



Element A

Problem Statement

One in six women are a victim of sexual assault. Women from the ages 18 to 24 who don't have the physical means to fight back are the ones most commonly attacked. The victims afterwards then suffer mentally, physically, and financially for something that they weren't responsible for.

Introduction and Definition of the Problem

Women and people in general in today's society are too much at risk for sexual assault and abuse. This is causing a lot of people to be afraid to just walk outside of their own homes. Our research has shown that every 98 seconds someone is sexually assaulted and more than half of those sexually assaulted don't report it. In a lot of these cases, the sexual assaults can't be stopped because even if the women have something to defend themselves they can't reach it or it doesn't work.

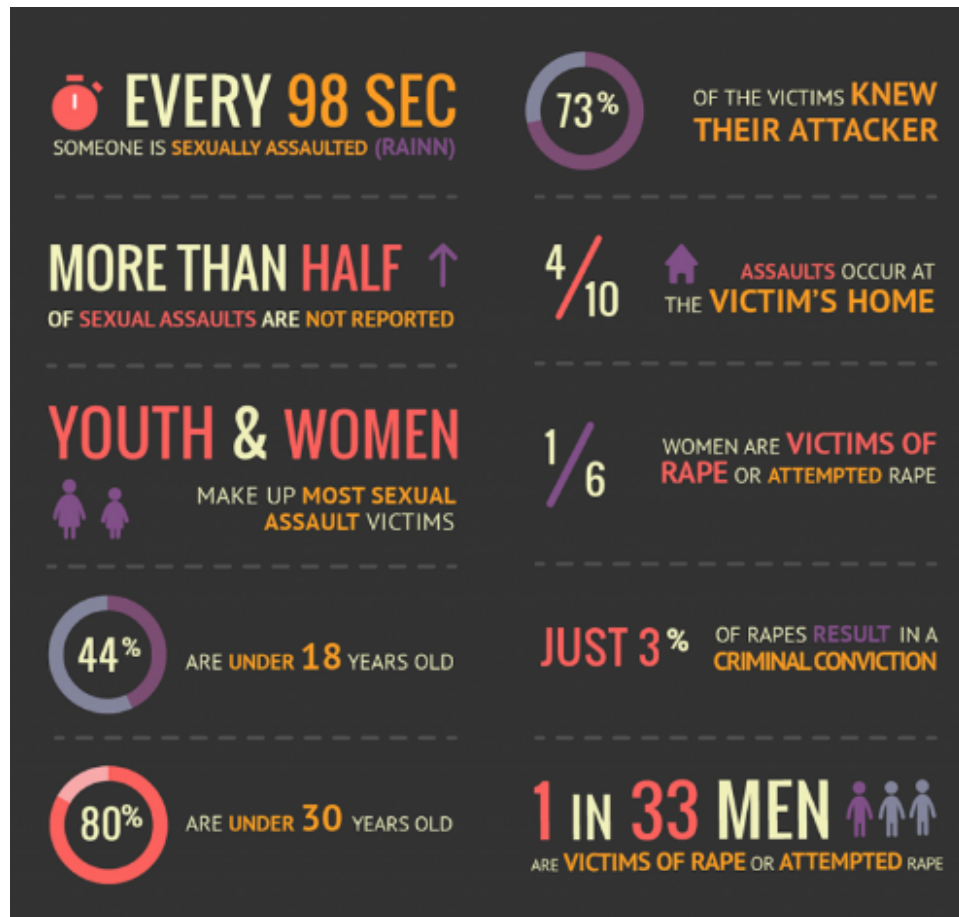
- Just 3% of rapes result in a criminal conviction.
- $\frac{1}{3}$ of female rape victims identified in community samples experienced PTSD at some time after assault.
- Prevention of sexual assault is societal and should focus on public health education. Safety and support programs have been shown to reduce sexual assaults.
- Annually in the United State rape costs more than any other crime totaling a stacking 127 billion dollars.
- A third of people believe that rape is the woman's fault if she flirts, is intoxicated, or dresses provocatively.

