



# **Violent Deaths Reporting System Puerto Rico**

## **Annual Report 2020**

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## **Violent Deaths - Puerto Rico 2020**

### **Editors**

Diego E. Zavala Zegarra, MSc, PhD

Mariluz Bezares Salinas, BS, MS

Tania M. Martínez Sánchez, BS, MPH

Glorián Carrasquillo Sánchez, BA, MPH

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# Puerto Rico Violent Deaths Reporting System Staff

## Principal Investigators

Diego E. Zavala Zegarra, MS, PhD

Mariluz Bezares Salinas, BS, MS

## Program Coordinator

Mariluz Bezares Salinas, BS, MS

## Data Abstractors

Glorián Carrasquillo Sánchez, BA, MPH

Tania Martínez Sánchez, BS, MPH

Yamilka Pérez Fontánez, BA

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## Introduction

The Puerto Rico Violent Death Reporting System (PRVDRS) is an epidemiological surveillance system designed to obtain a complete census of violent deaths in Puerto Rico. The PRVDRS, affiliated to the Puerto Rico Institute of Statistics, began its participation in the National Violent Death Reporting System (NVDRS) in September 2016 through a collaborative agreement funded by the Centers for Disease Control and Prevention (CDC) of the Department of Health and Human Services. By 2017, 40 states, the District of Columbia (D.C.) and Puerto Rico participated in the NVDRS. Since 2018, all 50 states participate, in addition to D.C. and Puerto Rico.

The PRVDRS collects, consolidates, analyzes, and publishes information on all violent deaths in Puerto Rico. Violent deaths occur by suicide or homicide, as well as deaths from unintentional firearm injuries, deaths due to legal intervention (excluding legal executions), and deaths with undetermined intent.

The documentation of violent deaths is carried out through a collaborative agreement with the Forensic Sciences Institute, the Puerto Rico Police Bureau, and the Demographic Registry (Vital Statistics) of the Puerto Rico Department of Health.

To learn more about data sources, definitions of violent deaths, circumstances, firearms, data quality and integrity, and mortality rates, please refer to the first edition of the Annual Report of Violent Deaths in Puerto Rico - 2017 available at: [https://estadisticas.pr/files/Publicaciones/Informe%20Muertes%20Violentas%202017\\_2020%200710-CEE.pdf](https://estadisticas.pr/files/Publicaciones/Informe%20Muertes%20Violentas%202017_2020%200710-CEE.pdf)



## Puerto Rico Population – 2020

In 2020, the median age of the population of residents in Puerto Rico was 44 years old. In other words, it is estimated that, in that year, the number of inhabitants who were 44 years of age or younger was equal to the number of inhabitants who were over 44 years of age. In the male population, the median age was 42 years and 46 years in the case of women. Table 1 shows the distribution of the population by sex and age groups, while Figure 1 illustrates the proportion of the population by age and sex, reflecting the aging of the population. In addition, there is no official classification of race in Puerto Rico. However, in the 2020 Census, 60.0% of PR residents identified themselves as white. Census results indicate that 98.7% of the population in Puerto Rico is Hispanic/Latino and 95.4% Puerto Rican.

Figure 2 shows Puerto Rico in the Caribbean Region. The map in Figure 3 shows Puerto Rico's 78 municipalities including Vieques and Culebra.

**Table 1. Puerto Rico Population by Age and Sex, 2020**

Age Groups	Both Sexes	Men	Women
0 - 4	112,666	57,707	54,959
5 - 9	154,507	78,296	76,211
10 - 14	183,501	92,979	90,522
15 - 19	200,989	102,519	98,470
20 - 24	221,770	112,488	109,282
25 - 29	225,215	112,833	112,382
30 - 34	199,240	96,968	102,272
35 - 39	188,125	88,578	99,547
40 - 44	205,361	97,017	108,344
45 - 49	207,265	98,077	109,188
50 - 54	215,877	101,138	114,739
55 - 59	226,106	103,505	122,601
60 - 64	217,741	99,573	118,168
65 - 69	198,067	89,329	108,738
70 - 74	184,677	82,470	102,207
75 - 79	141,803	62,233	79,570
80 - 84	97,766	41,841	55,925
85 +	100,862	37,743	63,119
Total	3,281,538	1,555,294	1,726,244
Median age (years)	44	42	46

Source: U.S. Census Bureau, 2022

Figure 1. Puerto Rico Population Pyramid, 2020

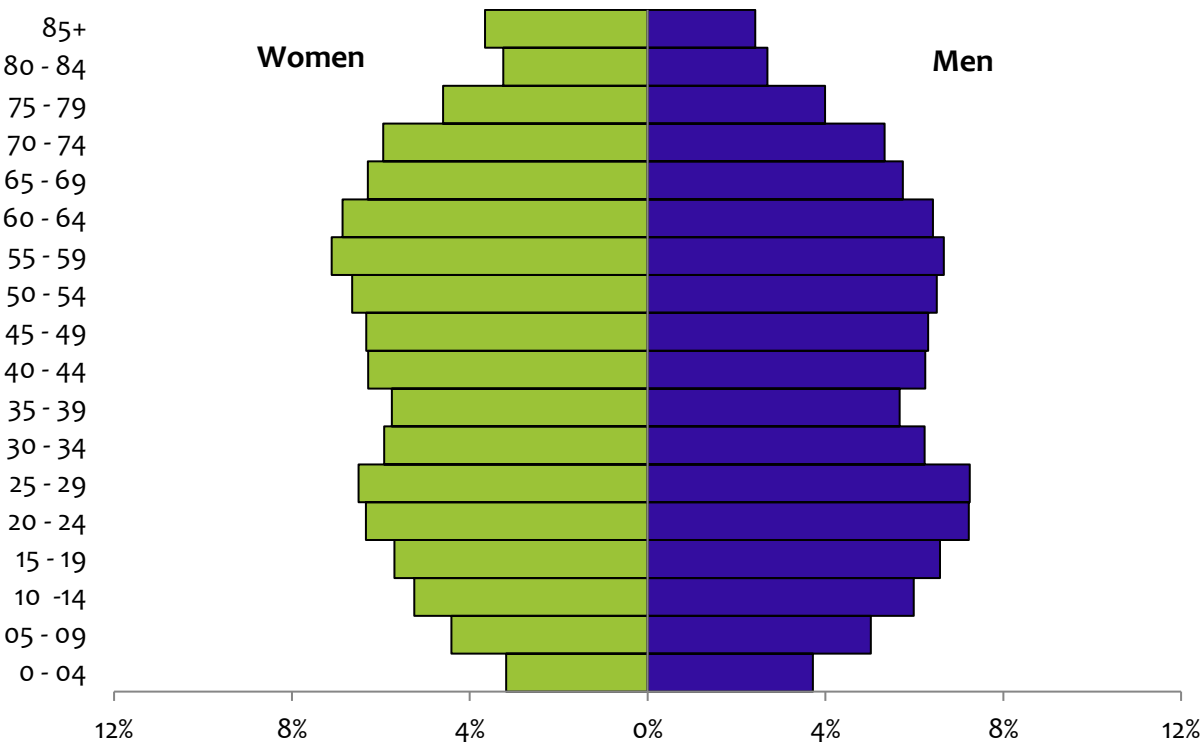


Figure 2. Caribbean Region and Puerto Rico



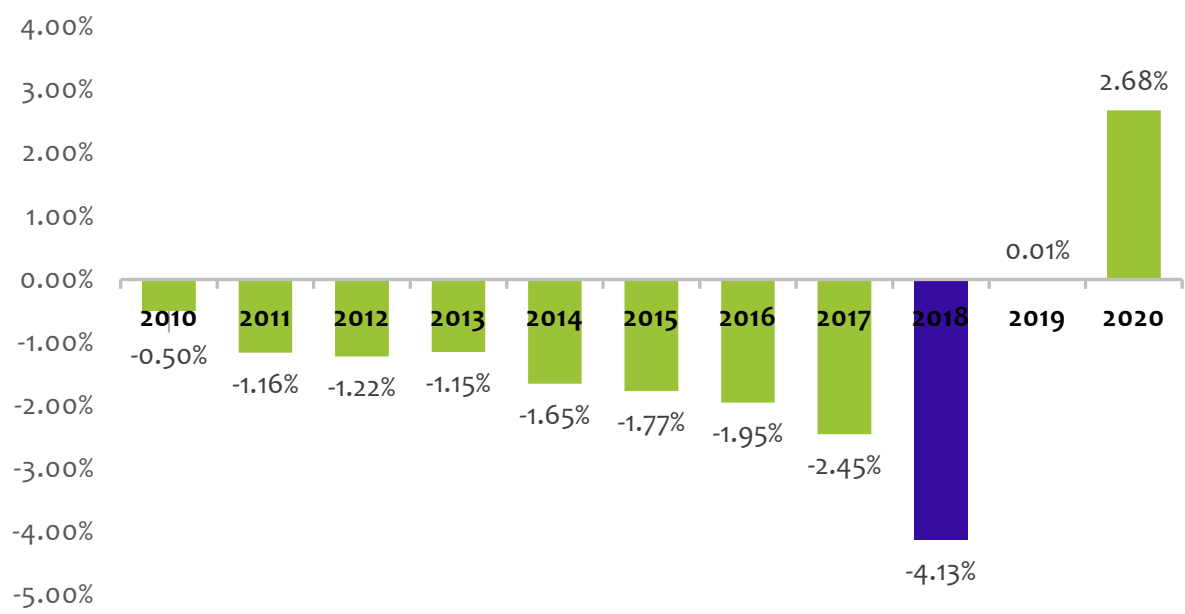
**Figure 3. Map of Puerto Rico's 78 Municipalities**



### Changes in Puerto Rico's Population after Hurricane María

Beginning in 2005, Puerto Rico experienced a gradual decline in population. The estimated population for Puerto Rico as of July 1, 2018 was 3,193,344 which represents a 14.2% decrease from the 2010 Census population of 3,725,789. Hurricanes Irma and María fostered one of the largest emigrations of Puerto Rican residents to the US mainland. According to a report released on September 26, 2019 by the U.S. Census Bureau, an estimated 142,000 people (4.4% of the population) emigrated from Puerto Rico in the wake of Hurricane María, (Glassman, 2019). Figure 4 shows the annual relative changes in population from 2010 to 2020. The large decline in 2018 is directly related to the impact of Hurricanes Irma and Maria. According to U.S. Census estimates, the population as of July 1, 2020 in Puerto Rico is 3,281,538 inhabitants, registering an increase of 2.7% with respect to the population in 2019 (US Census Bureau, 2022).

Figure 4. Population Growth Rate with Respect to Previous Years: Puerto Rico, 2010 - 2020



# VIOLENT DEATHS IN PUERTO RICO 2020

## OVERVIEW

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## Violent Deaths in Puerto Rico – 2020

During 2020, 729 incidents of violent deaths were reported, resulting in 790 victims, mostly from single or multiple homicides (551 victims, 69.8%) and suicides (210, 26.6%). Notably, of the total number of homicides and suicides reported in 2020, eight victims (1.1%) were recorded in four homicide-suicide incidents. Homicide-suicide incidents are those where the aggressor, after killing the victim, commits suicide. In addition, four violent deaths attributed to legal intervention incidents (0.5%) and six violent deaths due to unintentional self-inflicted firearms (0.8%) were documented. Finally, 19 violent deaths with undetermined intent were documented (2.4%). Table 2 shows the distribution of all violent deaths that occurred in 2020 by incident type and sex and Figure 5 illustrates the relative distribution of these violent deaths in males and females, respectively. Approximately 9 out of 10 victims of violent deaths (89.0%) were male.

