

ABSTRACT

African American youths have the highest risk of firearm-related homicides. Emergency departments are a critical part of implementing intervention among violently injured youth. The current study is a secondary analysis of the Flint Youth Injury (FYI) study, in Flint, Michigan, 2009-2013. The purpose of this study is to analyze whether African American male youths reported higher rates of gun accessibility. The current study was composed of 365 participants. A chi-square test was utilized to test the relationship of violently injured group with different racial background and participants reporting ease of accessibility to guns and guncarriage within the past six months. No statistical significance for racial background and guncarriage within the last six months. African American youth continues to be high risk for firearm injuries however there are limited studies examining these variables. Thus, this study needs to be conducted in multiple high-risk areas and screening questions need to be improved to improve interventions among emergency departments.

INTRODUCTION

Significance of the Study

- Firearm violence is the leading cause of death among African American youth (Carter et al., 2015).
- Emergency departments are increasingly becoming a critical part of implementing intervention among violently injured youth (Bohnert et al., 2015)

Purpose of Research

- This study will focus on an outcome evaluation in identifying the need by using screening measures conducted in the ED using the FYI study as secondary data.

Research Question

- How can the emergency department improve interventions based on screenings of violently injured African American male youth, who have access to guns?

Hypothesis

- The FYI study will show African American male youths reporting higher rates of gun accessibility when reporting violence related injuries.

LITERATURE REVIEW

Conceptual Framework:

- The SBIRT framework serves as a template among programs that include screenings, brief interventions, and referral to treatment service options (De Boca et al., 2017).

Flint Youth Study and Evidence of Effectiveness

- Emergency departments are identified as primary care setting for violence prevention among youth (Roche et al., 2018)
- Studies in the United States and United Kingdom discuss the effectiveness of emergency departments interventions in reducing and identifying trajectories of violent behavior (Carter et al., 2015)

Violent Behavior and African American

- Homicide is the second leading cause of death among youth and nearly 1,100 are treated in emergency room for assault-related each day (Centers for Disease and Control Prevention, 2020)
- African American youth living in urban areas reported 50 to 100 percent witnessing violence in their community (Thomas et al., 2016).

African American Male Youth and Gun Violence

- African American youth have the highest risk of firearm-related homicides (Carter et al., 2016; Khubchandani & Price, 2018)
- African American males' youth with conduct problems were more likely to carry guns before the age of 18 than white male youths (Beardslee et al., 2018)

Emergency Department and Youth Intervention Programs

- Emergency departments provide an opportunity to connect with difficult to reach youth (Carter et al., 2016)
- Emergency departments brief interventions addressing violence among youth have shown to be effective in reducing occurrence of peer aggression and increase self efficacy for avoiding fighting (Carter et al., 2016)

METHODOLOGY

Research Design and Data Collection Procedure

- The current study is a secondary analysis of the Flint Youth Injury (FYI) study, also known as the Substance Use Among Violently Injured Youth in an Urban Emergency Department: Services and Outcome in Flint, Michigan, 2009-2013 (ICPSR 36769).
- Research data was collected from December 2009 through September 2013.
- The FYI study data was conducted at the Hurley Medical Center emergency department within two years in which participants received baseline assessment and follow-up assessment at six, 12, 18, and 24 months.
- The FYI study was a quantitative, longitudinal cohort study, quasi-experimental (nonequivalent comparison group design).
- The current study aimed to utilize the data provided by the FYI study that focuses on screenings of violently injured, gun access, and African American male youth.
- The current study focused on baseline questions about violence-related injuries, gun access, age, gender, and race.

Sample and Sampling Method

- The FYI study used availability sampling technique.
- The study participants were composed of a group with assault-injured youth with substance use within the last six-month and a comparison group of non-assaulted drug-using youth with substance use within the last six months along with a proportionally sampled (by gender and age group [14-17, 18-20, and 21-24 years]) comparison group
- The current study utilized the first dataset composed of 1,448 participants but was reduced to 365 participants to include only violently injured male youths.
- The inclusion criteria also included whether the participant injury caused by a fight, conflict, argument, or physical attack (no/ yes) and all racial background (African American/ white/multi race/American Indian).

