

Practicum Final Project

Internship at the Worcester Division of Public Health

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UMass Amherst

BACKGROUND

- **Division of Public Health under the City of Worcester Department of Health & Human Services**
 - **Supervision of Nikki Nixon, the lead Epidemiologist, and Karina Scott, the Strategic Partnerships Manager**
 - **My role included Covid-19 vaccination data coalition and analysis**
 - **Analyze and visualize data, and write a report on the Regional Youth Health Survey of the town of Toury for 2021**
 - **I also attended meetings and assisted community outreach events**
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Typical week

- **Monday**

- Regional Epidemiologists meeting

- **Tuesday**

- Covid-19 outreach partners' meeting

- **Thursday**

- Intern Learning Series meeting, meeting with site supervisors

- **Friday:**

- Pull Covid-19 vaccination data and tallies for the towns of Grafton, Shrewsbury, and Worcester from Mass.gov

PROJECT HIGHLIGHT

Regional Youth Health Survey Report of the town of Toury 2021 (RYHS)

PURPOSE / GOALS

- Gather information on the important issues facing youth in the town of Toury in the Central Massachusetts Regional Public Health Alliance (CMRPHA) district
- Identify and assess student risk behaviors
- Guide Public Health interventions and affect decision making

METHODS

This was a survey where questionnaire were administered to high school children as an electronic questionnaire via REDCap, partnerships with the City Public School, Worcester Division of Public Health, and UMass Prevention Research Center

KEY FINDINGS

Demographic Characteristics

A total of 917 students completed the survey at Toury High School
48% were Males, and 52% were females