The crude rate of violent deaths for Puerto Rico in 2020 is 24.1 per 100,000 inhabitants, 45.2 in men and 4.9 in women. The estimated lifetime risk of a violent death (cumulative to age 74) is 1 in every 56 inhabitants, 1 in every 30 males and 1 in every 266 females. The primary mechanism of all violent deaths was the use of firearms. Approximately, seven out of ten fatal incidents (n=535, 73.4%) involved a firearm. Of these deaths, 91.8% occurred in males (n=491) and 8.2% in females (n=44). The majority of violent deaths involving firearms were homicides (n=490, 91.6%) compared to suicides (n=35, 6.5%). Firearms were used in all four homicide-suicide incidents (n=8, 1.0%). Four violent deaths with firearms by legal intervention (0.5%), and six unintentional self-inflicted (0.8%) were documented.

Given that 96.3% of all violent deaths in Puerto Rico in 2020 were homicides (n=551) and suicides (n=210), this report focuses on these two types of violent deaths.

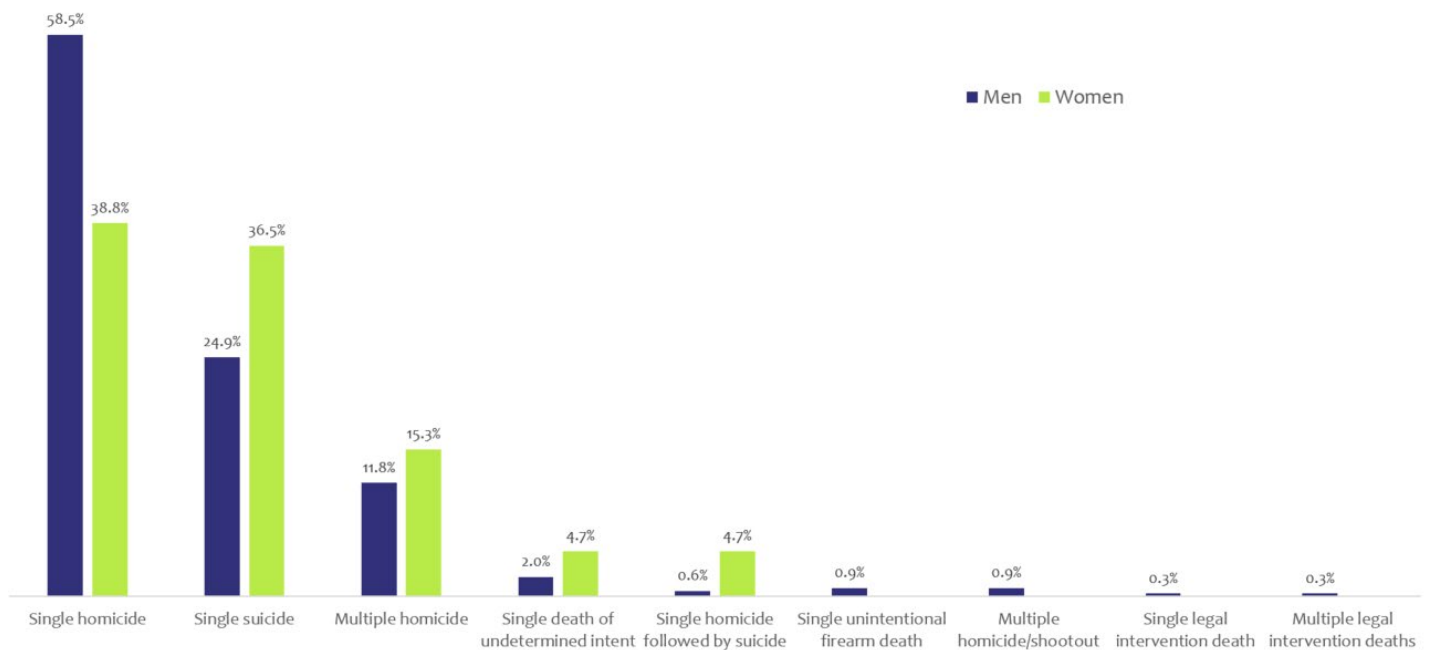
**Table 2. Victims of Violent Deaths by Type of Incident and Sex in Puerto Rico, 2020**

Type of violent death incident	Victim's sex		
	Men	Women	Total
Single homicide	411	33	445*
Multiple homicide	83	13	96
Mutual homicide/shootout	6	0	6
Single homicide followed by suicide	~	~	8
Multiple homicide followed by suicide	0	0	0
Singular suicide	175	31	206
Single legal intervention	~	0	~
Multiple legal intervention deaths	~	0	~
Unintentional firearm death (self-inflicted)	6	0	6
Single death of undetermined intent	14	~	19*
<b>Total</b>	<b>703</b>	<b>85</b>	<b>790</b>

\*One case with undetermined sex.

~ Number is not presented when fewer than six cases are reported to ensure the confidentiality of the information.

**Figure 5. Percent Distribution of Violent Death Incidents by Sex in Puerto Rico, 2020**



VIOLENTS DEATHS IN PUERTO RICO 2020  
HOMICIDES

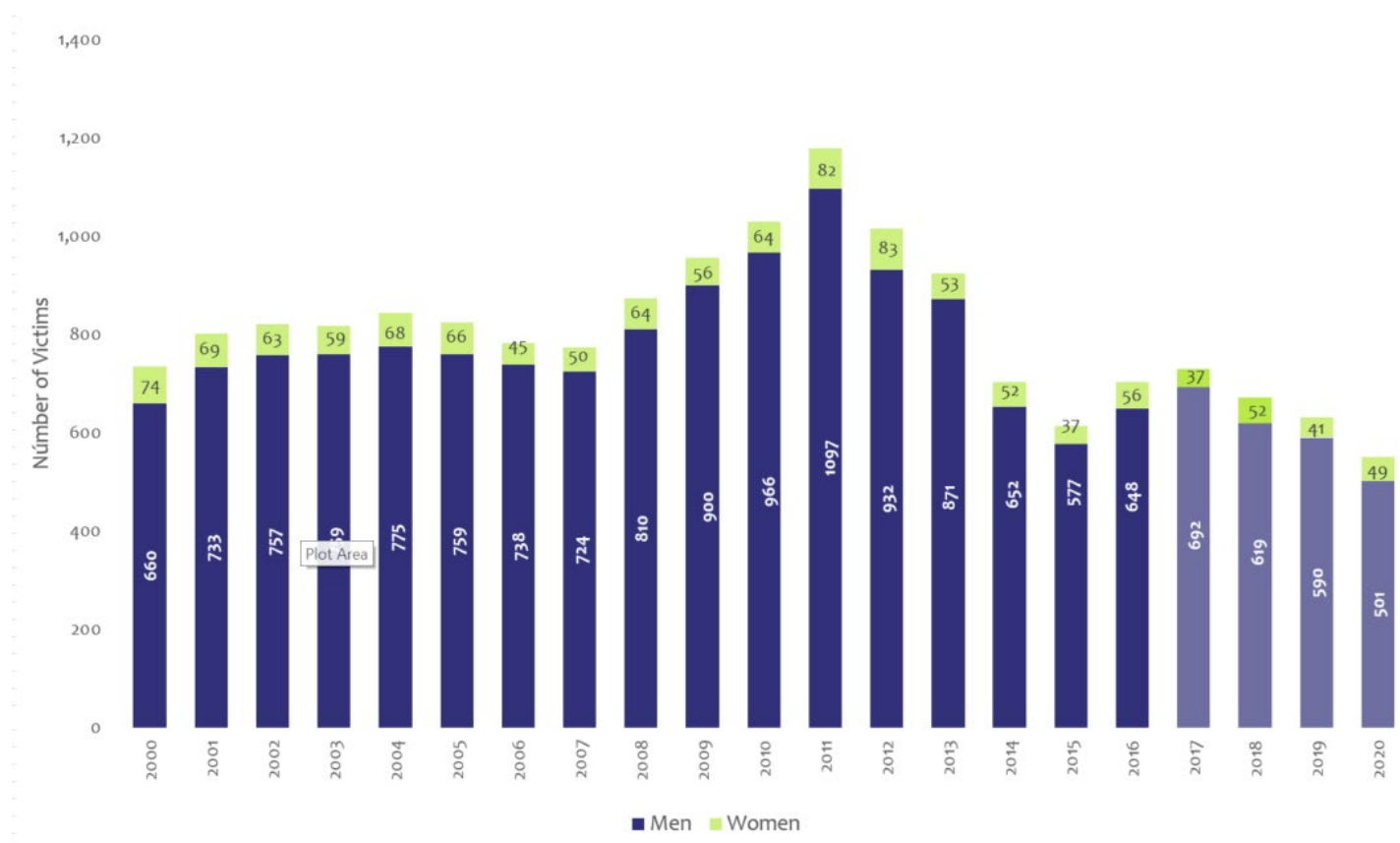
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## Homicides

Of the 790 violent deaths registered in 2020, 551 were homicides (69.7%). Homicides are more frequent in men (n=501, 90.9%) than in women (n=49, 9.1%). This gender profile has been maintained for decades. According to historical data from the Institute of Forensic Sciences, and as presented in Figure 6, between the years 2000 to 2016 and adding the PRVDRS data from 2017 to 2020, a total of 16,986 homicides have been recorded; 15,760 in males (92.8%) and 1,220 in females (7.2%). Gender could not be established for three victims in 2014 and one victim in the years 2011 and 2020.