Statistics

There are 167.5 million women in the United States. Out of these women one of every six has been the victim of an attempted or completed rape in her lifetime. This overabundance of assaults occur most to women in which 81% of women say they have been the victim of some form of sexual assault compared to 43% of men. These stats add up to an american

being sexually assaulted every 98 seconds. The likelihood of an attack increases in women 18-24 who are on college campuses. Out of all of these attacks over 65% are not reported due to fear or victim shaming.

The results of such attacks lead to medical and financial issues. 81% of women who were attacked reported long and short term effect such as post traumatic stress disorder. Health care for women who have been sexually assaulted increases by 36%. The lifetime cost of rape per lifetime is \$122,461. Annually in the United State rape costs more than any other crime totaling a stacking 127 billion dollars, making it a very worthwhile problem to solve.



Experts

Our first expert we interviewed was Sylvia Starr. She is a Sexual Assault Advocate for Safenet Services; a shelter for women and children experiencing abuse. While there, victims receive food, clothes, and any other necessities. Sylvia Starr provides support groups and helps with referrals as well as assisting with hospital visits, legal proceedings and transportation services for participants.

The second expert we interviewed was Vicky Hershberger. She is a Claremore Public School Resource Officer, and she has been a police officer for six years. She also is a rape aggression defense class teacher within the community, where she has gotten a lot of experience working with rape survivors and other women who want to try to prevent sexual assault from ever happening to them by learning to protect themselves.

Expert 1: Sylvia Starr

Area of Expertise: Sexual Assault Advocate

Credentials: Certified Sexual Assault Personnel

Possible Needs That Should Be Addressed: Victim Shaming

Possible Ideas: Education and Awareness

Expert 2: Vicky Hershberger

Area of Expertise: Claremore Public School Resource Officer

Credentials: Rape Aggression Defense Instructor

Possible Needs That Should Be Addressed: Victim Shaming

Possible Ideas: Education and Situational Awareness

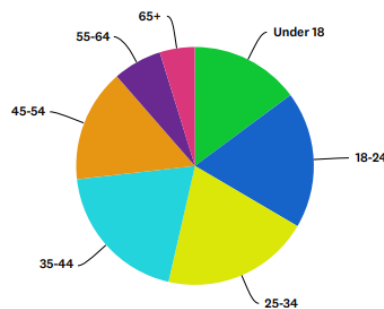
Consumer Research and Surveys

Women At Risk

SurveyMonkey

Q2 How old are you?

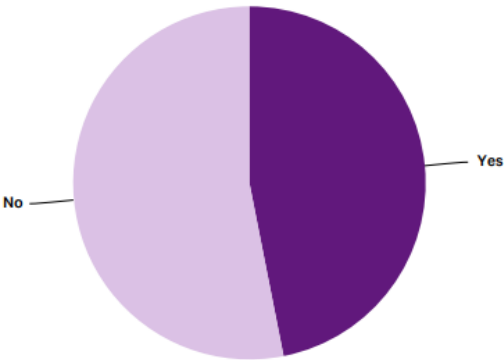
Answered: 586 Skipped: 3



ANSWER CHOICES	RESPONSES	
Under 18	14.85%	87
18-24	18.60%	109
25-34	20.14%	118
35-44	19.62%	115
45-54	15.36%	90
55-64	6.66%	39
65+	4.78%	28
TOTAL		586

Q3 Have you been a victim or an attempted victim of sexual assault?

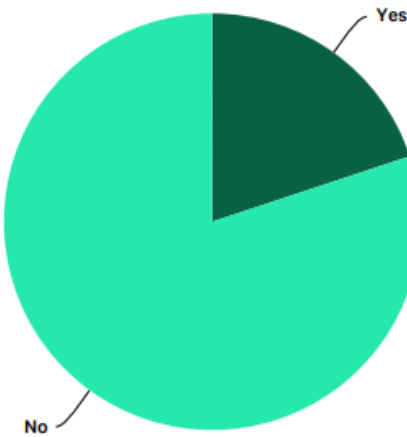
Answered: 582 Skipped: 7



ANSWER CHOICES	RESPONSES	
Yes	46.91%	273
No	53.09%	309
TOTAL		582

Q4 If you answered yes to the question above, have you reported it?

