

THE INFLUENCE OF PERSONAL NARRATIVE INFORMATION ON ATTITUDES
TOWARDS SYRINGE EXCHANGE PROGRAMS

by

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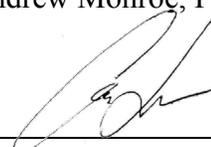
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Attitudes Towards Syringe Exchange Programs

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Abstract

With the current opioid epidemic in the United States, cities across the United States are increasingly considering Syringe Exchange Programs (SEPs). SEPs allow people to anonymously dispose of used syringes and acquire new, sterile syringes, and have been shown to reduce the incidence of HIV and other diseases. Despite the effectiveness, these programs are often met with resistance. The present project compares two possible methods for changing attitudes about SEP's: providing statistical information about a program's effectiveness (e.g., 20% reduction) and providing personal narrative information (e.g., a description of an individual's experiences) about how a program helped a specific individual. In our study all participants received basic information about SEPs followed by either statistical information, narrative information, or a combination of the two, and then we assessed participants' attitudes towards using government money to fund a local SEP. Overall, people's attitudes became more supportive after reading the information. However, the amount of improvement was similar across all three conditions.

The Influence of Personal Narrative Information on Attitudes Towards Syringe Exchange Programs

Syringe exchange programs (SEPs) offer a valuable resource to people who are suffering from drug addiction. These programs allow individuals to anonymously dispose of used syringes and exchange them for new, sterile ones. According to the Centers for Disease Control and Prevention (CDC), intravenous drug use is one of the most common means of contracting HIV in the United States. To assist people in minimizing harm from illegal substances, SEPs also provide educational materials, mental health services, and naloxone kits. To assist people in minimizing the harm from illegal substances, SEPs also provide educational materials, mental health services, and naloxone kits. Despite the benefits of syringe exchange programs, many people are unaware of these programs and, perhaps more problematic, may have negative attitudes towards the programs when they initially hear about them (Blau, 2019). In this study, we examined a method of informing people about syringe exchange programs and increasing their attitudes towards funding these beneficial programs. Specifically, we investigated the influence of personal narratives (i.e., descriptive accounts of individual experiences) on people's attitudes towards syringe exchange programs.

Narratives have been studied extensively as a means of influencing an individual's attitudes (e.g., Graaf et al., 2012; Green & Brock, 2000; Zhou & Niederdeppe, 2017). Narratives have been used to influence attitudes in many different contexts, such as empathy, character identification, and cancer treatment (Kreuter et al., 2007). For example, narratives have been used to influence attitudes and behaviors pertaining to pre-diagnosis (i.e., sun protection and mammography) and post-diagnosis cancer behaviors (i.e., informed decision making and coping).

Kreuter et al. (2007) described several narrative techniques, such as demonstrating healthy behaviors and displaying the benefits of early detection. For example, a person reading a narrative about a woman engaging in the behavior of obtaining a mammogram will be able to better understand and prepare for the actual mammogram (Kreuter et al., 2007). This tool can be used to influence people's likelihood to engage in behaviors. Importantly, narratives are often more influential in changing people's attitudes and behaviors than being presented with statistics about the effectiveness of a treatment (e.g., "Mammography screening reduces mortality from breast cancer by 20%").

Erwin, Spatz, and Turturro (1992) examined the effectiveness of narratives in a study that looked at using modeling as an intervention to increase breast self-examination and mammography in African American women. Participants read about a person of the same race and cultural background as the patients who engaged in breast-cancer prevention practices. Reading about the narratives helped to educate women about prevention practices and, as a result, participants were more likely to engage in breast self-examination and mammography relative to people who did not read a narrative.

Although narratives are effective at influencing people's attitudes and behavior, not every narrative is equally effective. One factor that can impact the effectiveness of a narrative is how much a reader is absorbed into the information they are reading—this is referred to as transportation (Green & Brock, 2000). A narrative that is high in transportation allows the reader to imagine being in the situation of the person described in the narrative and is more likely to cause readers to experience stronger emotional responses, vivid mental images, and a stronger connection to information in the story. Crafting narratives that are higher in transportation increases the effectiveness of the narrative in influencing the target attitude or behavior.

Green and Brock (2000) conducted three studies examining the impact of transportation on attitude and belief change. In one study, participants read a narrative about a college student's sister, Katie, who was stabbed at a mall by a psychiatric patient. The participants were either assigned to read the narrative as fiction or nonfiction. When the narrative was described as nonfiction, participants reported that they were more likely to be transported by the narrative. Furthermore, the authors found that transportation was associated with more beliefs in line with the views of the story (as opposed to real world beliefs/information) and positive views of the narrative protagonists.

In addition to transportation, narratives that are personalized to the reader tend to be more effective (Zhou & Niederdeppe, 2017). Zhou and Niederdeppe reviewed three major factors that increase the personalization of narratives: Identifiability, Individualization, and Inner states descriptions.