**Figure 6. Number of Homicides by Sex: Puerto Rico, 2000-2020\***

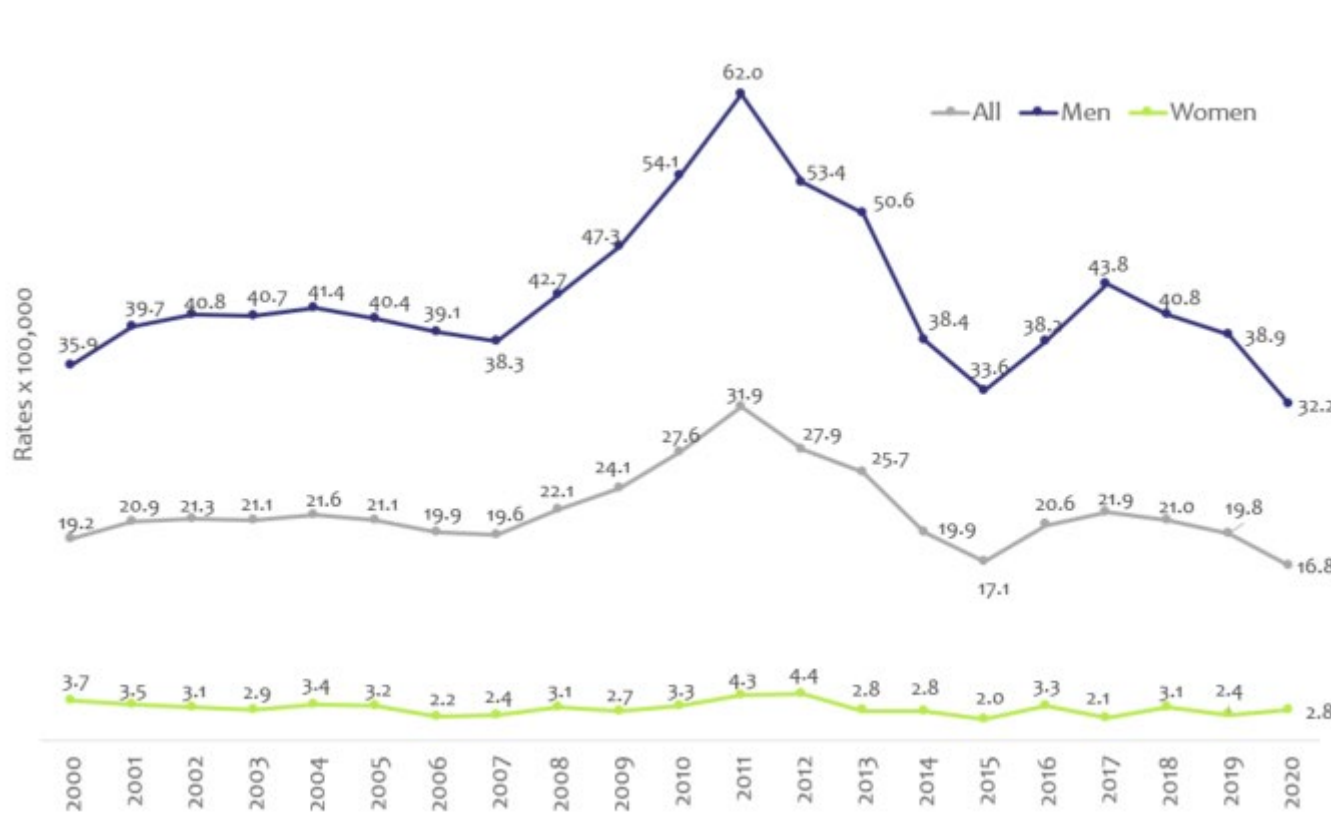


\* 1 homicide in 2011 and 2020, 3 homicides in 2014 have no sex classification.

Figure 7 shows the trend of annual homicide rates for the period from 2000 to 2020. During this period, the highest homicide rates were recorded in 2011 with 31.9 homicides per 100,000 inhabitants; 62.0 per 100,000 males and 4.3 per 100,000 females. The crude female homicide rates during the years 2000 to 2020 have fluctuated between the lowest rate recorded in 2015 (2.0 per 100,000 females) and the highest in 2012 (4.4 per 100,000 females). During 2016 and 2017, an increase in the crude homicide rates in Puerto Rico was observed; however, by 2020, the homicide rate decreased to 16.8 per 100,000

inhabitants (32.2 in males and 2.8 in females). According to this data, the risk of dying from homicide in 2020 in men was approximately 12 times higher than the risk in women (RR=11.5). Similar results were obtained using age-adjusted rates.

**Figure 7. Homicide Crude Rates by Sex: Puerto Rico, 2000-2020**



## Demographic Profile of Homicides

### Age and sex

To compare Puerto Rico with other U.S. populations and other countries, rates were adjusted for age and sex using the U.S. standard population (2000) and the world standard population (2000). Table 3 shows the number, homicide mortality rates for Puerto Rico in 2020, by sex and age groups and includes the calculation of the cumulative rate and the approximation of the cumulative risk up to 74 years of life (lifetime risk). This statistic does not consider the risk for other causes of death and its interpretation is easy and comparable between populations, even with different age structures. The highest homicide rates were recorded in 2011, where the cumulative risk was 1 in 42 inhabitants, 1 in 22 males and 1 in 315 females. In 2020, the cumulative risk decreased to 1 in 77 persons; 1 in 42 males and 1 in 442 females. Age-specific rates are important for identifying age groups at higher risk of dying from homicide. Figure

8 shows the specific rates by age group and sex. The contrast in homicide rates by sex in the 15-39 age groups is striking (framed in Figure 8). In these age groups, 72.7% of all homicides occur in males and 61.2% in females. At the end of Table 3, the higher risk of dying from homicide in males relative to the risk in females between 15 and 39 years of age is shown.

**Table 3. Number and Rates of Homicides by Age and Sex: Puerto Rico, 2020**

Age Group	Number of cases			Rates per 100,000*		
	Sex		Total	Sex		Total
	Men	Women		Men	Women	
0-4	~	~	~	~	~	~
5-9	~	~	~	~	~	~
10-14	~	0	~	~	0	~
15-19	29	~	34	28.3	~	16.9
20-24	96	8	104	85.3	7.3	46.9
25-29	96	6	102	85.1	5.3	45.3
30-34	80	6	86	82.5	5.9	43.2
35-39	63	~	68	71.1	~	36.1
40-44	45	~	50	46.4	~	24.3
45-49	35	~	40	35.7	~	19.3
50-54	17	0	17	16.8	0	7.9
55-59	11	~	13	10.6	~	5.7
60-64	~	~	6	~	~	2.8
65-69	~	~	6	~	~	3
70-74	~	~	6	~	~	3.2
75-79	~	0	~	~	0	~
80-84	~	~	~	~	~	~
85+	~	~	~	~	~	~
Unknown	3	0	4**			
Total	501	49	551	32.2	2.8	16.8
Age-adjusted rate (US 2000)				34.3	3.2	18.3
Age-adjusted rate (World, 2000)				35.5	3.3	19.1
Cumulative rate to 74 years of age (%)				2.43	0.23	1.3
Cumulative risk (1 in...)				42	442	77
Relative Risk Men: Women by age-groups:						
RR	15-19		20-24	25-29	30-34	35-39
	5.5		11.7	16.1	14	14.2

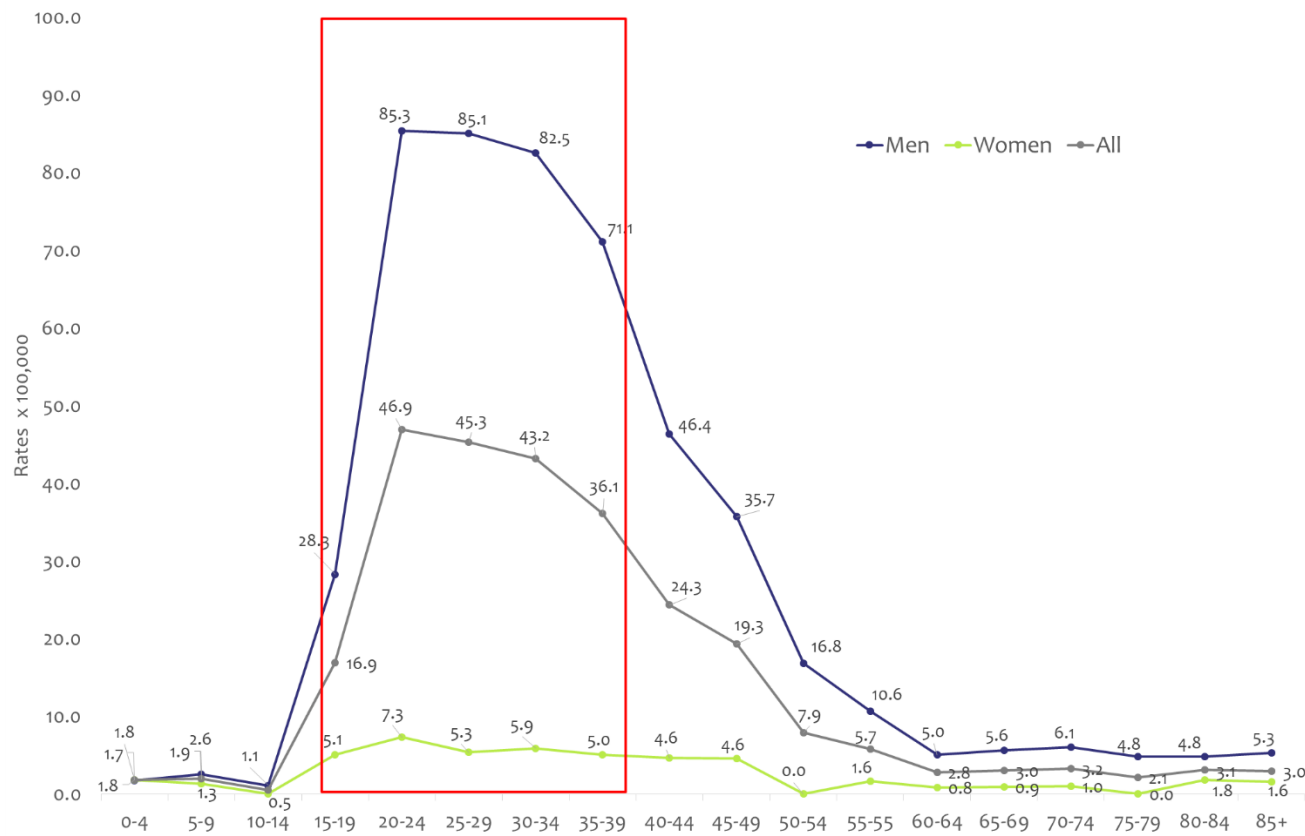
~Number and rates are not presented when fewer than six cases are reported to ensure the confidentiality of the information.

\*Rates calculated with fewer than 20 observations are unreliable and should be interpreted with caution.

\*\*One case with age and sex unknown. In addition, there were six transgender victims reported.

Table 4 shows the age-adjusted homicide rates for men and women in Puerto Rico and compares them with White, African American, Hispanic, and Native American populations in the U.S. (National Center for Injury Prevention and Control, 2022). The risk of dying from homicide for men in Puerto Rico was the second highest of all populations in comparison. Men in Puerto Rico had a risk 7.6 times higher than that of white men in the US. This risk was lower than that of the population of African American men, whose risk of dying from homicide was the highest, 11.9 times higher than that of white men in the United States. The risk of dying from homicide in women in Puerto Rico was 1.6 times higher than that of white and Hispanic women in the United States. However, this risk was lower than that of Native American (3.1) and African American (4.0) women. Hispanic women had the same risk as white women in the US (1.1).