Figure 2. Grade Level Distribution of Toury HS Participants, 2021

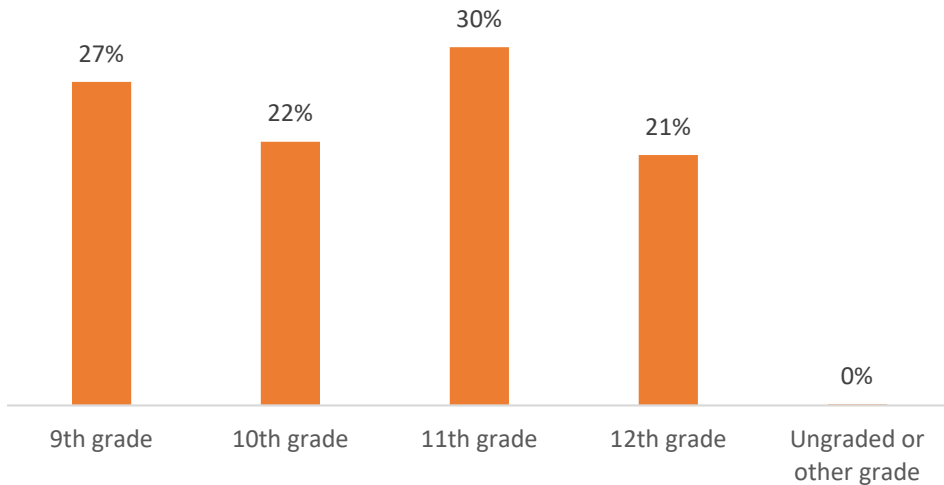


Figure 1. Age distribution among Toury HS Participants, 2021

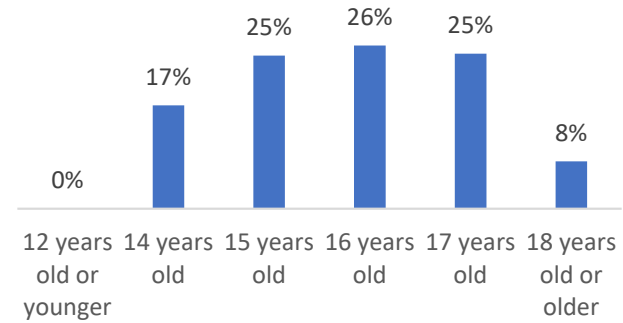
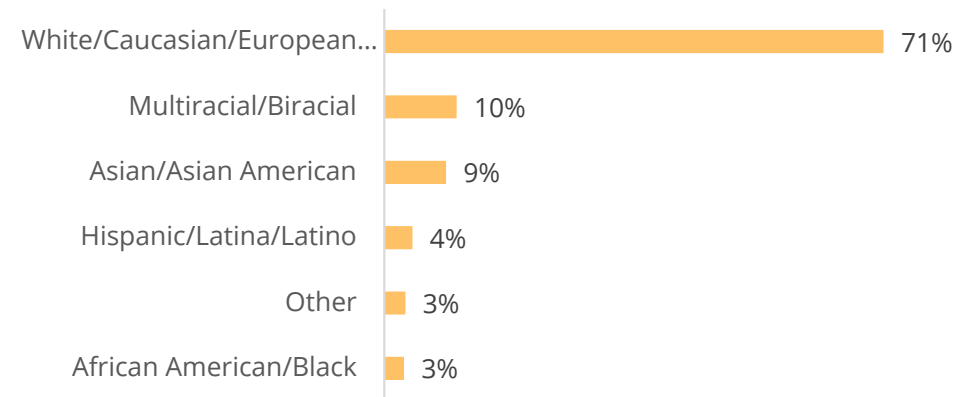
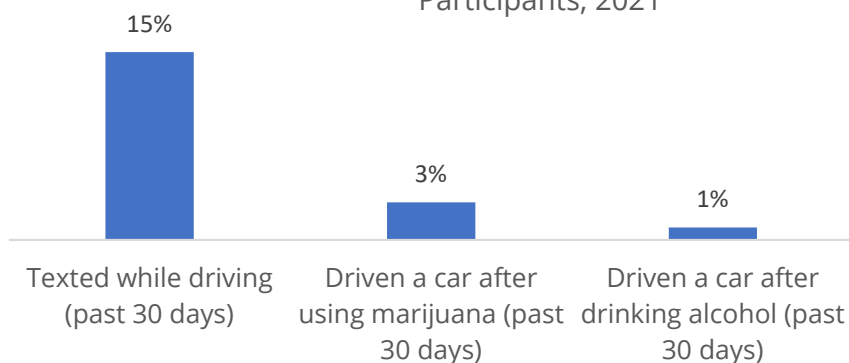


Figure 3. Race and Ethnicity among Toury HS Participants, 2021



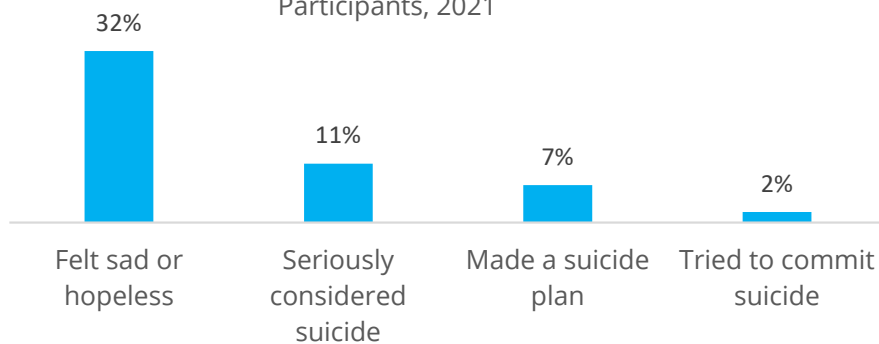
Behaviors contributing to unintentional injuries

Figure 4. Unsafe Driving Practices among Toury HS Participants, 2021



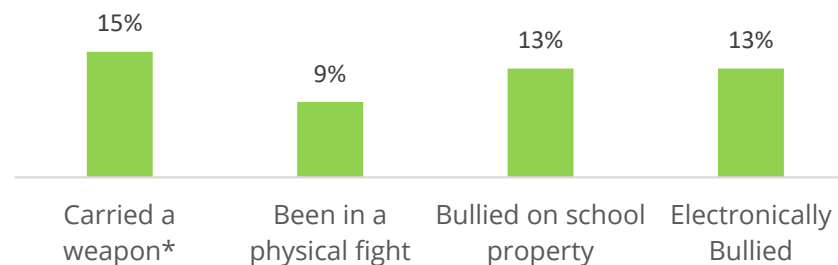
Depression & Suicidal Ideation

Figure 6. Suicidal Ideations among Toury HS Participants, 2021



Behaviors that contribute to violence

Figure 5. Weapons, Physical Fights and Bullying among Toury HS Participants, 2021