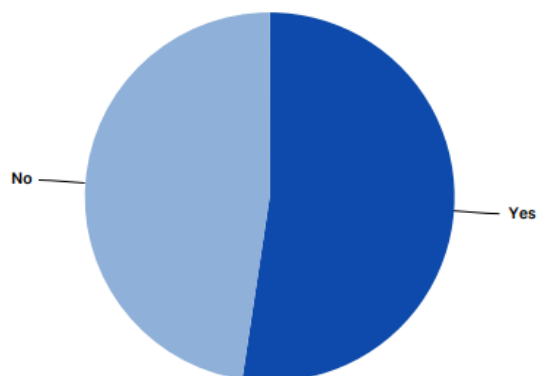
Answered: 582 Skipped: 7



ANSWER CHOICES	RESPONSES	
Yes	19.92%	53
No	80.08%	213
TOTAL		266

Q5 Have you bought anything to help prevent or to defend yourself in the event of an attack?

Answered: 584 Skipped: 5



ANSWER CHOICES	RESPONSES	
Yes	52.40%	306
No	47.60%	278
TOTAL		584

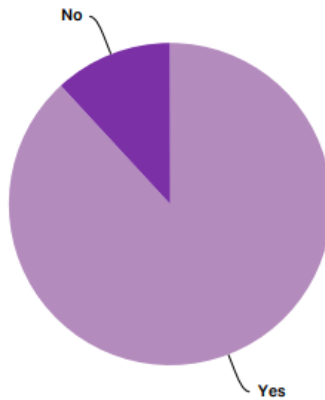
Q6 If you did buy something, what did you buy and did it work?

Answered: 407 Skipped: 182

34	Pepper Spray after attack. It didn't work. It was an attempted, acquaintance rape and fighting like hell and not being too intoxicated helped me fight him off.	9/17/2018 8:08 PM
60	Key chain and mace for when I had a job where I worked nights. Didn't use in my situation as it was a co-worker on a business trip that knocked on my hotel door and I let him in.	9/16/2018 10:57 AM
404	Pepper spray and a knife. No, I couldn't get into my bag or grab my lanyard because I was pinned down by five people	9/12/2018 8:50 AM
74	A little alarm as a key ring, but it went off at the wrong times, so I don't use it anymore.	9/16/2018 2:29 AM

Q7 If there was a product (not an app) that could allow you to get help in the event of an attack, would you buy it?

Answered: 582 Skipped: 7



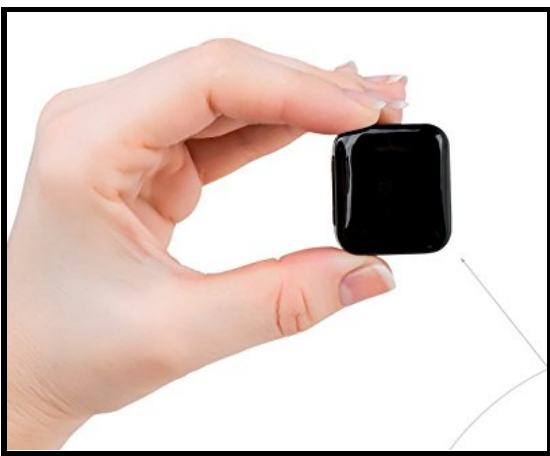
ANSWER CHOICES	RESPONSES
Yes	88.14% 513
No	11.86% 69
TOTAL	582

These survey results show that a large majority of women, of all ages experience sexual assault. Of these women eighty percent do not report it. In most cases these experiences can't be stopped because what women have to defend themselves doesn't work, they can't reach it, or they don't/can't have anything. The survey also shows that 88% of women would buy something to help them defend themselves or get help in case they were attacked.