Identification is when individuals take the perspective of the character they are reading about and see the events through their eyes (Graaf et al., 2012). In other words, people who identify with the character in a narrative are empathizing with the character's situation. Zhou and Niederdeppe (2017) add that identifiable information such as photos and names can increase personalization. Through Identification, a reader may change their beliefs based on their new understanding of the events and experiences in the narrative. Graaf et al. (2012) asked participants to read a narrative about a job interview for a web designer position. Participants were asked to either read the narrative from the perspective of the programmer or the applicant, a man in a wheelchair. Perspective was established in the narrative by using "I" for the character participants were taking the perspective of. The characters' thoughts were also added into the

narrative. Graaf et al. found that the participants identified most with the character whose perspective they took.

After identification, a second factor described by Zhou and Niederdeppe (2017) used for increasing the personalization in narratives is Individualization. This is where a narrative focuses on the description of a single individual, as opposed to a group (Zhou & Niederdeppe, 2017). When people are presented with an individual case, they pay more attention, recall the information in the narrative better, and change their beliefs and behaviors more than they would for a collective case. Additionally, people feel more distress when presented with misfortunes of an individual than they do when presented with misfortunes of a group (Kogut & Ritov, 2005; Västfjäll et al., 2014). For example, a description of a single person who has been diagnosed with cancer is likely to create more distress than learning about the thousands of people who get diagnosed with cancer.

Describing a character's unique thoughts and feelings is known as inner states descriptions (Zhou & Niederdeppe, 2017). Adding information about the character's cognitive or affective state can increase the reader's overall understanding of the character's experience. Zhou and Niederdeppe (2017) provide the example of a mother who does not earn a lot of income but she wanted to buy milk for her daughter. She believed she had purchased good milk for her daughter, but it was actually spoiled. The mother believed she was doing a positive thing for her daughter and her intentions were good. This example highlights the mother's intentions and her thoughts about the situation, not just the objective situation at hand (Zhou & Niederdeppe, 2017).

An important feature of narratives is that they give identifiable information about a specific individual. A closely related phenomenon is the identifiable victim effect (IVE). The

IVE states a person will offer greater support for an identifiable victim than for an anonymous, statistical victim. For example, Kogut and Ritov (2005) found that participants were more likely to contribute funds to a charity when they read about a single identified child (age, name, and picture) than when they read about a large group of children in need. This is, of course, problematic because more money is necessary to help larger groups of people, relative to individuals.

One explanation for the IVE is that people feel stronger emotional responses when learning about a single identified victim, as opposed to a statistical victim (Kogut & Ritov, 2005). For example, Lee and Feeley (2018) told some participants about a child who was suffering from hunger and lived in poverty. This information included identifying information about the child (age and name) as well as a picture. Other participants were given statistical information about the thousands of children who suffer from hunger and live in poverty. When participants read information about a single identified victim, participants reported feeling higher levels of distress and empathy as compared to the participants who received the statistical information. These emotions offer a potential explanation for the motivation to help the identified victim (Kogut & Ritov, 2005).

Current Study

Evidence from previous research on the influence of narratives as well as the identifiable victim effect has shown that identifying information is an effective method of changing attitudes in various contexts. Based on the body of literature supporting narratives as a means for attitude change, the current study examined their effectiveness for changing attitudes about syringe exchange programs.

In the current study, participants were given a pre-information questionnaire about their attitudes about using government funds to create a SEP in Boone and another question assessing their support for creating a SEP somewhere in North Carolina. All participants were then given basic information about SEPs and harm reduction programs. Participants were randomly assigned to either a narrative condition, statistical information condition, or a combination of each type of information. After reading this information, participants were given the same questionnaires assessing their attitudes about government funds to create SEPs. We predicted that (1) people's attitudes would be more positive after learning about the SEPs than before; (2) attitudes toward SEPs would be more positive when the SEP was distant (i.e., somewhere in North Carolina) than when it was local, and (3) that the increase in positive attitudes toward SEP's would be larger in the narrative and combination conditions, relative to the statistics condition.

Method

Participants

Participants were 224 undergraduate students from the psychology department of a southeastern university. Among the participants, 19.64% were male, 78.12% were female, 0.9% were transgender, and 1.3% preferred a response not listed. The average age of the participants was 19.9 years of age ($SD = 1.63$). Participants received course credit in the psychology department for completing the study.

Design

Participants were randomly assigned to one of three information conditions: narrative information, statistical information, or a combination of each. Each participant was given pre-information and post-information questions about their attitudes toward the syringe exchange

programs. The pre-information and post-information included questions about Boone and North Carolina, in general. The information condition varied between subjects, while the time and location varied within subjects. This study was a 3 (information: narrative, statistics, combination) x 2 (location: Boone vs. North Carolina) x 2 (time: pre-information vs. post-information) factorial design.