Ultimately, 1% had made a suicide attempt resulting in an injury, poisoning, or overdose that had to be treated by a doctor or nurse

Substance abuse

Figure 7. Marijuana, Alcohol & Lifetime Nicotine Product Use among Toury HS Participants, 2021

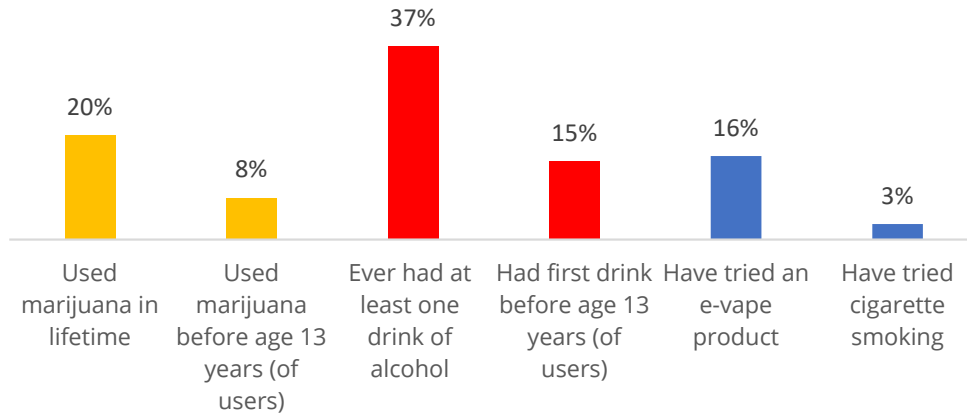
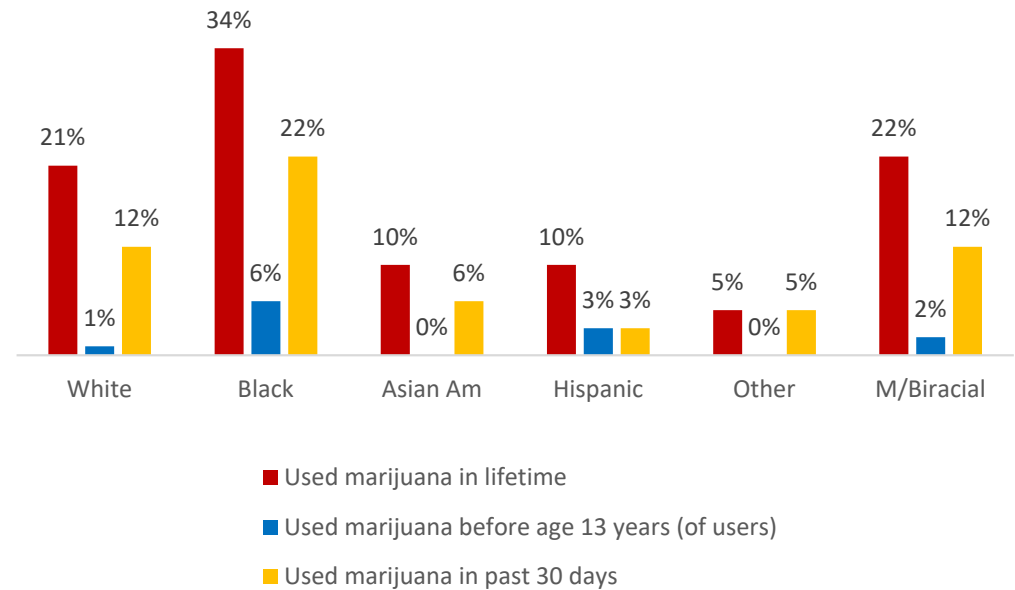
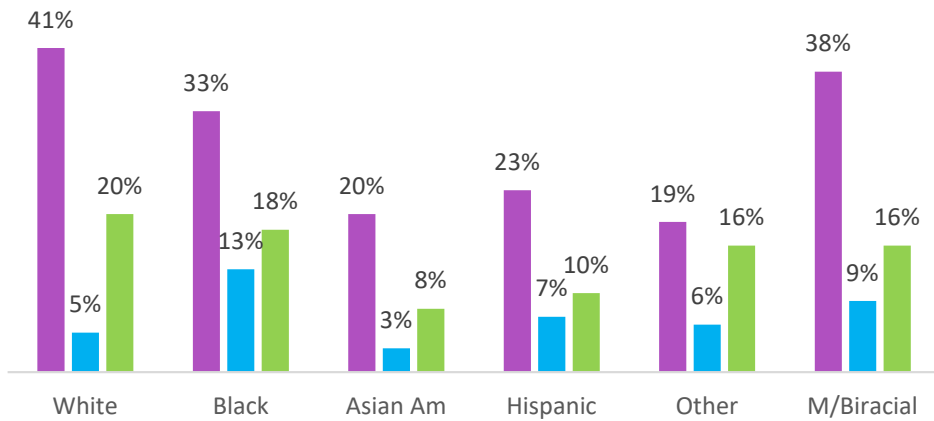