Market Research



Ini Sabre Self-Defense Alarm



Mini Voice Recorder



130 dB Personal Alarm



Runner Personal Alarm



Pink Key Knife

Company Name	Sabre	ATTo Digital	Vigilant Personal Protection Systems	Sabre	Tanking
--------------	-------	--------------	--------------------------------------	-------	---------

Product Name	Personal Self-Defense Alarm On Key Ring	Mini Voice Recorder	130 dB Personal Alarm	Runner Personal Alarm	Pink Key Knife
Price	\$7.93	\$82.82	\$15.99	\$15.10	\$9.99
Specifics	Metal chain pin dual alarm with 120 dB siren	Voice activated recording device with 286 hours of recording. A 24 hour battery life and password protected memory.	A keychain personal alarm with push button, hidden off button, and backup manual whistle.	An arm strapped personal alarm that is triggered by pulling a metal ring.	A fold out knife disguised as an ordinary key.
Shortcoming	Never worked, was not durable. Alarm does not turn off when you put the pin back in. Alarm not very loud.	Can't access files on computer. Stops working after a month. Very low sound resolution and voice activation doesn't work.	It is easily activated by accident. The off button does not work and it is not loud enough.	The strap to carry it falls apart and is not secure. The alarm does not always work.	The knife is very difficult to open, especially without given time to do so.
Our Solution	Make the alarm louder. Make it discrete to turn the alarm off. Have it durable to wear and tear.	Make it easy to access files. Have stop/start option for recording. Disguise it inside something such as a necklace.	Use a switch instead of a button. Make a working off button that is completely concealed.	Make a more adjustable strap to secure the alarm. One that won't fall off.	Make the knife a lot easier to open, such as with the lick of a button and into something easier to find.

Scholarly Articles

Predictors of PTSD Symptom Severity and Social Reactions in Sexual Assault Victims

Summary: This article summarizes the analysis from demographics, assault variables, and post-assault responses as correlates of PTSD symptom severity in a sample of 323 sexual assault victims.

- 1/3 of female rape victims identified in community samples experienced PTSD at some time after assault.
- Rape appears to be more likely than other traumatic events to result in PTSD.
- Symptoms of PTSD include repeated thoughts of the assault; memories and nightmares; avoidance of thoughts, feelings, and situations related to the assault; and negative changes in thought and feelings.
- Analysis indicated that less education, greater perceived life threat, and receipt of more negative social reactions upon disclosing assault were each related to greater PTSD symptom severity.

Critique: This article explains the effects that sexual assault has on women; the most prevalent being severe forms of PTSD.

Attack Paths: Health and Safety

Addressing Domestic Violence Against Women: An Unfinished Agenda

Summary: Domestic violence is widespread, deeply ingrained and has serious impacts on women's health and well-being.

- Women are always considered weak vulnerable and in a position to be exploited.
- The gender imbalance in domestic violence is partly related to differences in physical strength and size.
- Violence not only causes physical injury, it also undermines the social, economic, psychological, spiritual and emotional well being of the victim, the perpetrator and the society as a whole.
- It has serious consequences on women's mental and physical health, including their reproductive and sexual health. These include injuries, gynecological problems, temporary or permanent disabilities, and depression and suicide.
- Over both the short term and the long term, women's physical injuries and mental trouble either interrupts, or ends, their educational and career paths leading to poverty and economic dependence.
- Victim's family life gets disrupted, leading to neglect and possible divorce.

Critique: This article explains how deeply violence can affect the victim and their surroundings. From health and economic problems to disruption of family life.

Attack Paths: Health and Safety, Economic

Prevalence and Characteristics of sexual violence, Stalking, and Intimate Partner Victimization-National Intimate Partner and Sexual Violence Survey, United States, 2011

Summary: This article breaks down statistics from the National Intimate Partner and Sexual Violence Survey (NISVS), which is a random digit phone survey that calls people aged 18 or older in the United States, in order to gather data.