Measures

- Dependent Variables:** I did not carry a gun (yes/no), and how difficult was it to get a gun you wanted (It would be almost impossible/it would be a lot of trouble, but it could be done/ it would be only a little trouble/it would be no trouble at all).
- Independent Variable:** was your injury caused by a fight, conflict, argument, or physical attack (no/ yes) and racial background (African American/ white/multi race/American Indian).
- Demographics Variables:** gender (male/ female), age (14 to 17, 18 to 20, 21 to 24), and racial background (African American/ white/multi race/American Indian), received public assistance (no/yes), conflict with a stranger (no/yes), in the past six months: get into serious physical fights? (Never, 1 time, 2 times, 3 to 5 times, 6 to 10 times, 11 to 20 times, 20+ times), and level of severity for expressed violence (moderate/ severe).

RESULTS

Descriptive Analysis

- Descriptive statistics of the study dependent variables are how difficult would it be to get a gun (28.2%) participants stated it would be no trouble at all and (23.0%) participants who stated it would be a lot of trouble, but it could be done.

Descriptive Statistics: Study Variables

Variables	f	%
How difficult to get a gun		
It would be almost impossible	112	30.7
It would be a lot of trouble, but it could be done	84	23.0
It would be only a little trouble	48	13.2
It would be no trouble at all	103	28.2
Missing	18	4.9
Past 6 Months: Carried Gun for Protection		
No	304	83.3
Yes	43	11.8
Missing	18	4.9

Inferential Analysis

- A chi-square test was utilized to test the relationship of violently injured group with different racial background and participants reporting ease of accessibility to guns and guncarriage within the past six months.
- No statistical significance was found for racial background and access, ($\chi^2(9) = 16.37, p = 0.060$), Cramer's V statistic suggested a weak relationship (0.060).
- No statistical significance for racial background and guncarriage within the last six months, ($\chi^2(3) = 5.383, p = 0.15$), Cramer's V statistic suggested a weak relationship (0.125).

Table 1

Sample Characteristics (N = 365)

Characteristics	f	%
Sex		
Male	365	100.0
Age		
14 to 17	83	22.7
18 to 20	136	37.3
21 to 24	146	40.0
Ethnicity		
African American or Black	201	55.1
White	119	32.6
Multi-Race	31	8.5
American Indian/Asian/Native Hawaiian	14	3.8
Receiving Public Assistance		
No	136	37.3
Yes	229	62.7
Conflict with: Stranger		
No	205	56.2
Yes	129	35.3
Missing	31	8.5
Level of Severity for Expressed Violence		
None	235	64.4
Moderate	43	11.8
Severe	87	23.8
In the Past 6 months: Got into a serious fight		
Never	98	26.8
1 time	128	35.1
2 time	60	16.4
3 to 5 times	55	15.1
6 to 10 times	13	3.6
11 to 20 times	5	1.4
20+ times	6	1.6

Figure 2

Percentages of access to guns by different race groups.