Figure 8. **Marijuana Use by Race** among Toury HS Participants, 2021



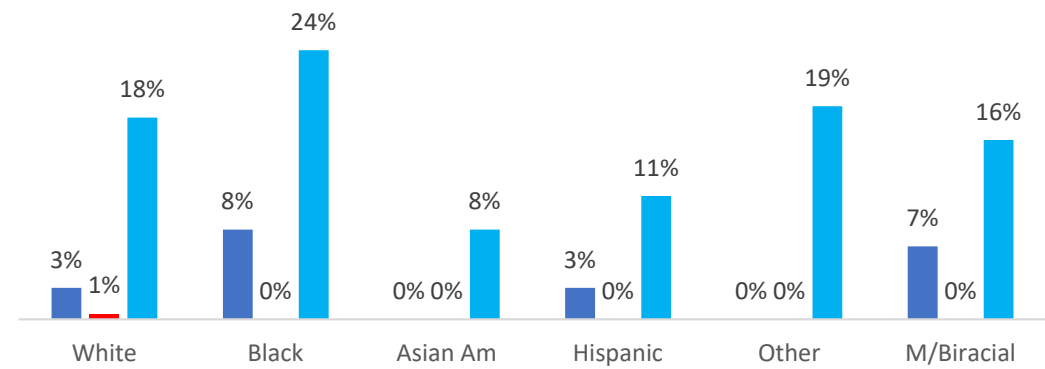
Substance abuse /race & ethnicity

Figure 9. **Alcohol Use by Race** among Toury HS Participants, 2021



- Ever had at least one drink of alcohol
- Had first drink before age 13 years (of users)
- Had at least one drink in 30 days

Figure 10. **Nicotine Product Use by Race** among Toury HS Participants, 2021



- Have tried cigarette smoking
- Have tried chewing tobacco
- Have tried an e-vape product

Sexual Health

Sex education & Sexual activity:

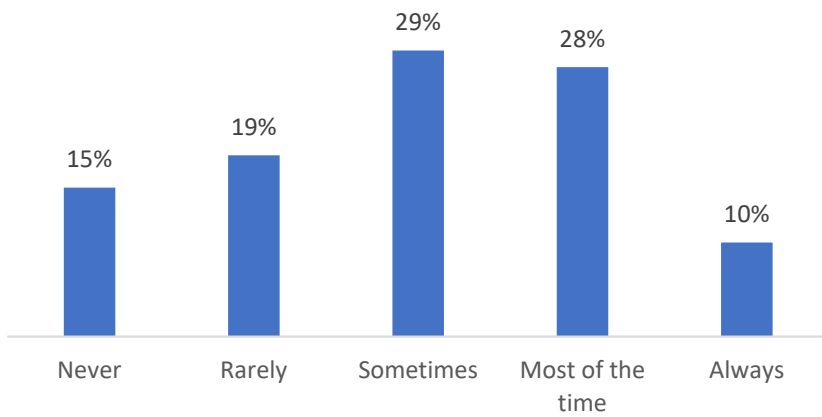
- **53%** reported being taught about Sexual Health in school
- **53%** reported being taught about healthy relationships in school
- **17%** of students had ever had sexual intercourse.