Figure 8. Homicide Rates by Age-group and Sex: Puerto Rico, 2020



**Table 4. Age-adjusted Homicide Rates (US 2000): Puerto Rico and US, 2020**

**Homicides**

**Men**

<b>Race   Ethnicity</b>	<b>No. of Deaths</b>	<b>Population</b>	<b>Crude Rate</b>	<b>Age-adjusted rate</b>	<b>RR</b>
White, Non-Hispanic	4,282	98,866,799	4.33	4.52	1.0
Hispanic	3,277	30,922,535	10.6	10.06	2.2
African American, Non-Hispanic	11,785	20,904,808	56.38	53.71	11.9
American Indian, Non-Hispanic	300	1,354,955	22.14	22.46	5.0
Puerto Rico, Hispanic all races	501	1,555,294	32.21	34.26	7.6

**Women**

<b>Race   Ethnicity</b>	<b>No. of Deaths</b>	<b>Population</b>	<b>CrudeRate</b>	<b>Age-adjusted rate</b>	<b>RR</b>
White, Non-Hispanic	1,974	101,632,584	1.94	1.99	1.0
Hispanic	643	30,390,344	2.12	2.09	1.1
African American, Non-Hispanic	1,809	22,715,825	7.96	7.99	4.0
American Indian, Non-Hispanic	82	1,411,437	5.81	6.08	3.1
Puerto Rico, Hispanic all races	49	1,726,244	2.84	3.20	1.6

## Education

Table 5 presents the highest level of education attained by homicide victims, broken down by sex. The majority of homicide victims did not complete high school, or manage to graduate from high school or obtain a high school equivalency diploma (GED). These basic levels of education constituted 75.5% of all homicide victims. Figure 9 shows the percentage distribution of education of these victims by sex. 76.8% of males and 63.3% of females did not complete more than a high school education. Some 8.2% of male and 6.1% of female homicide victims had no information on the level of education obtained.

## Current Occupation

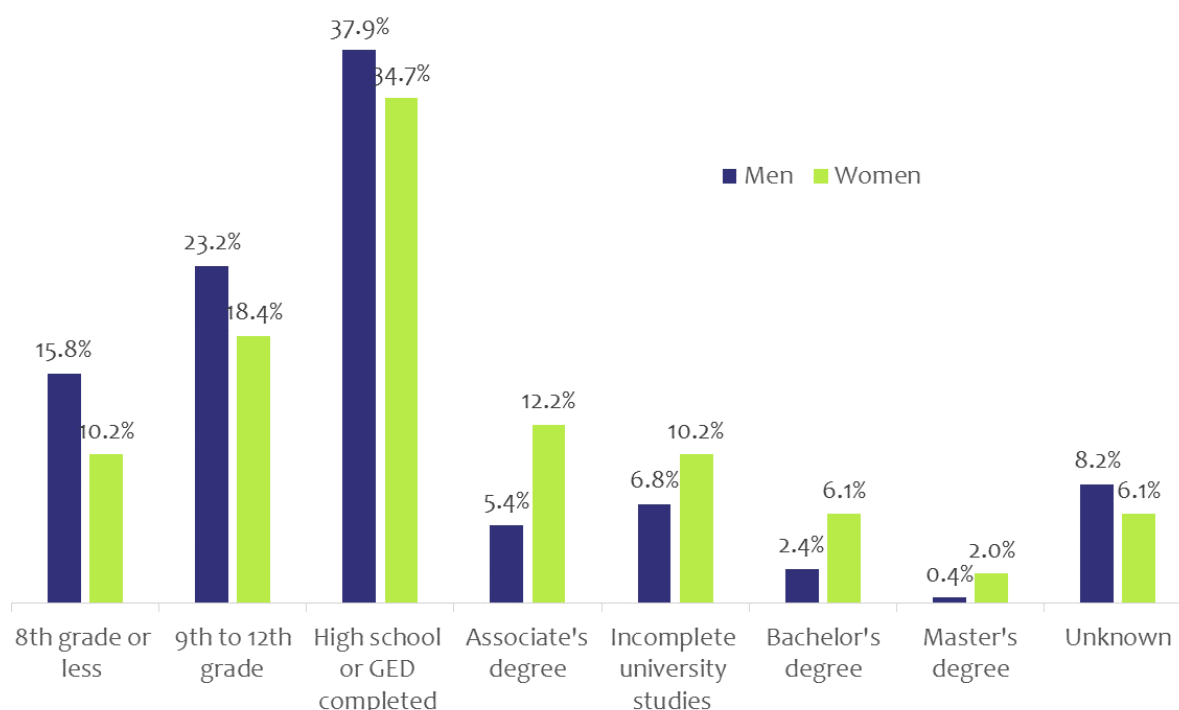
In 39.0% of male and 26.8% of female homicide victims, current occupation information was unknown. The proportion of employed victims in men (46.8%) was similar to that of women (46.7%). 26.2% of the men and 3.3% of the women had never worked and 36.7% of the women identified themselves as homemakers.

**Table 5. Highest Educational Level Attained by Homicide Victims: Puerto Rico, 2020**

Highest educational level attained	Sex of the victim		
	Men	Women	Total
8th grade or less	79	5	84
9th to 12th grade, no diploma	116	9	125
High School graduate or GED completed	190	17	207
College credits, but no degree	27	6	33
Associate's degree	34	5	39
Bachelor's degree	12	3	15
Master's degree	2	1	3
Unknown	41	3	44
<b>Total</b>	<b>501</b>	<b>49</b>	<b>550*</b>

\*One victim with sex unknown

**Figure 9. Highest Educational Level Attained by Homicide Victims: Puerto Rico, 2020**



## Mechanism

Historically, the use of firearms has been the primary mechanism of homicides in Puerto Rico (Zavala, et al; 2012). Data from the Institute of Forensic Sciences from 2000 to 2016 and PRVDRS data from 2017 onwards reflect that the use of firearms to inflict fatal injuries increased from 83.8% in men and 54.1% in women in 2000, to 89.6% in men and 83.7% in women in 2020. The proportion of female homicides with firearms in 2020 is the highest since 2000. Table 6 shows all mechanisms used in homicides by sex by 2020.

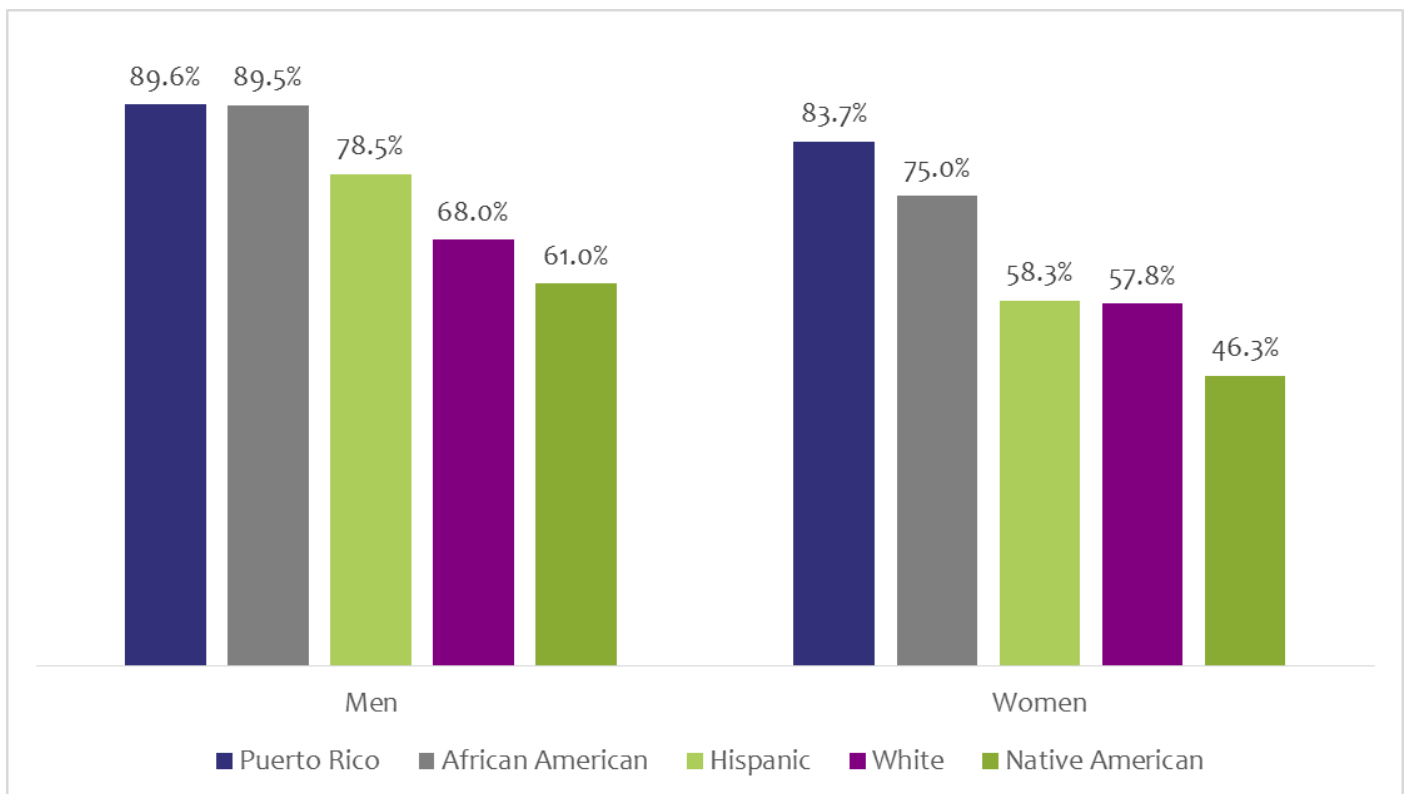
Comparing 2020 homicides with firearms in Puerto Rico and the U.S. populations described above shows that Puerto Rico had the highest proportion in males (89.6%) and females (83.7%). Figure 10 shows the proportion of firearm homicides for the four racial groups in the US compared to Puerto Rico (National Center for Injury Prevention and Control, 2022).

**Table 6. Primary Weapon Type or Mechanism Used to Inflict the Fatal Injury: Puerto Rico, 2020**

Mechanism	Sex of victim		
	Men	Women	Total
Firearm	449 (89.6%)	41 (83.7%)	490 (88.9%)
Sharp instrument	19 (3.8%)	3 (6.1%)	22 (4.0%)
Blunt instrument	9 (1.8%)	3 (6.1%)	12 (2.2%)
Hanging, strangulation, asphyxiation	3 (0.6%)	1 (2.0%)	4 (0.7%)
Personal weapon (hands, fists, etc.)	11 (2.2%)	0 (0%)	11 (2.0%)
Fall	2 (0.4%)	0 (0%)	2 (0.4%)
Fire or burns	3 (0.6%)	0 (0%)	4* (0.7%)
Other (ej. motor vehicle, shaken baby syndrome)	1 (0.2%)	1 (2.0%)	2 (0.4%)
Unknown	4 (0.8%)	0 (0%)	4 (0.7%)
Total	501 (100%)	49 (100%)	551 (100%)

\* One victim with sex unknown.

**Figure 10. Proportion of Homicides by Firearms: Puerto Rico and US populations, 2020**





More recent similar data at the international level indicate that in 2020, globally, 40.0% of homicides involved the use of firearms. In the Latin American and Caribbean regions, Puerto Rico (91.7%), Venezuela (85.3%) and Guatemala (82.1%) led in the use of firearms in homicides. Canada (30.8%), Grenada (11.7%) and Cuba (4.9%) had the lowest levels of firearm use in homicides (GBD, 2019).