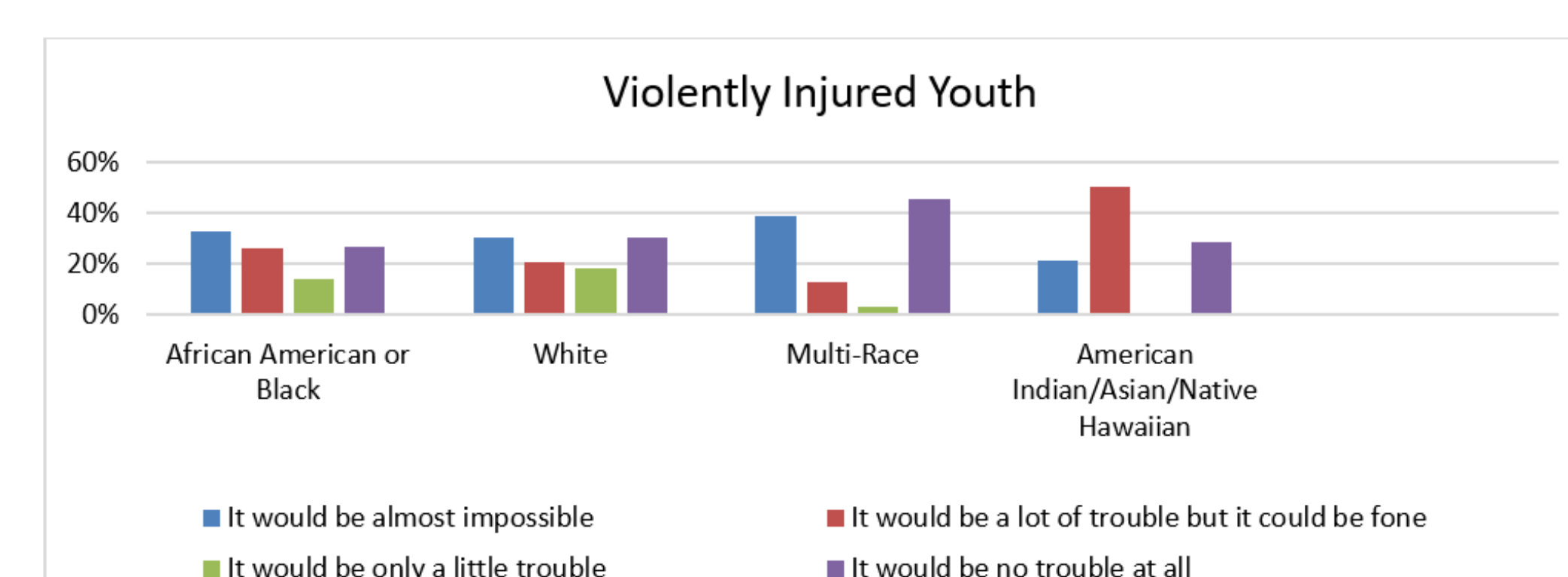
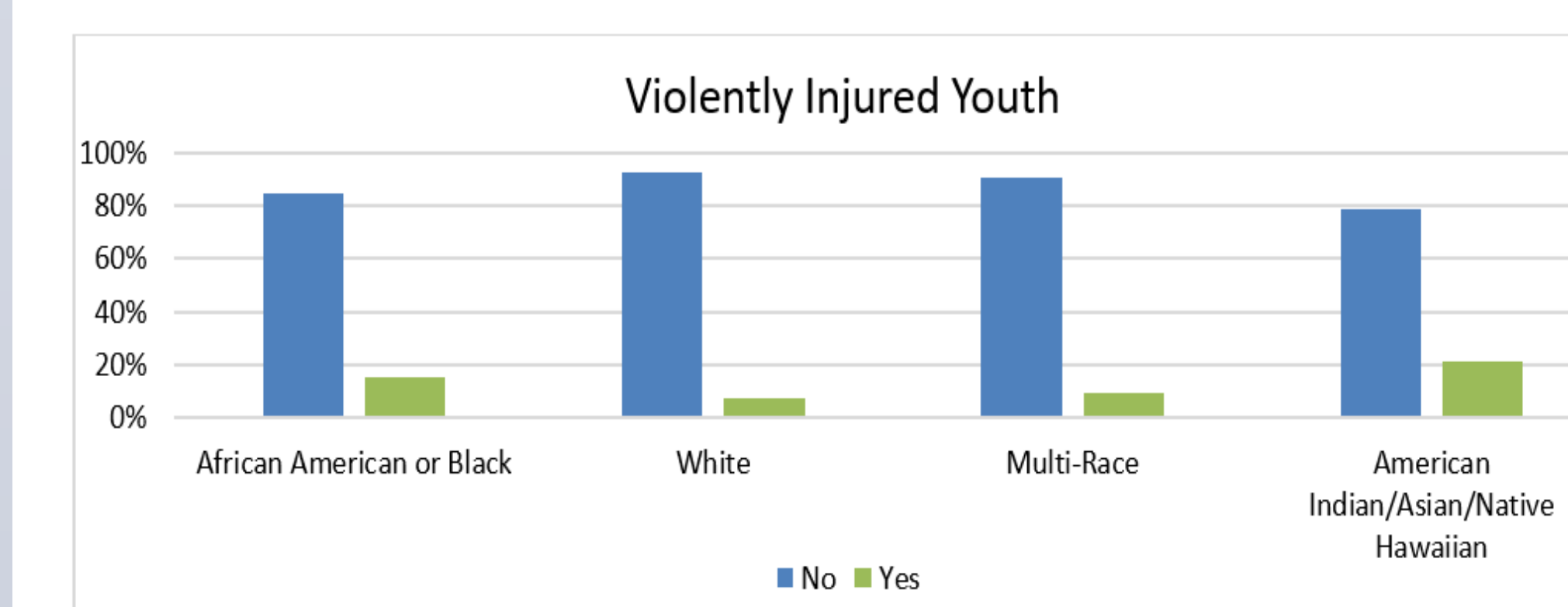