Among those students who reported ever having sexual intercourse:

- 8% had had sexual intercourse for the first time before the age of 13 years
 - 18% had had sexual intercourse with four or more persons
 - 4% did not use any method of birth control during their last sexual intercourse
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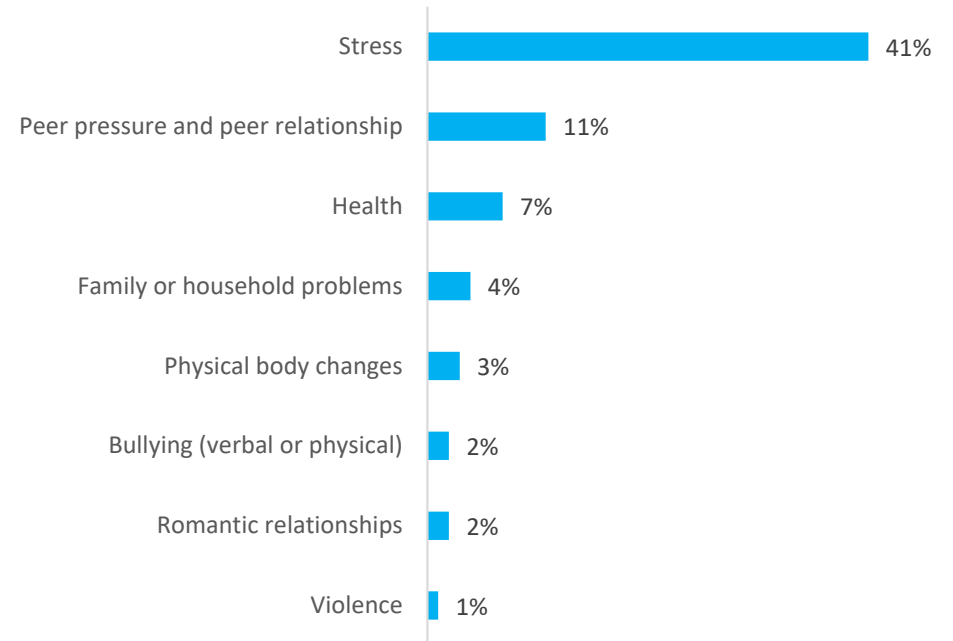
Mental Health during Covid-19

Figure 11 How often Participants Mental Health was not good during Covid among HS students, 2021