According to statistics provided by the World Bank, the average homicide rate worldwide in 2020 was 5.6 per 100,000 inhabitants, while the average in Latin America and the Caribbean was 20.1 per 100,000 inhabitants. Jamaica, Honduras and St. Vincent and the Grenadines had the highest homicide rates of 47.3, 35.8 and 31.5 per 100,000 inhabitants, respectively, while Puerto Rico with a rate of 17.0 is ranked seventeenth out of 36 countries in the region with available data (World Bank, 2020).

Because of the high proportion of firearm homicides, firearm homicide rates were calculated and compared to the four populations in the US described above. Table 7 shows the age- and sex-adjusted firearm homicide rates (National Center for Injury Prevention and Control, 2022). The risk of being a victim of firearm homicide for Puerto Rican men is approximately 10 times the risk for white men in the United States. This risk is lower than that of African-American men with a risk 15 times higher than that of white men in the US. The firearm homicide rate for Puerto Rican women is similar to or lower than that of U.S. female populations except that the risk for African-American women is 5.1 times the risk of being killed by firearms compared to U.S. white women. Puerto Rican women have 2.3 times the risk of dying from firearms compared to the white female population.

Figure 11 shows the age group-specific rates of male firearm homicides for Puerto Rico and the four U.S. populations described above. The male population in Puerto Rico between the ages of 15 to 44 years has a higher risk of homicide death than any other population in the United States except the African American population. For ages 20 to 34, homicide rates were approximately 80.0 per 100,000 males in Puerto Rico. This elevated risk of homicide in young men is the same pattern observed primarily in Latin America and the Caribbean (IHME, 2018).

**Table 7. Age-adjusted Homicide Rates (US 2000): Puerto Rico and US Populations, 2020**

## Homicides

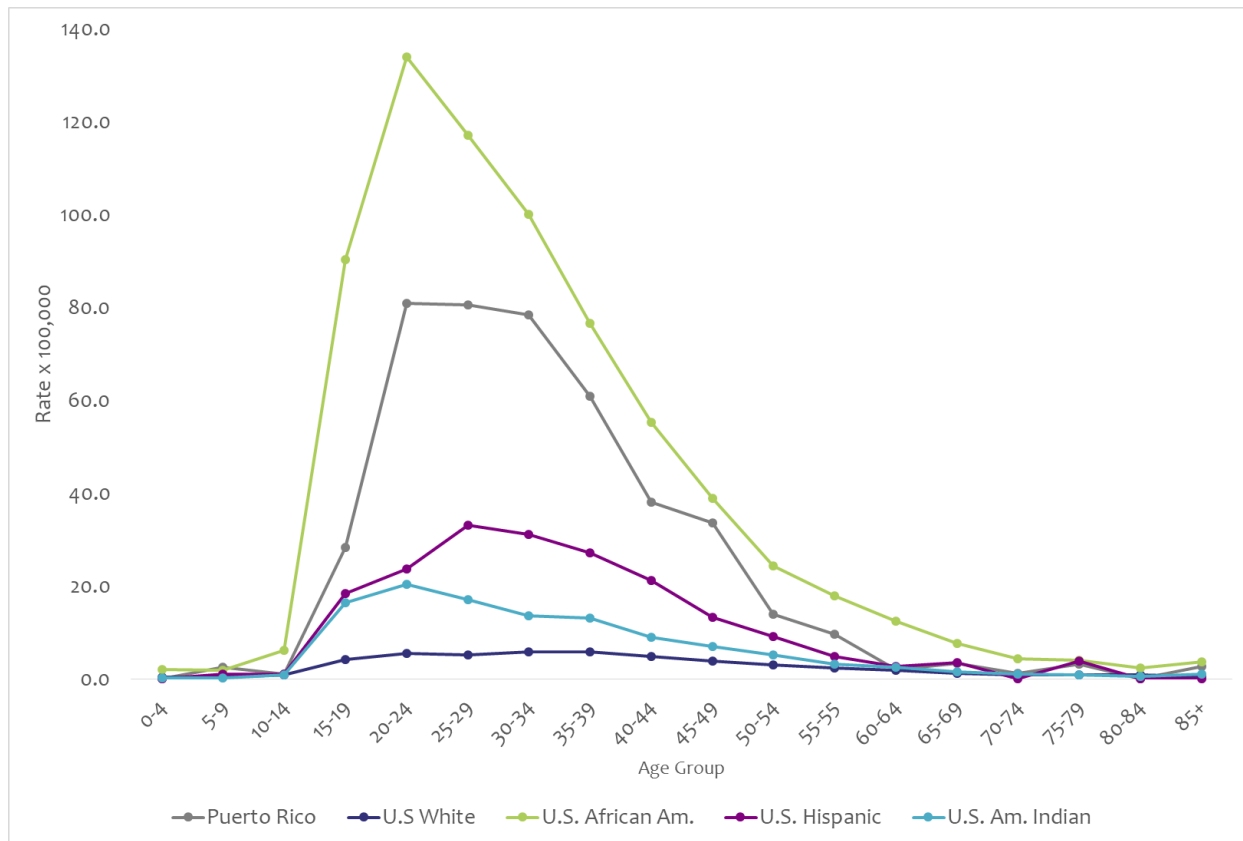
### Men

Race   Ethnicity	No. of Deaths	Population	Crude Rate	Age-adjusted Rate	RR
White, Non-Hispanic	2,911	98,866,799	2.94	3.14	1.0
Hispanic	2,572	30,922,535	8.32	7.71	2.5
African American Non-Hispanic	10,548	20,904,808	50.46	47.81	15.2
American Indian, Non-Hispanic	183	1,354,955	13.51	13.40	4.3
Puerto Rico, Hispanic, all races	449	1,555,294	28.87	30.75	9.8

### Women

Race   Ethnicity	No. of Deaths	Population	Crude Rate	Age-adjusted Rate	RR
White, Non-Hispanic	1,141	101,632,584	1.12	1.17	1.0
Hispanic	375	30,390,344	1.23	1.20	1.0
African American Non-Hispanic	1,356	22,715,825	5.97	6.00	5.1
American Indian, Non-Hispanic	38	1,411,437	2.69	2.80	2.4
Puerto Rico, Hispanic all races	41	1,726,244	2.38	2.72	2.3

**Figure 11. Age-specific Firearm Homicide Rates in Men: Puerto Rico and U.S. Populations, 2020**



## Circumstances

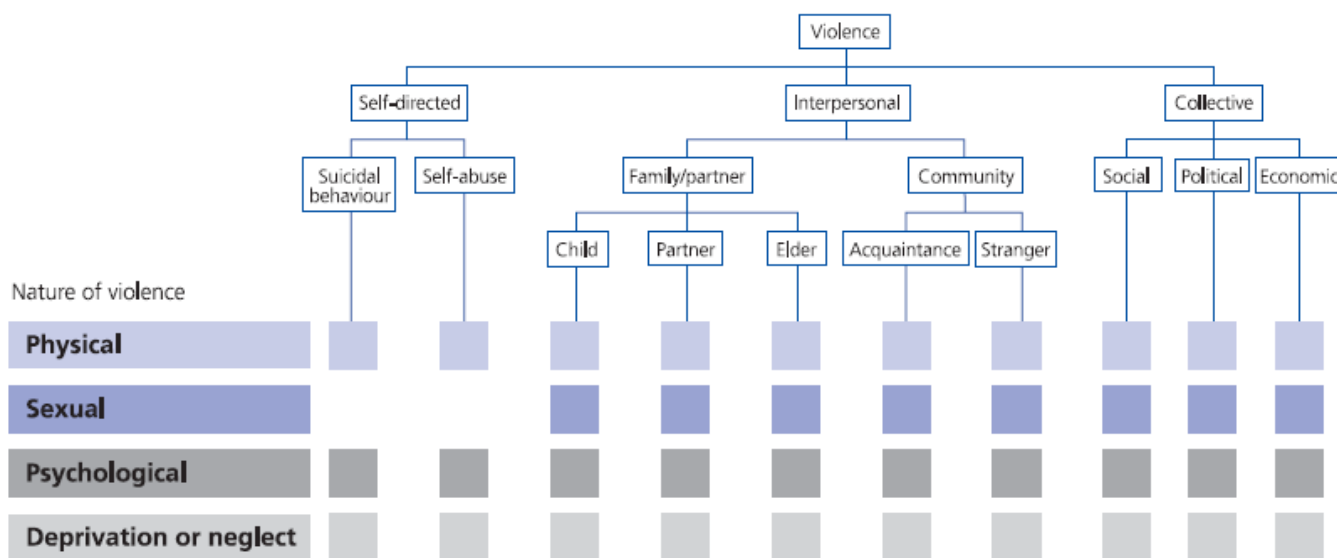
As a result of the criminal and medicolegal investigation of homicide incidents, multiple circumstances related to the crime were identified. Information on the circumstances in which homicides occur includes the interpersonal relationships between victims and suspects, the circumstances of the crime, and circumstances related to the mental health of the victims, among others.

In this edition of the PRVDRS annual report, a differentiation of homicides occurring in the community is presented to more adequately distinguish the context between community violence and collective violence. Figure 12 illustrates the classification of violence in its different forms adopted by the World Health Organization (WHO) and used worldwide. This classification links violence to the intention that precipitates it and distinguishes it into three categories: self-inflicted violence (suicides), interpersonal violence and collective violence. Interpersonal violence includes violence in a family or intimate partner setting and community violence is defined as "violence that

occurs between unrelated people who may or may not know each other and usually occurs outside the home" (Krug, E., Dahlberg, L., & Mercy, J., 2002). Finally, collective violence is defined by the possible motives or reasons for the use of violence including social, political and economic reasons.

Unlike community violence, collective violence can be perpetrated by the State or by organized groups of individuals, including criminal groups, as is the case in Puerto Rico with homicides perpetrated by individuals belonging to groups involved in the illegal drug trade. Documentation of the circumstances of these fatal incidents of collective violence in Puerto Rico includes drug trafficking in criminal groups. The context of these homicides is organized crime and it is important to differentiate them from fatal incidents that occur in the community between individuals who are not associated with criminal groups and that occur in other circumstances such as street fights or confrontations between individuals in public or private places such as, for example, an argument in a bar that gets out of control and precipitates a homicide with a firearm.

**Figure 12. Typology of Violence – World Health Organization**



## Interpersonal Violence

Interpersonal violence occurs in two circumstances: family violence and community violence. Family violence (violence between family members) includes child or elder abuse and intimate partner violence (Krug, E., Dahlberg, L., & Mercy, J., 2002).

## Family Violence (n=68)

In 2020, 68 fatal victims of family violence were reported. Most of these cases were related to violence in an intimate partner or ex-partner setting (17 cases, 25.0%) and 31 additional victims related to intimate partners or third parties present in an intimate partner conflict (45.6%). Violence between family members (20 cases, 29.4%) occurred mainly during an argument (50.0%).

## Intimate Partner Violence (n=17)

The PRVDRS uses the World Health Organization's definition of intimate partner violence. This definition is widely used internationally to refer to violence perpetrated by spouses, partners, or friends involved in a current or past close personal or sexual relationship. Intimate partner violence includes not only violence against women, but also violence by women against men and between same-sex partners (Krug, Dahlberg & Mercy, 2002). The United Nations defines femicide/feminicide as the gender-related killing of women that can take many forms including intimate partner homicide (UN, 2012), recognizing that femicides/feminicides are an extreme manifestation of violence against women perpetrated or condoned by public and private actors (Grzyb et al., 2018).