- In the United States, an estimated 19.3% of women and 1.7% of men have been raped during their lifetimes.
- An estimated 43.9% of women and 23.4% of men experienced other forms of sexual violence during their lifetimes.
- Among female victims of completed rape, an estimated 78.7% were raped before the age of 25, with 40.4% experiencing rape before the age of 18.
- In 2011, they only had a 33.1% response rate, but the cooperation rate was high, at 83.5%.
 - The estimates presented likely underestimate the actual prevalence of these forms of violence.
 - Victims involved in violent relationships, or have been, are less likely to speak up about what happened which skews the result.

Critique: The article supports health and safety because it shows the statistics of how many people are affected by sexual assaults in their lives. It also supports Technical because it shows the statistics of people who speak up about their sexual assault when asked by an unknown person who can't connect it to them.

Attack paths: Health & Safety, and Technical

Sexual Assault of Women- American Family Physician

Summary: This article breaks down what a family physician should do in the situation that their patient is sexually assaulted. This covers immediate care and care years after an attack. It also goes over some statistics of sexual assault.

- Sexual assault affects up to $\frac{1}{3}$ of women in their lifetime.
- Sexual violence is underreported, and more than half of assaults are committed by someone known to the survivor.
- Some groups are more vulnerable, including adolescents; survivors of childhood sexual or physical abuse; people who are disabled; people with substance abuse problems; sex workers; poor or homeless people, and people living in prisons, institutions, or areas of military conflict.
- Immediate care includes treatment of injuries, prophylaxis for sexually transmitted infections, administration of emergency contraception to prevent pregnancy, and the sensitive management of psychological issues.

- Family physicians should collect evidence for a “rape kit” only if they are experienced in treating people who have been sexually assaulted because of the legal ramifications of improper collection and storage of evidence.
- Sexual assault may result in long term mental and physical problems; self destructive behaviors, chronic pelvic pain, and difficulty with pelvic examinations.
- Prevention of sexual assault is societal and should focus on public health education.
- Safety and support programs have been shown to reduce sexual assaults.

Critique: This article supports health and safety because it shows all of the things a physician should do in the instance that their patient is or was a victim of sexual assault. This article also supports Education as an attack path because it shows that if there were more education programs out there to both show women how to defend themselves, and men how to understand that sexual assault is not the answer, then the effect of sexual assault on society would be lessened.

Attack paths: Health & safety, and Education.

Impacts of Sexual Assault on Women

Summary: The article details statistics from the Australian Institute of Family Studies. In which they describe the psychological, physical, and financial costs of sexual assault.

- Psychological effects are anxiety, fears, devaluing of self, and long term effects of post traumatic stress disorder.
- The physical impacts of sexual assault are damage to urethra, damage to vagina, eating disorders, sexually transmitted disease, chronic diseases, and irritable bowel syndrome.
- Socially assault can cause fractured relationships, avoidance of social situations, vulnerability, fear of judgment, and lack of trust.
- Financially the victim can lose income, have to pay medical expenses of thousands of dollars, lose quality of life, and take on counseling expenses.

Critique: The article summarizes all short and long term mental, physical, and financial problems women face after sexual assault. This underlines the need to stop sexual assault by showing all the different impacts of sexual assault on victims.

Attack Paths: Health & Safety, Economics

Sexual Assault Key Issues

Summary: The article shows the after workings of sexual assault and the difficulty in which it is proven.

- Defines the sexual offenses act in accordance with any unconsented penetration illegal as well as any sexual act with a child of under 13 illegal.
- There is a very short time period in which forensic evidence can be collected to be used in prosecution making a lack of evidence in court.
- A third of people believe that rape is the woman's fault if she flirts, is intoxicated, or dresses provocatively.

Critique: The article shows the legal need in sexual assault cases because in most cases the victim is shamed for the attack and has no real evidence other than her/his word.