Top issues among youth

Figure 12. Top Reported Issues among Toury High School Youth, 2021

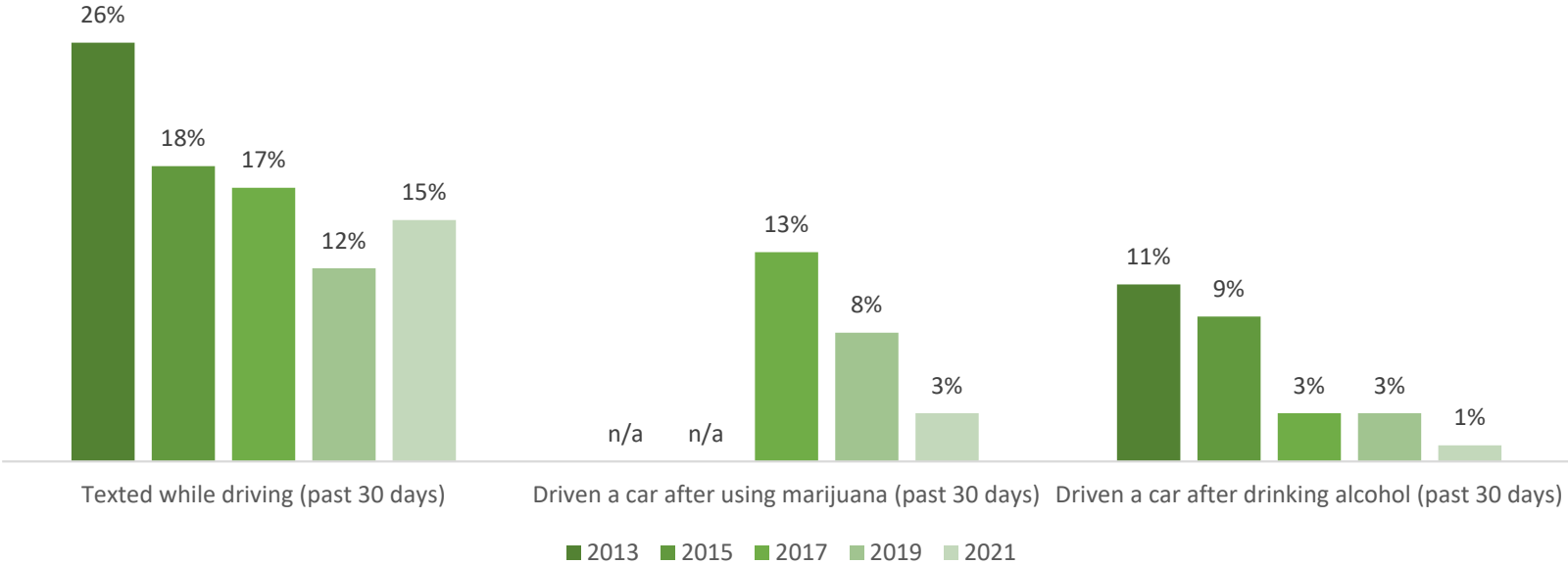


DISCUSSION

- RYHS data analyses are based on cross-sectional surveys and can only indicate association, not causality. Moreover, the survey is descriptive and not designed to explain the reasons behind any observed trends
 - Nevertheless, because this is the fifth iteration of the Regional Youth Health Survey, it is possible to look at trend comparisons to ascertain whether behaviors among youth have improved, worsened, or remained the same over the years
 - However, some questions were partially redesigned, creating a break in trend analyses over time
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DISCUSSION: Behaviors contributing to unintentional injuries