The majority of the victims of intimate partner violence were female (n= 13, 76.5%) fatally assaulted by their male ex-partner or ex-spouse (61.5%) or current partner or spouse (38.5%). In addition, three of the female victims of intimate partner violence were incidents of homicide-suicide (23.1%). These femicides/feminicides occurred primarily during an argument (42.9%) or due to jealousy over a current or former intimate partner relationship (28.6%). In the case of the two male intimate partner homicides, the relationship between the suspect and the victim was female-male, where both victims were in a current intimate partner relationship.

The two main mechanisms of all intimate partner homicides were firearms (64.7%) and a sharp instrument (23.5%). In nine of the 13 femicides/feminicides a firearm was used (69.2%) and in two femicides/feminicides a sharp instrument was used (15.4%). One femicide/feminicide was by a blunt weapon and another by asphyxiation. A firearm was used in two of the four male victims of intimate partner violence and a sharp object in the other two.

Within the context of intimate partner violence, there were 31 deaths of a third person who was directly linked to a current or past intimate relationship (e.g., the current partner of the suspect's ex-partner, the ex-partner of the suspect's current partner, friend or acquaintance of the victim, bystander, etc.).

In these cases, the majority of victims were male (90.3%) and the use of a firearm predominated (93.6%).

## Community Violence

Multiple circumstances were documented in 204 of the 551 homicides in a community violence setting, accounting for 37.0% of all homicides (excludes four deaths by legal intervention and 19 deaths of unknown intent). The most common circumstances were arguments (n=41, 20.1%) and robbery (n=22, 10.8%). In addition, 21.1% (43 victims) of the homicides occurred in drive-by shootings. Of the 43 homicides that occurred in drive-by shootings, seven victims were recorded in multiple homicide incidents (16.3%) and five were innocent victims (11.6%). Three homicides were considered hate crimes (1.5%).

Fatal incidents of community violence occur primarily in males (n=185, 90.7%), between 15 to 39 years of age (60.0%) and with an education level of high school graduate or less (67.0%). For female victims of community violence (n=18, 8.8%), the majority were between 15 to 39 years of age (66.7%), and 44.4% of victims had an education level of high school graduate or less.

The use of a firearm was the primary mechanism of death in community violence incidents (n=171, 83.8%). A firearm was used in 83.8% of male homicides and a firearm was used in 88.9% of these female deaths.

## Collective Violence

In Puerto Rico, 276 of the 551 homicides (50.1%) registered in 2020 occurred in an environment of collective violence, related to criminal groups involved in the trafficking of illicit drugs. Of the 276 homicides classified as collective violence, 216 were related to drug trafficking (78.3%) or organized crime (n=257, 93.1%). In addition, 68 victims involved in organized crime or drug trafficking groups were killed in drive-by shootings (24.6%). In these incidents there were 26 victims in multiple homicides (38.2%), of which 14 (20.6%) were innocent victims.

Victims of mob violence are mostly male (96%), the majority between 15 and 39 years of age (83.4%) and with an education level of high school graduate or less (80.6%). Firearms were used in virtually all homicides related to organized crime and/or drug trafficking (97.8%). The rest of the homicides in a context of mob violence were related to arguments, quarrels, revenge, physical fights or robbery.

Table 8 summarizes the contrasting demographic characteristics and circumstances of victims of community violence and collective violence. In both classifications of violence, the majority of victims are young men between 15-39 years of age. However, a greater proportion of victims of collective violence had no more than a high school graduate education (82.6%) compared to victims of community violence (64.7%). Not a single victim of mob violence had a high school or graduate degree compared to victims of community violence (7.3%). The proportion of victims of fatal firearms injuries in both types of violence is extremely high (83.8% community violence, 97.5% collective violence, and 97.5% collective violence).

**Table 8. Demographic Profile and Circumstances of Community and Collective Violence**

Victim's sociodemographic profile and incident circumstances	Type of Violence	
	Community Violence n=204	Collective Violence n=276
<b>Demographics</b>		
<i>Sex*</i>		
Men	185 (90.7%)	265 (96.1%)
Women	18 (9.3%)	11 (3.9%)
<i>Victims in 15-39 age-group</i>		
Men	111 (60.0%)	221 (83.4%)
Women	11 (61.1%)	9 (81.8%)
<i>Educational level**</i>		
High School or less	132 (64.7%)	228 (82.6%)
Male victim	124 (67.0%)	221 (80.1%)
Female victim	8 (44.4%)	7 (63.6%)
Associate degree	21 (10.3%)	13 (4.7%)
Male victim	19 (10.3%)	11 (4.1%)
Female victim	2 (11.1%)	2 (18.2%)
Bachelor's/Post-graduate	15 (7.3%)	0
Male victim	12 (6.5%)	0
Female victim	3 (16.7%)	0
Unknown	19 (9.3%)	22 (8.0%)
<i>Mechanism of death</i>		
Firearms	171 (83.8%)	269 (97.5%)
Male victim	155 (83.8%)	258 (97.4%)
Female victim	16 (88.9%)	11 (100%)
<i>Incident Circumstances</i>		
Multiple homicide	30 (14.7%)	59 (21.4%)
Fight between two people	13 (6.4%)	2 (0.7%)
Argument	41 (20.1%)	17 (6.2%)
Innocent victim	12 (5.9%)	23 (8.3%)
Vehicle shootout	43 (21.1%)	68 (24.6%)
Drug trafficking	0	216 (78.3%)
Associated to criminal organization	0	257 (93.1%)
Robbery	22 (10.9%)	7 (2.5%)

\* one victim of community violence with sex unknown

\*\*19 cases of community violence and 22 cases of collective violence with no information

According to a Drug Enforcement Administration (DEA) report, Puerto Rico is the jurisdiction with the fourth highest volume of cocaine seizures in 2020. Puerto Rico and the Virgin Islands have been designated as High Intensity Drug Trafficking Areas (HIDTA) for being the main maritime transshipment points for cocaine in the Caribbean (DEA 2020). The DEA has established a "strong



connection" between violent crime, illicit drug trafficking, gang activity, and possession of illicit weapons, the DEA has established a "strong connection" between violent crime, illicit drug trafficking, gang activity, and possession of illicit weapons (DEA, 2017).

## **Firearms and Ammunition**

Access to firearms is a determining factor in the homicides that occur in Puerto Rico. In 83.8% of the victims of community violence and 97.5% of the victims of collective violence died from firearm injuries. Restrictions to legally access a firearm in Puerto Rico continue to be stricter than in many U.S. jurisdictions (Puerto Rico Firearms Statutes and Codes, ATF). However, in neighboring states such as Florida, the purchase of firearms is less restricted, so the accessibility of these weapons in Florida extends to Puerto Rico (Zavala et al., 2012). The 2020 report of the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF, 2020) Firearms Tracing System provides detailed information on 450 firearms selected for tracing in Puerto Rico. The majority of these weapons were pistols or revolvers (86.9%) and more than half of these weapons were .40, 9mm and .45 caliber (72.4%).

The ATF report described that the largest number of firearms submitted for tracing were mostly guns confiscated for illegal possession (n=158, 35.1%), under investigation (n=83, 18.4%) or gun use violation (n=66, 14.7%). Two firearms traced were involved in a homicide. The latter data reflects the fact that in the vast majority of homicide scenes firearms are not usually recovered. However, numerous casings of different calibers are recovered at these scenes, which are sent to the Institute of Forensic Sciences for analysis through the National Integrated Ballistics Information Network (NIBIN) and may eventually be associated with other homicides or different types of crime. Finally, ATF was able to identify the state of origin of the firearm in 334 of the 450 firearms analyzed (74.2%). The primary origin of the 334 firearms traced by ATF were the states of Florida (52.4%), Puerto Rico (13.2%), and Texas (10.5%) (ATF, 2020).

Data on the number of firearms in legal or illegal possession in Puerto Rico is difficult to obtain. According to a Small Arms Survey report, in 2017 it was estimated that 422,00 firearms were in legal (registered by the Police) and illegal possession in Puerto Rico; that is, approximately 12 out of every 100 people owned a firearm (Small Arms Survey, 2018). This number contrasts with the large number of ammunition available annually in Puerto Rico. According to Puerto Rico Foreign Trade statistics, in 2020, 14,037,066 cartridges with projectiles for shotguns, rifles or pistols were imported (PR Planning Board, 2020), an increase of 15.3% of the amount of ammunition imported in 2019.

## Mental Health Circumstances

Most homicide incidents had no available or documented mental health history information. Table 9 shows the available mental health history documented in homicide victims. The percentage of each circumstance is in relation to the total number of homicides. The most documented circumstance was a non-alcohol substance abuse problem (25.3%). In addition, 6.4% of victims were documented as having a current mental health problem, and 3.1% of victims were perceived by others as depressed.

**Table 9. Mental Health Circumstances in Victims of Homicide: Puerto Rico, 2020**

Mental health circumstances in homicides (n=550)	Victim's sex		
	Men n=501	Women n=49	Total n=550*
Victim had a non-alcohol related substance abuse problem	134 26.8%	5 10.2%	139 25.3%
Victim had been identified as currently having a mental health problem	31 6.2%	4 8.2%	35 6.4%
Victim was perceived by self or others to be depressed at time of the injury	14 2.8%	3 6.1%	17 3.1%
Victim had alcohol dependence or alcohol abuse problem	11 2.2%	1 2.0%	12 2.2%
History of ever being treated for a mental health or substance abuse problem	17 3.4%	2 4.1%	19 3.5%
Currently in treatment for mental health problem or substance abuse	10 2.0%	1 2.0%	11 2.0%

\* Excludes one homicide with undetermined sex

VIOLENT DEATHS IN PUERTO RICO 2020  
SUICIDES

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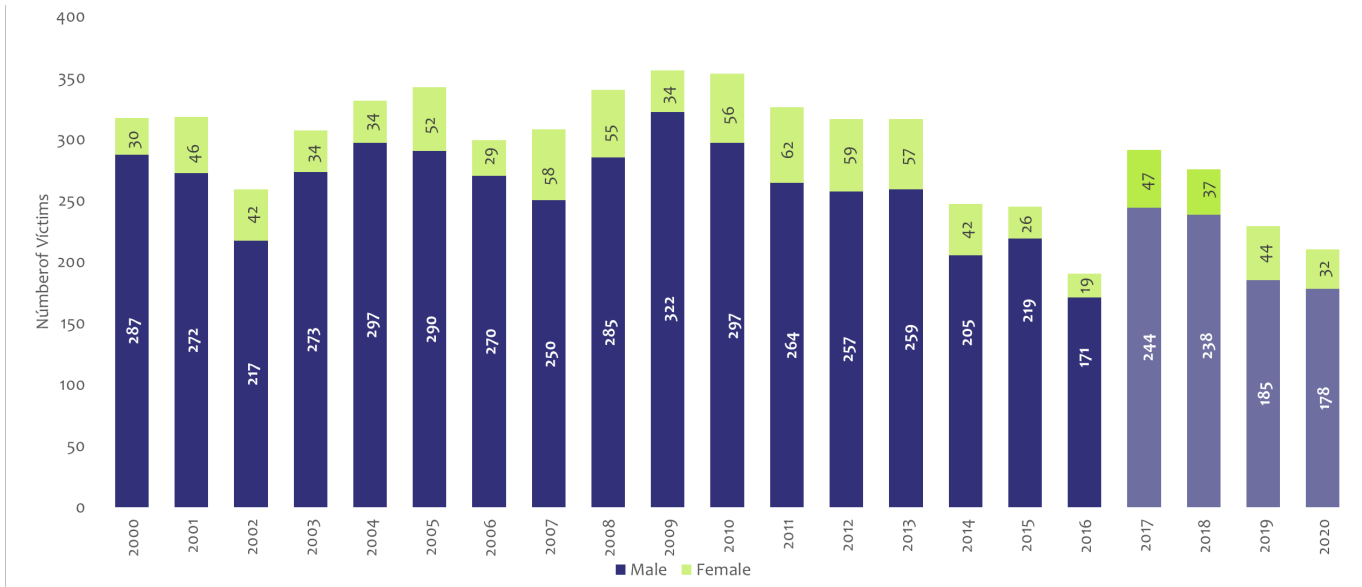
## Suicides

The health care approach to suicide prevention recognizes that multiple levels of influence on a suicide victim's life must be considered in addition to personal factors, including family, community, and societal factors (Krug, Dahlberg & Mercy, 2002). PRVDRS data provide information on the circumstances of deaths which, in the case of suicides, includes data on the individual's mental health and other factors that could precipitate a fatal self-injury.

