Act, Australia enacted a series of aggressive gun law reforms following a 1996 mass shooting in Tasmania, which left 35 dead. These reforms included removing semi-automatic and pump-action shotguns and rifles from civilian possession, requiring that all firearms be individually registered to their licensed owner, requiring all firearms purchasers to have a genuine reason for gun
ownership, and prohibiting any private firearm sales. Additionally, more than 700,000 guns were removed and destroyed from an adult population of about 12 million through a gun buyback program.

Several studies have subsequently evaluated the impact of this aggressive legislation, the most comprehensive of which was a study published in Injury Prevention 2006.[22] This well designed study did not suffer from the same limitations as the study noted above evaluating the impact of the Brady Act. Similar to the JAMA study, it looked at trends in firearm death rates before and after the firearm laws were announced. However, the authors looked at firearm death rate trends in the 18 years leading up to the new firearm laws, a long enough period of time to establish trends in firearm deaths accurately. They then compared these trends with the corresponding trends for the next 7 years. They hypothesized that the implementation of the gun laws would be associated with accelerating declines in firearm homicides, firearm suicides, and total firearm deaths, which were all in decline prior to the new gun laws being implemented. They also evaluated the rates of total all-cause, and non-gun, homicides and suicides in order to rule out substitution bias. In other words, they wanted to make sure that reduced access to firearms did not result in increased suicides and homicides by other methods, such as stabbings or hangings. As well, given that the legislation had been prompted by a mass shooting, they compared the number of people killed or injured in the 18 years leading up to the law’s implementation in 1996 with the decade that followed, up until the year that the study was published, 2006.

The findings were significant. Although the rate of firearm deaths were reducing by an average of 3% per year prior to the new gun laws, this declining rate doubled to 6% after their introduction. Looking individually at firearm suicides and firearm homicides, the authors found that, while the rates of firearm suicide and homicide were decreasing by an average of 3% per year prior to the new gun laws, the rates accelerated to 7.4 and 7.5%, respectively, after their implementation. However, due to the relatively lower rate of homicides in Australia, the ratio of trend estimates for homicides failed to reach statistical significance secondary to the inherently low power due to the small numbers involved. The discrepancy between the 6% declining rate for total firearm deaths and the 7.4 and 7.5% rates for firearm suicides and homicides was explained by a paradoxical increase in unintentional firearm deaths, for which the authors could formulate no plausible explanation.

Regarding total all-cause suicide and homicide and concern for possible substitution bias, the authors found that total suicide increased by an average of 1% per year before the introduction of the gun laws and decreased by 4.4% per year after the introduction of the gun laws. Total homicide was essentially steady before the introduction of the gun laws and decreased by 3.3% per year after their introduction. The ratio of the pre-law to post-law trends reached statistical significance for both total suicide (p<0.001) and total homicide (p=0.01).

In terms of mass shootings, the authors reported that Australia experienced 13 mass shootings, in which a total of 112 people were killed and 52 injured, from 1978 to 1996. By contrast, no mass shootings had occurred in the decade following the law’s initiation. The authors concluded that “the data swings shown are so obvious that if one were given
the data…and were asked to guess the date of a major firearm intervention, it would be clear that it happened between 1996 and 1998.” Furthermore, though gun lobby researchers in Australia have sought to repudiate these conclusions using methods that have been heavily criticized, to date, no peer-reviewed research has established a plausible alternative cause for these findings.[23]

There are several limitations in the aforementioned data’s application to the U.S. First, the sheer size of the U.S. population and rates of firearm deaths is significantly greater in the U.S. as compared to Australia. In 2010, the U.S. population was 13.7 times larger than that of Australia, and it had 134 times the number of total firearm-related deaths and 17 times the rate of firearm homicides.[24] Related to this discrepancy in size, it is estimated that the gun buyback program in Australia was able to reduce the country’s stock of private guns by one-fifth. The estimated equivalent figure in the U.S. would be 40 million guns,[25] which is a massive number. Thus, implementing similarly comprehensive legislation in the U.S. on a comparable scale would be a huge undertaking.

Is there any potential harm associated with psychiatrists participating in the gun control debate?

In the wake of high-profile gun crimes, it has been common for mainstream media to connect the psychological instability of shooters to violence. Public opinion polls following mass shootings have suggested that the lay public also links violence and mental illness. For example, following the Newtown shooting, gun-policy and mental-illness surveys were completed by the survey research firm GfK Knowledge Networks with a total of 4233 respondents participating.[26] The surveys revealed that 59% of respondents supported increased government spending on mental health care, and 61% favored greater spending on such care as a strategy for reducing gun violence. They also assessed support for 31 specific gun policies and found public support to be particularly high for measures prohibiting certain persons from having guns and for enhanced background checks.