Figure 13. Unsafe Driving Practices among Toury HS Participants Over Time

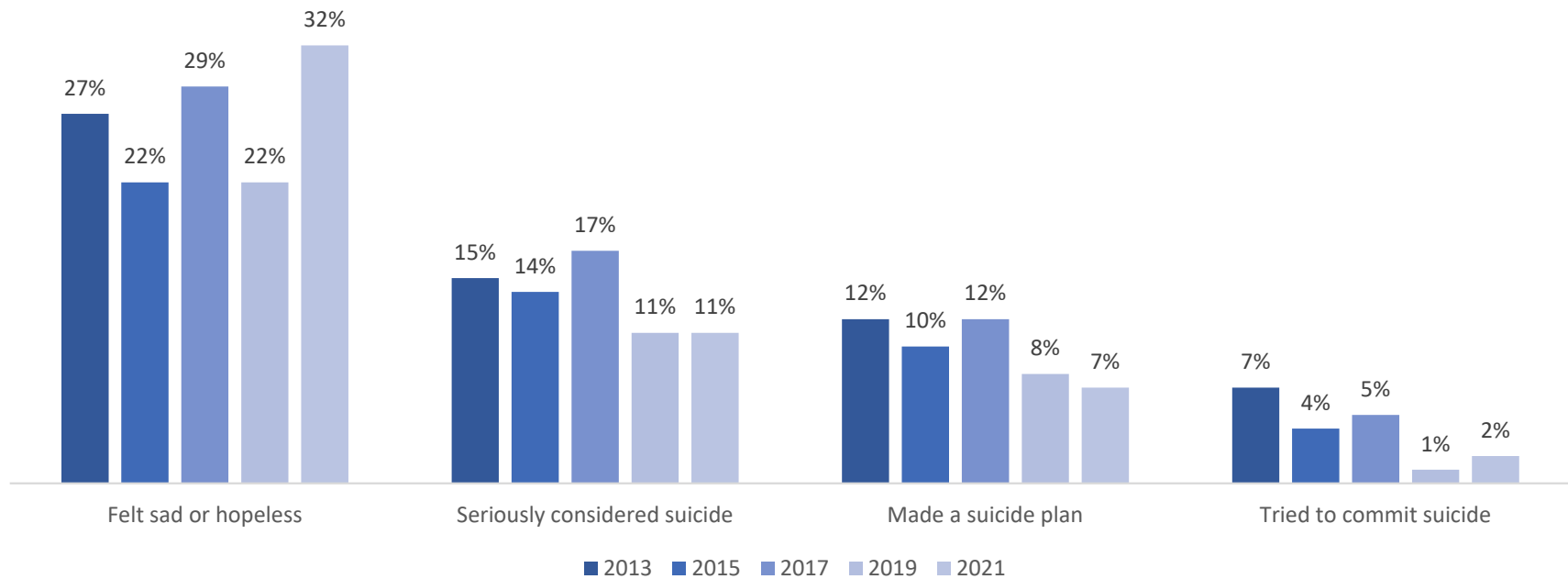


Even though there is a slight increase from 2019 to 2021 for texting while driving

Overall, there is a trend decrease for behaviors that contribute to unintentional injuries

DISCUSSION: Depression & Suicidal Ideation

Figure 15. Suicidal Ideations among Toury HS Participants Over Time



Slight decrease over time in suicidal ideation. However, from 2019 to 2021, depression has worsened, and public health interventions need to be focused there

DISCUSSION: Substance abuse (Tobacco & Alcohol use)

Figure 16. Lifetime Nicotine Product Use among Tourey HS Participants Over Time

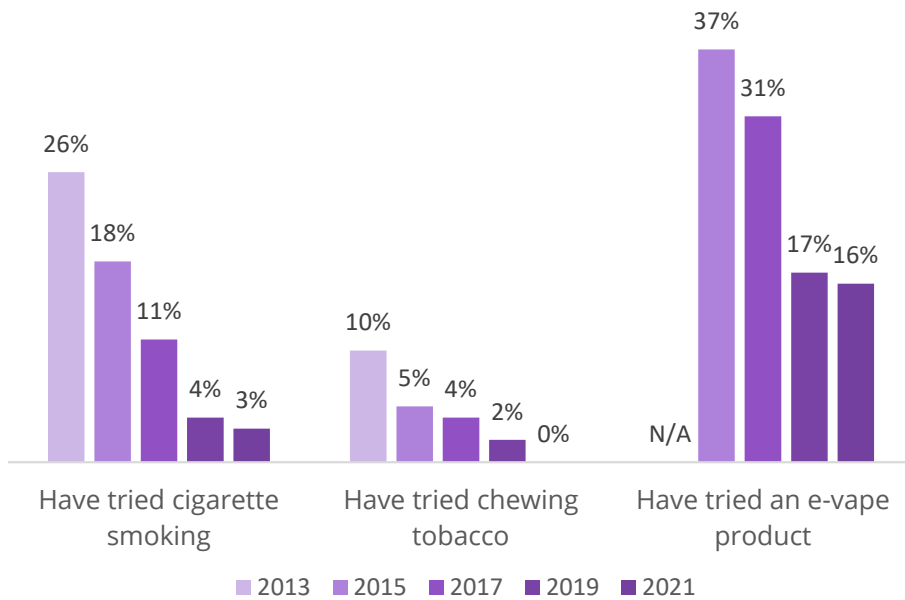
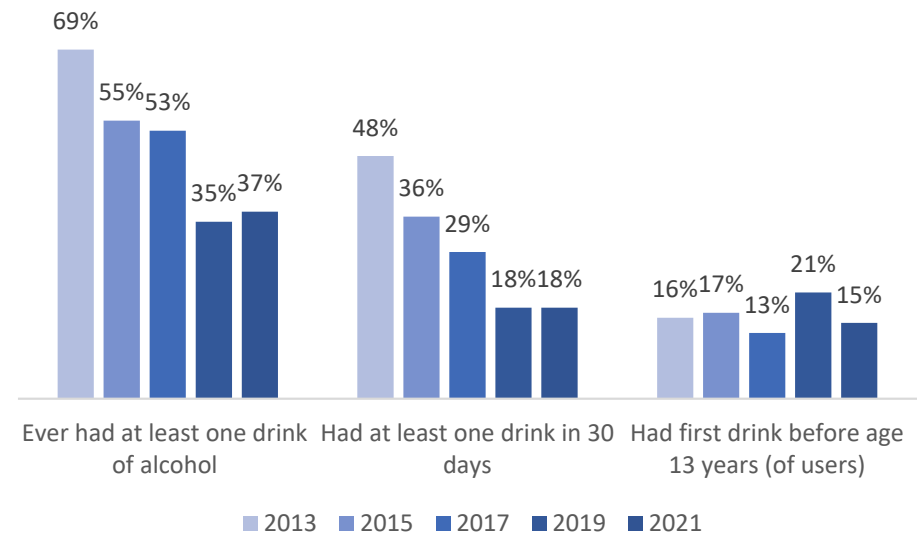