Attack Paths: Legal

Conclusion

Sexual assault is a problem worth solving because it affects so many people around the globe, listing at 81% of women and 43% of men being affected. Everyone that is a victim is impacted whether that be socially, financially, or health wise. Victim shaming is a major problem with sexual assault because the victim feels judged for being taken advantage of. A victim can potentially never recover health wise from an assault because 81% of women have short term or long term mental illnesses such as post traumatic stress disorder. Sexual assault heavily affects the economy by not only taking a lot of money out of victims pockets for medical expenses(averaging 122 thousand in a lifetime), but also by costing more than any other crime in the United States annually(over 127 billion dollars). This huge problem is also one of the hardest to solve with 65% going unreported and a severe lack of evidence in court due to forensic deadlines. Sexual assault changes so many things in society and is only now just coming into light about just how big of a problem it is.

Work Cited

- (2018), *Victims of Sexual Violence Statistics*.
<https://www.rainn.org/statistics/victims-sexual-violence>
- (2018), *Total Population in the United States by gender from 2010 to 2023*.
<https://www.statista.com/statistics/737923/us-population-by-gender/>
- (2018), *Get Statistics*. <https://www.nsvrc.org/statistics>
- Boyd, C. (2011, April), The impacts of sexual assault on women.
<https://aifs.gov.au/publications/impacts-sexual-assault-women>
- Cybulska, B. (2007, July), Sexual Assault: key issues.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1905867/>
- Sabre Personal Self-Defense Alarm On Key Ring -
https://www.amazon.com/SABRE-Personal-Self-Defense-Safety-meters/dp/B00F0MY5HM/ref=cm_cr_ar_p_d_product_top?ie=UTF8
- ATTo Digital Mini Voice Recorder -
https://www.amazon.com/Mini-Voice-Recorder-Recordings-Protection/dp/B01N5QLWED/ref=cm_cr_ar_p_d_product_top?ie=UTF8
- Vigilant Personal Protection Systems 130 dB Personal Alarm -
https://www.amazon.com/Vigilant-130dB-Personal-Alarm-Activated/dp/B00FX2PFFK/ref=cm_cr_ar_p_d_product_top?ie=UTF8
- Sabre Runner Personal Alarm -
https://www.amazon.com/SABRE-Runner-Personal-Alarm-Weather-Resistant/dp/B01AZ37LAI/ref=cm_cr_ar_p_d_product_top?ie=UTF8
- Tanking Pink Key Knife -
https://www.amazon.com/TANKING-Shaped-Folding-Defense-Keychain/product-reviews/B01NBICV9C/ref=cm_cr_ar_p_d_paging_btm_2?ie=UTF8&filterByStar=one_star&reviewerType=all_reviews&pageNumber=2#reviews-filter-bar
- (2018), *About Sexual Assault*. <https://victimlawyer.com/about-sexual-assault/>
- Breiding, M. J. (2014, September 5), *Prevalence and Characteristics of sexual violence, stalking, and intimate partner victimization - national intimate partner and sexual violence survey, United States, 2011*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4692457/>
- (2018, February), *Sexual assault of women*.
<https://europepmc.org/abstract/med/20148503>
- (2017), *Fighting Rape culture begins with proactivity*.
<https://www.themaneater.com/stories/uwire/fighting-rape-culture-begins-proactivity>
- Senthilingam, M. (2017, September 29), *Sexual harassment: how it stands around the*

world.<https://www.cnn.com/2017/11/25/health/sexual-harassment-violence-abuse-global-levels/index.html>

- (2017, May 20), *Preventing Violence against Women & Children*.
<https://www.fdlwomensfund.com/preventing-violence-against-women-children-2018-2020/>
- (2018), 2018 Study on Sexual Harassment and Assault.
<http://www.stopstreetharassment.org/resources/2018-national-sexual-abuse-report/>
- Ullman, S. E. (2001, April), *Predictors of PTSD Symptom Severity and Social REactions in Sexual Assault Victims*.<https://link.springer.com/article/10.1023/A:1011125220522>
- Ravneet, K. (2008, April), *Addressing Domestic Violence against Women: An Unfinished Agenda*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2784629/>