

## **Violent, Psychological, Sexual and Abuse-Related Emergency Department Usage amongst Pediatric Victims of Physical Assault and Gun Violence: A Case-Control Study**

**Authors :** Mary Elizabeth Bernardin, Margie Batek, Joseph Moen, David Schnadower

**Abstract :** Background: Injuries due to interpersonal violence are a common reason for emergency department (ED) visits amongst the American pediatric population. Gun violence, in particular, is associated with high morbidity, mortality as well as financial costs. Patterns of pediatric ED usage may be an indicator of risk for future violence, but very little data on the topic exists. Objective: The aims of this study were to assess for frequencies of ED usage for previous interpersonal violence, mental/behavioral issues, sexual/reproductive issues and concerns for abuse in youths presenting to EDs due to physical assault injuries (PAIs) compared to firearm injuries (FIs). Methods: In this retrospective case-control study, ED charts of children ages 8-19 years who presented with injuries due to interpersonal violent encounters from 2014-2017 were reviewed. Data was collected regarding all previous ED visits for injuries due to interpersonal violence (including physical assaults and firearm injuries), mental/behavioral health visits (including depression, suicidal ideation, suicide attempt, homicidal ideation and violent behavior), sexual/reproductive health visits (including sexually transmitted infections and pregnancy related issues), and concerns for abuse (including physical abuse or domestic violence, neglect, sexual abuse, sexual assault, and intimate partner violence). Logistic regression was used to identify predictors of gun violence based on previous ED visits amongst physical assault injured versus firearm injured youths. Results: A total of 407 patients presenting to the ED for an interpersonal violent encounter were analyzed, 251 (62%) of which were due to physical assault injuries (PAIs) and 156 (38%) due to firearm injuries (FIs). The majority of both PAI and FI patients had no previous history of ED visits for violence, mental/behavioral health, sexual/reproductive health or concern for abuse (60.8% PAI, 76.3% FI). 19.2% of PAI and 13.5% of FI youths had previous ED visits for physical assault injuries (OR 0.68, P=0.24, 95% CI 0.36 to 1.29). 1.6% of PAI and 3.2% of FI youths had a history of ED visits for previous firearm injuries (OR 3.6, P=0.34, 95% CI 0.04 to 2.95). 10% of PAI and 3.8% of FI youths had previous ED visits for mental/behavioral health issues (OR 0.91, P=0.80, 95% CI 0.43 to 1.93). 10% of PAI and 2.6% of FI youths had previous ED visits due to concerns for abuse (OR 0.76, P=0.55, 95% CI 0.31 to 1.86). Conclusions: There are no statistically significant differences between physical assault-injured and firearm-injured youths in terms of ED usage for previous violent injuries, mental/behavioral health visits, sexual/reproductive health visits or concerns for abuse. However, violently injured youths in this study have more than twice the number of previous ED usage for physical assaults and mental health visits than previous literature indicates. Data comparing ED usage of victims of interpersonal violence to nonviolent ED patients is needed, but this study supports the notion that EDs may be a useful place for identification of and enrollment in interventions for youths most at risk for future violence.

**Keywords :** child abuse, emergency department usage, pediatric gun violence, pediatric interpersonal violence, pediatric mental health, pediatric reproductive health

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