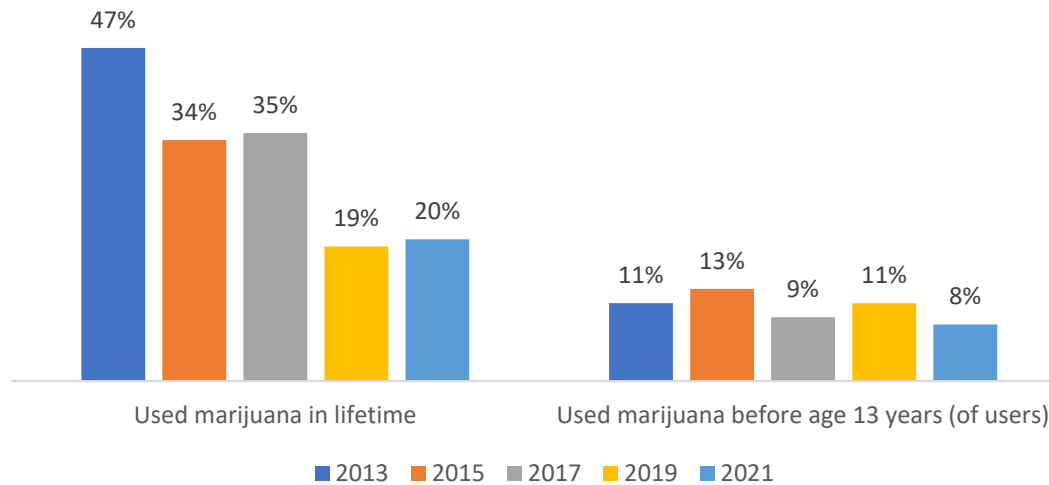
Figure 17. Alcohol Use among Tourey HS Participants Over Time



Decrease over the years in nicotine product and alcohol use but not satisfactory at this level
 We can say that behaviors on Tobacco & Alcohol use slightly improved over time

DISCUSSION: Substance abuse (Marijuana use)

Figure 18. Marijuana Use among Toury HS Participants Over Time



The decrease over time in Marijuana use is not satisfactory at this level.
More resources needed to combat substance abuse

LESSONS LEARNED

- Learned how to work within an interdisciplinary team
 - Learned how to create charts using Microsoft word and excel and how to create a professional report outside of the academy world
 - Learned about the scope of risky youth behaviors and substance abuse in Worcester
 - Interdependence of disciplines to provide good services and better care to the community is indispensable in the Public Health field
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RECOMMENDATIONS

About the project

- **City & Schools** should connect with parent intervention to manage child behavior at home
- **The city** should also do an additional survey to find out what kids think they need to minimize youth risk behavior

About Internship

- **DPH** should encourage interns to participate in various department and stakeholder meetings
 - **DPH** should keep the Intern Learning Series presentations for future interns
 - **UMass Amherst** should linkup with DPH to encourage student internships at WDPH
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ACKNOWLEDGEMENTS

Thank you to all DPH team members

Special thanks to Nikki, Karina, and Irene for helping me break my impostor syndrome at the beginning and being able to integrate quickly

REFERENCES

- <https://www.worcesterma.gov/hhs>
 - <https://sites.google.com/view/internserieswebsite/schedule>
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Thank you!
Questions?