However, many clinicians and researchers, most notably, Paul Appelbaum, have suggested that the relationship between mental disorders and violence is actually quite complex.[27] This view appears to be well supported by the literature. For example, a study published in the American Journal of Psychiatry in 2006 examined data from high-quality national hospital and crime registers in Sweden from 1988 to 2000 to investigate the population impact of severe mental illness on violent crime.[28] They found that 6.6% of all patients with severe mental illness, as identified by hospital admissions, had a violence conviction, compared with 1.8% for the general population. However, overall, patients with severe mental illness committed only about 5% of all violent crimes. Thus, though people with mental disorders may have an elevated risk of violence, the proportion of violence that they account for is relatively small. Furthermore, a number of studies have actually suggested that people with mental disorders are much more likely to be the victims of violence rather than the perpetrators of violence.[29]

In light of this information, concern exists that psychiatrists participating in the gun control debate could inadvertently link violence with mental health disorders in the public
mind, thereby reinforcing the stigmatization of persons with mental health problems. This theoretical concern was demonstrated in a study in the American Journal of Psychiatry, which investigated the relationship between news coverage of violence by persons with serious mental illness and negative public attitudes. In this study, participants in an online survey were randomly assigned to groups instructed to read news stories about mass shooting events perpetrated by people with serious mental illness, or to a control group that read about a mass shooting event, without mention of the perpetrator being mentally ill. All groups reading about a mass shooting event perpetrated by a person with mental illness exhibited heightened negative attitudes towards persons with serious mental illness, with respondents reporting less willingness to work closely with or live near a person with mental illness. As the majority of people with serious mental illness already go untreated or are undertreated, and as stigma is a key contributor to poor treatment rates, this link could have devastating consequences for mental health care.

Conclusions
I hoped to review in this article the evidence that exists regarding the efficacy of implementing tighter gun control legislation, the limitations in that evidence base, the historical approach psychiatry has taken in social activism, and some of the potential complications with psychiatrists participating in the debate over gun control. I have come to the conclusion, through this review, that an adequate evidence base exists for psychiatrists to advocate for stricter gun control legislation, based upon the information that is currently available. However, this does not diminish the equally important conclusion that additional research directed towards determining the basic epidemiology of firearm violence, the risk factors for involvement of victims and perpetrators of violence, and the validity of specific gun policies is desperately needed. This would allow for the implementation of only the most efficacious gun policies.

While concerns about the public inappropriately linking violence with mental health disorders and thus further contributing to the stigmatization of mental illness are no doubt legitimate and deserve attention, I do not believe that they are sufficient to prevent us from participating in the debate over gun control. Perhaps Paul Appelbaum summarized this issue best: “Psychiatrists and organizations such as APA have an important role to play as the ‘honest brokers’ in this process. When passions become inflamed by tragic acts of violence, we should be clear voices of factual information and advocates of reason. Real risks should be acknowledged and appropriate interventions endorsed, while distortions are exposed and recourse to discriminatory and stigmatizing policies is discouraged; a tall order perhaps in what is often a politically charged environment, but not a bad set of aspirations.” Similarly, though the historical review of psychiatry’s engagement in social activism does provide some insight into why psychiatrists have not taken a greater role in the gun control debate up until now, this should not point our field away from future participation.

I am not naïve to the challenges that exist. Aside from those challenges discussed already, varying views on Second Amendment interpretation, as well as partisan and personal preferences, have had, and will continue to have, significant bearing on the debate, particularly as long as the debate focuses primarily on gun ownership. However, it is
important to recognize that gun violence arises from a broad array of socio-cultural, educational, and behavioral issues, which may well eclipse the current focus on gun ownership in the future. In other words, a much more comprehensive strategy is likely to be required than one that focuses exclusively on reducing the number of guns in our society.

While the magnitude of the problem can be overwhelming, prior public health achievements do suggest more optimism than may be initially apparent. One example is the public health effort to decrease tobacco use in the U.S., which resulted in a greater than 50% reduction (43% to 19%) in the prevalence of cigarette smoking among adults between 1966 and 2010.\[33\] Notably, these results required a multifaceted approach to the problem across a broad range of public health domains, from increased taxation of tobacco products, which secured funding for prevention efforts, to the strategic efforts that were made utilizing media and education, effectively shifting a culture that, for many years before, glorified cigarette use. Translating this to decreasing gun violence, a new and substantial national tax on all firearms and ammunitions could be considered, which would provide a stable revenue source for gun violence prevention efforts. Also, new restrictions could be placed on gun violence in television, movies, and video games, as is already in place for obscenities and sexual imagery.\[34\] As intimated above, these efforts would not necessarily be intended to reduce gun ownership.

What is clear is that we can wait no longer to address this urgent public health issue. Psychiatrists are equipped with a skill set that includes the ability to evaluate complex information and synthesize it and maintain objectivity. Psychiatrists also embody the capacity to empathize with others, and are thus excellent at acting as liaisons between disparate parties. One could argue that psychiatrists, as a result of this unique skill set, are best equipped to participate, and take leadership, in the debate over gun control.

References:


EDITOR’S NOTE: Dr. Nakamura won the 2013 Shirley Hatos 21st Century Psychiatry Prize for this article.