Figure 3

Percentages of carrying a gun by different race groups



DISCUSSION

Major Findings

- There are limited studies focusing on these specific variables in an ED setting. One study analyzed these specific variables in the ED settings however it provided limited insight due to a small sample size and it did not analyze relationship between race and gun accessibility (Lumba-Brown et al., 2020)
- Findings from previous research were inconsistent with FYI results regarding relationship between violence behavior and guns among African American males.
- One study conducted in an inner-city community repeatedly assessed 485 Black and White youth and found that (28%) Black male youth were more likely to carry guns than (10%) white male youths (Beardslee et al., 2017).

Strengths and Limitations

Strengths

- large sample size which was highly composed of African Americans youth over other race that had sought ED care for violence related injuries. This allowed the opportunity to compare gun accessibility among race groups and violence related behavior.

Limitations

- lack of clarity of questions utilized in the study.
- The formation of the questions in this study were confusing and contradicting at times which were left for youth interpretation
- The structure of the data collection, eligible participants were engaged semi-structured interview that took about 90 minutes to complete this could have hinder the participants response due their trust in the individual
- Lengthy survey: 90 minutes
- Youth fear to the repercussion if disclosing gun carrying or gun accessibility.

Research and Practice Implications

- Other studies demonstrates that African American are at high risk for violence related behavior and gun access.
- These is a lack of research analyzing the relationship between race and gun access in an emergency department setting.
- Screening questions need to be improved in the emergency department as it serves as a pivotal point for intervention.

Social Welfare Significance and Future Trends

- Social Workers need to continue analyzing this population as it continues to be high risk for violence and firearm related homicide.
- More studies in high-risk areas need to be conducted that examines the relationship between race and gun accessibility.
- Emergency rooms are a pivotal and effect point for intervention

Conclusion

- There is limited studies analyzing these variables in an emergency room setting. The FYI study results are inconsistent with other studies focusing on race groups and gun access but in other settings. This population is at high risk for gun access and ED usage. Thus, the EDs need to improve their screening questions and replicate this study in multiple high-risk locations. Furthermore, better screening questions could improve ED intervention among violently injured African American male youth with access to guns.

ACKNOWLEDGMENT

Many thanks to my mother, sister, and fiancé who supported and cheered me on during these three years. Above all thank God for His endless love, grace, and peace in my life.