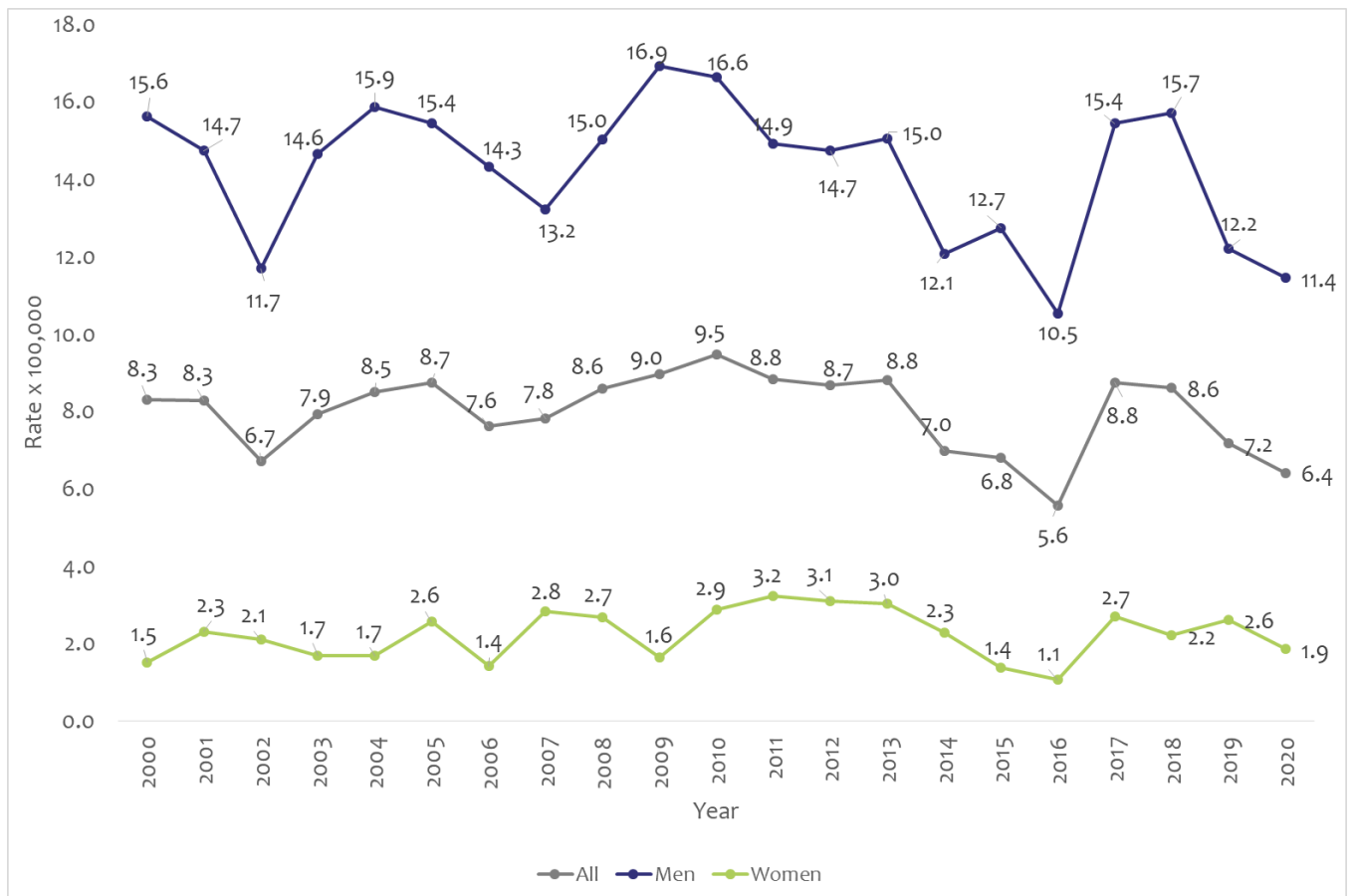
Figure 13 shows historical data from the Institute of Forensic Sciences from 2000 to 2016 and PRVDRS data from 2017 to 2020. In this 21-year period, 6,175 suicides were reported. In Puerto Rico, the frequency of suicides is much lower than that of homicides, however, as with homicides, suicides are more frequent in males (5,280, 85.5%) than in females (895, 14.5%).

Figure 14 shows crude suicide rates by sex for the period 2000 to 2020. In this period, the highest rates for males and females were recorded in different years. In 2009, the crude suicide rate was 16.9 per 100,000 males (1 of 77 males) and 1.6 for females (1 of 777 females). In 2011, the highest female suicide rate was observed, 3.2 per 100,000 females (1 of 399 females) compared to 14.9 for males (1 of 88 males). Overall, 2020 is the second consecutive year of declining suicide rates in Puerto Rico. In 2020, the crude suicide rate was 6.4 per 100,000 inhabitants, 11.4 for males (1 of 124 males) and 1.9 for females (1 of 765 females). The risk of suicide in men was six times higher than the risk of suicide in women by 2020.

**Figure 13. Number of Suicides by Sex: Puerto Rico, 2000-2020**



**Figure 14. Annual Crude Suicide Rates by Sex: Puerto Rico, 2000-2020**



## Demographic Profile of Suicides

### Age and sex

To minimize variability in age-specific rate calculations, Table 10 shows the number and rates of suicides specific to sex and age groups in 10-year intervals. However, age-specific rates based on fewer than 20 cases, especially in females, are unstable and should be interpreted with caution. For comparison with other populations, Table 10 includes age-adjusted rates using the US Standard Population (2000) and the World Standard Population (2000).).

**Table 10. Number and Age-sex Specific Rates for Suicides: Puerto Rico, 2020**

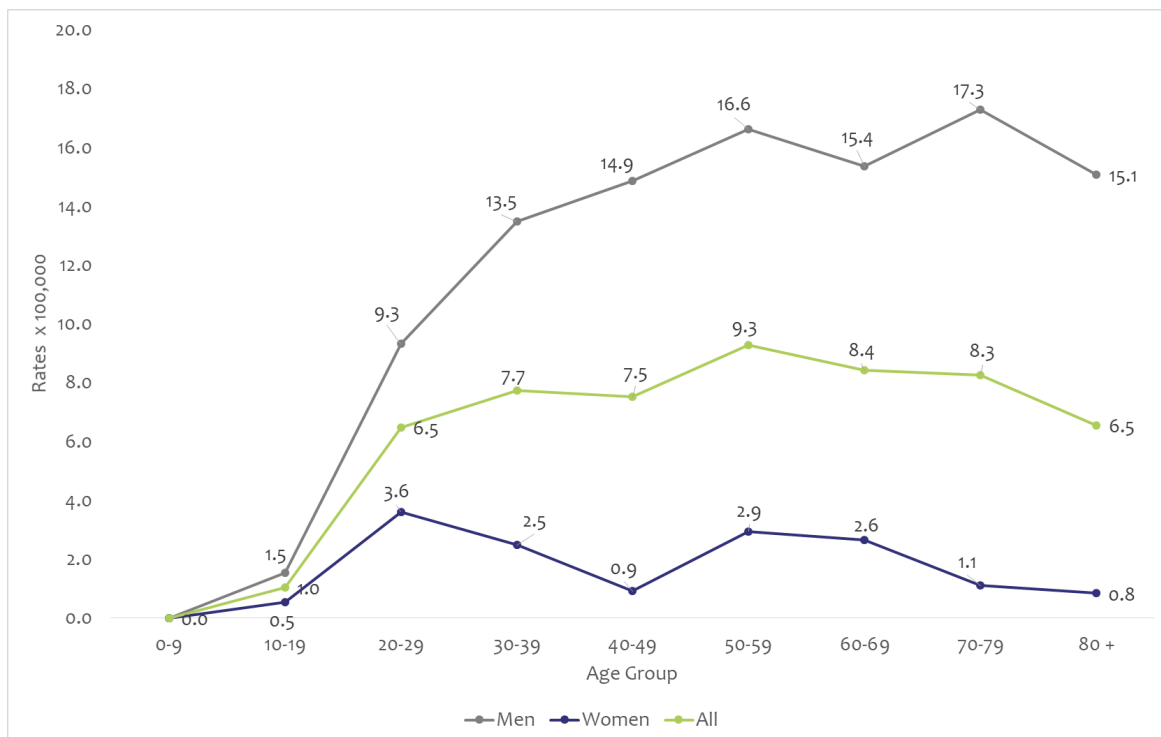
Age group	Number of cases			Rate x 100, 000		
	Men	Women	Total	Men	Women	Total
0-9	0	0	0	0	0	0
10-19	~	~	~	~	~	~
20-29	21	8	29	9.3	3.6*	6.5
30-39	25	~	30	13.5	~	7.7
40-49	29	~	31	14.7	~	7.5
50-59	34	7	41	16.6	2.9*	9.3
60-69	29	6	35	15.4	2.6*	8.4
70-79	25	~	27	17.3	~	8.3
80 +	12	~	13	15.1*	~	~
Unknown	0	0	0			
Total	178	32	210	11.4	1.9	6.4
Age-adjusted rate (U.S. 2000)				10.3	1.7	5.7
Age-adjusted rate (World 2000)				9.2	1.7	5.2
Cumulative rate (%)				0.81	0.13	0.45
Cumulative risk (1 in x persons)				124	762	224
Relative Risk Men : Women by age-groups:						
RR	20-29	30-39	40-49	50-59	60-69	70-79
	2.6	5.4	16.2	5.6	5.8	15.7

~Number or rates are not presented when fewer than six cases are reported to ensure confidentiality of information.

\* Rates calculated with fewer than 20 observations are unstable and should be interpreted with caution.

Overall, 64.3% of all suicides occurred before the age of 60. Among males, 62.9% of suicides were observed before this age and 71.9% for females. Figure 15 shows the specific suicide rates by age group and sex in 2020. Males aged 50-59 and 70-79 have the highest suicide rates (16.6 and 17.3 per 100,000 males, respectively). The highest rates in women were observed in the 20-29 age group (3.6 per 100,000 women). Comparison of suicide risk by age group is limited by the instability of rate calculation in certain age groups in women, however, the ages at which suicide risk is higher in men than in women are in the 40-49 and 70-79 age groups (16.2 and 15.7 respectively).

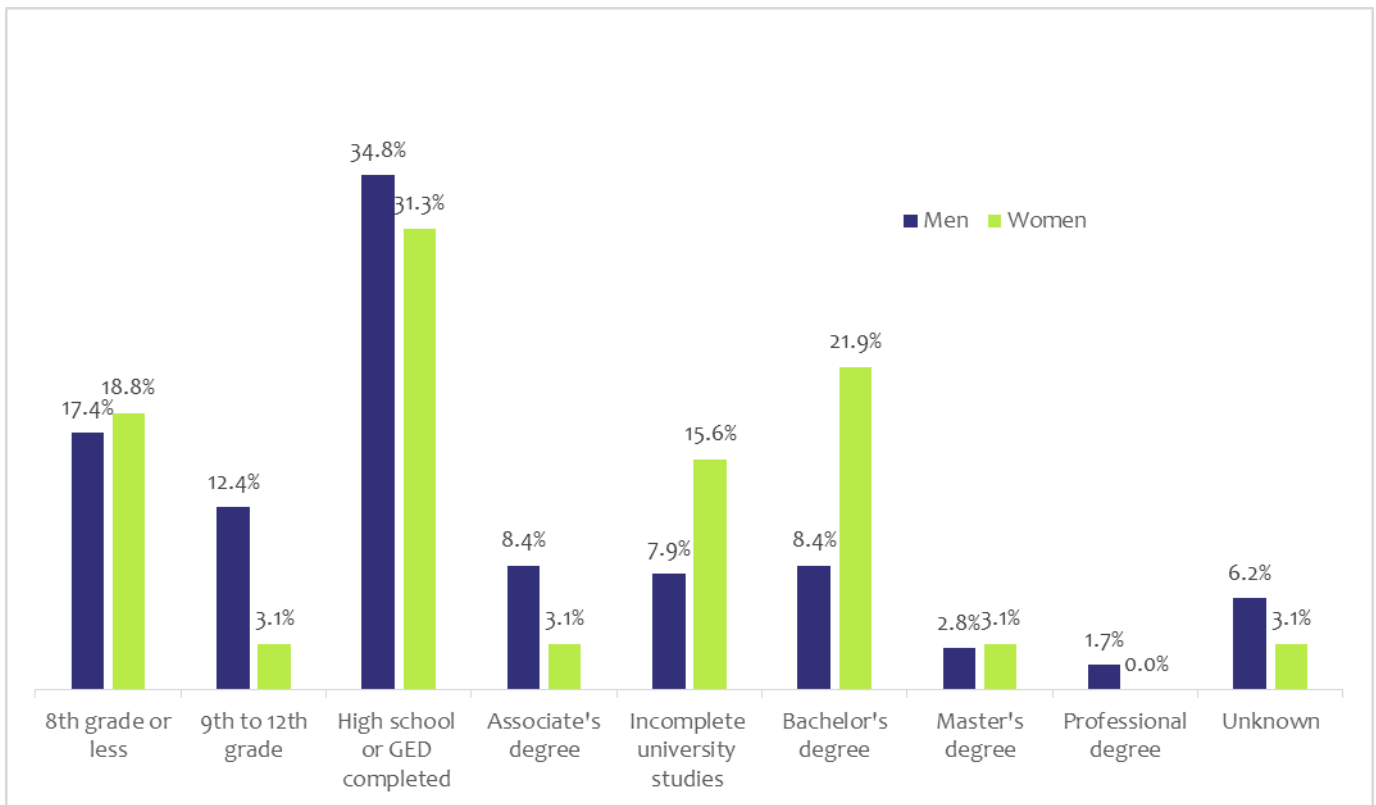
**Figure 15. Suicide Death Rates by Age and Sex: Puerto Rico, 2020**



## Education

Figure 16 shows the percentage distribution of the highest level of education obtained by suicide victims by sex. Similar to homicide victims, the majority of suicide victims (62.9%) did not obtain more than a high school education. Some 28.6% did not complete high school and 34.3% managed to graduate from high school or obtain a GED. 43.8% of female suicide victims had an associate's degree, college education started or completed compared to 29.2% of males.

**Figure 16. Highest Educational Level Attained by Suicide Victims: Puerto Rico, 2020**



## Mechanism

Compared to homicides, the use of firearms is not the most frequent mechanism used in suicides. Table 11 shows the mechanisms used in suicides in Puerto Rico by sex. The main mechanism is asphyxiation (66.9% in men and 50.0% in women). The second most frequent mechanism in men is firearms (18.0%) and in women poisoning (25.0%). The use of firearms in women is less frequent (9.4%) compared to men. Poisoning is the third most frequent mechanism in men (5.6%), while jumping into the void and the use of firearms (9.4%) is equally frequent in women.



**Table 11. Mechanism Used to Inflict Fatal Injury in Suicides: Puerto Rico, 2020**

Mechanism	Sex of the victim		Total
	Men	Women	
Hanging, strangulation, asphyxia	119 (66.9%)	16 (50.0%)	135 (64.3%)
Firearm	32 (18.0%)	3 (9.4%)	35 (16.7%)
Poisoning	10 (5.6%)	8 (25.0%)	18 (8.6%)
Fall	8 (4.5%)	3 (9.4%)	11 (5.2%)
Sharp instrument	5 (2.8%)	0 -	5 (2.4%)
Fire or burns	1 (0.6%)	1 (3.1%)	2 (1.0%)
Other (e.g. motor vehicle, drowning etc.)	3 (1.7%)	1 (3.1%)	4 (2.0%)
Total	178 (100%)	32 (100%)	210 (100%)

## Circumstances

Documentation of the circumstances of suicide focuses on the history of mental health problems, legal problems, financial problems, family problems, and problems at work. Table 12 shows the most frequent documented circumstances of suicide by sex. More women (34.4%) than men (20.8%) had a history of suicide attempts as did the proportion of women (28.1%) with a history of suicidal thoughts or plans compared to men (21.3%).

In the suicide cases that occurred in 2020, the victim expressing thoughts and/or plans to end their life to another person was not very frequent, 12.4% of male suicide victims shared their suicide intentions in the last month to a family member (50.0%) or their intimate partner (50.0%). On the other hand, only 18.8% of female suicide victims expressed their suicide intentions in the past month most frequently to a family member (50.5%) or their current or former partner (33.3%). In 16.3% of male and 12.5% of

female suicide victims, health problem(s) appeared to have contributed to the death. A similar proportion of men (14.0%) and women (15.6%) left a suicide note. Finally, problems with a current or previous intimate relationship appears to have contributed to the suicide in 14.0% of male and 12.5% of female suicide victims.

**Table 12. Suicide Circumstances: Puerto Rico, 2020**

Suicide Circumstances	Sex of the victim		Total (n=210)
	Men (n=178)	Women (n=32)	
Victim had a history of attempting suicide before the fatal incident	37 (20.8%)	11 (34.4%)	48 (22.9%)
Victim had a history of suicidal thoughts, plans or suicide attempts	38 (21.3%)	9 (28.1%)	47 (22.4%)
Victim disclosed to another person their thoughts and/or plans to end their life within the last month	22 (12.4%)	6 (18.8%)	28 (13.3%)
Previous or current partner	11 (50.0%)	2 (33.3%)	13 (46.4%)
Other family member	11 (50.0%)	3 (50.5%)	14 (50.0%)
Victim's physical problem(s) appear to have contributed to the death	29 (16.3%)	4 (12.5%)	33 (15.7%)
Victim left a suicide note	25 (14.0%)	5 (15.6%)	30 (14.3%)
Financial problems appear to have contributed to the death	2 (1.1%)	0	2 (1.0%)
Death of a family member or a friend due to a cause other than suicide appears to have contributed to the death	9 (5.1%)	0	9 (4.3%)
Job problem(s) appear to have contributed to the death	8 (4.5%)	3 (0.4%)	11 (5.2%)
Problems with a current or former intimate partner appear to have contributed to the suicide	25 (14.0%)	4 (12.5%)	29 (13.8%)

Mental health circumstances in suicide victims can be multiple. Table 13 shows the frequency of mental health-related circumstances documented in suicides that occurred in 2020. The most frequently reported circumstance was that the victim had been identified as having a current mental health problem (45.5% in

males and 71.9% in females). The second most frequent circumstance was that the victim was perceived by self or others as depressed (46.1% in males and 50.0% in females). Another frequent mental health circumstance was a history of ever having been treated for a mental health or substance abuse problem (29.2% in men and 50.0% in women).

**Table 13. Mental Health Circumstances in Suicides: Puerto Rico, 2020**

<b>Mental Health Circumstances in Suicides (n=210)</b>	<b>Sex of the victim</b>		<b>Total n=210</b>
	<b>Men n= 178</b>	<b>Women n= 32</b>	
Victim had been identified as currently having a mental health problem	81 45.5%	23 71.9%	104 49.5%
Victim was perceived by self or others to be depressed at the time of the injury	82 46.1%	16 50.0%	98 46.7%
History of ever being treated for a mental health or substance abuse problem	52 29.2%	16 50.0%	68 32.4%
Victim was in treatment for a mental health problem or substance abuse problem	35 19.7%	13 40.6%	48 22.9%
Victim had alcohol dependence or alcohol problem	23 12.9%	2 6.3%	25 11.9%
Victim had a non-alcohol related substance abuse problem	23 12.9%	3 9.4%	26 12.4%

### **Mental Health Diagnosis and Suicides Related to Disasters**

In approximately half of all suicide victims (49.5%) there was documentation of one to three mental health diagnoses at the time of the fatal event, reported in 45.5% of males (n=81) and 71.9% for females (n=23). Of these victims, 65.4% had a single diagnosis, 26.9% had two diagnoses and 7.7% had three diagnoses. The most frequent diagnosis was depression or dysthymia (77.8% in men and 78.3% in women), and to a lesser degree anxiety (18.5% in men and 17.4% in women), bipolar disorder (14.8% in men and 17.4% in women) and schizophrenia (13.3% in men, 13.0% in women).

Finally, seven suicides related to disasters were documented, six associated with the COVID-19 pandemic and one to the earthquakes in the southwest of the island in January 2020.

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## Contact Information

Puerto Rico Violent Deaths Reporting System

[prvdrs@estadisticas.pr](mailto:prvdrs@estadisticas.pr)

### **Instituto de Estadísticas de Puerto Rico**

Calle Quisqueya #57, 2do piso, San Juan, PR 00917

P.O. Box 195484, San Juan, PR 00919-5484



**Instituto de Estadísticas  
de Puerto Rico**

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