Procedure

In this online survey, participants were first greeted with an informed consent document reviewing the risks and benefits of the study. Each participant was given instructions to do their best with their current understanding of syringe exchange programs and that they would be given more information later in the study. Participants were then each asked, “Based on what you know right now, how supportive would you be of government funding being allocated to open a syringe exchange program site in **Boone, North Carolina?**” Participants responded on a seven-point response scale (1 = not at all supportive, 7 = extremely supportive). Participants were then asked, “Based on what you know right now, how supportive would you be of government funding being allocated to open a syringe exchange program site **somewhere in North Carolina?**” and again responded on a seven-point response scale. After answering these questions, each participant was presented with background information about syringe exchange programs and intravenous drug use (see Appendix A).

Next, participants were randomly assigned to one of three information conditions. Participants either received statistical information, narrative information, or a combination of each type of information. Participants in the statistical information condition received statistics pertaining to the effectiveness of syringe exchange programs (see Appendix B). Participants in the narrative information condition were shown a photograph of “Taylor” along with a

description of her personal experience with intravenous drug use and how she could benefit from an SEP (see Appendix C). Participants in the combination condition were shown the statistical information first and then the narrative information.

After the information manipulation, participants were presented with the post-information question. Each participant was asked, “Based on everything you’ve learned, how supportive would you be of government funding being allocated to open a syringe exchange program site in **Boone, North Carolina?**” Participants responded using a seven-point response scale (1 = not at all supportive, 7 = extremely supportive). Each participant was also asked, “Based on everything you’ve learned how supportive would you be of government funding being allocated to open a syringe exchange program site **somewhere in North Carolina?**” and again responded on a seven-point response scale.

At the end of the study, participants were asked a number of follow up questions (see Appendix D). Specifically, we asked participants about their familiarity with syringe exchange programs and intravenous drug use before this study, religiosity, political affiliation, age, and gender identity.

Results

In order to test my hypotheses, I conducted a 3 (information: narrative, statistics, combination) x 2 (location: Boone vs. North Carolina) x 2 (time: pre-information vs. post-information) ANOVA on participants’ support for governmental funding for SEPs (see Figure 1). This analysis found a main effect of time, $F(1, 220) = 132.20, p < .001, \eta_p^2 = .375$. This indicates that participants’ attitudes were more supportive in the questions following the information about SEPs (i.e., the post-information questions) than before receiving the information (i.e., the pre-information questions). There was also a main effect of location, $F(1,$

220) = 48.80, $p < .001$, $\eta_p^2 = .182$, reflecting that participants' judgments were higher for North Carolina than Boone. There was not a main effect of condition, $F(2, 220) = 0.26$, $p = .775$, $\eta_p^2 = .002$. Most importantly, there was not a time X condition interaction, $F(2, 220) = 0.255$, $p = .775$, $\eta_p^2 = 0.002$. This means that the increase from pre-information to post-information was similar across the narrative, statistics, and combination conditions. This does not support our hypothesis that judgments would improve in the narrative and combination conditions, relative to the statistics conditions. The interaction between time and location was not significant, $F(1, 220) = 1.189$, $p = .277$, $\eta_p^2 = 0.005$. The interaction between location and condition was not significant, $F(2, 220) = 1.362$, $p = .258$, $\eta_p^2 = 0.012$. Lastly, the interaction between time, location, and condition was not significant, $F(2, 220) = 1.175$, $p = .311$, $\eta_p^2 = 0.011$.

Discussion

This study was designed to examine whether the presence of personal narratives about intravenous drug use could positively influence people's attitudes about SEPs. We hypothesized that people's attitudes would be more positive after learning about the SEPs than before; attitudes would be more positive when asking participants about establishing SEP's more generally in North Carolina than for locally in Boone, and that the increase in positive attitudes from pre-information to post-information would be larger in the narrative conditions relative to the statistics condition. Results reveal partial support for these predictions. People's attitudes were more positive after learning about SEPs than before. Additionally, we found that people were more supportive of establishing SEPs when they were distant (i.e., somewhere in North Carolina) than when they were local (i.e., Boone). However, we found no evidence that the type of information used for educating people about SEPs affected people's attitudes. Instead we

showed an increase in positive attitudes from the pre-information to post-information regardless of the specific information we used.

The increase from pre-information to post-information can potentially be explained by the background information and information manipulations. Participants likely started off the study with varying levels of understanding of SEPs. After learning definitions, statistics of efficacy, and potentially reading a personal narrative, participants likely gained an understanding of the effectiveness of SEPs. This understanding may have led to their attitude change from the pre-information to the post-information.

Another potential explanation for this increase in attitudes from pre-information to post-information would be a demand characteristic. It is possible that participants became aware of the expected results of our study and answered based on what they believed to be the desirable answer. In other words, their attitudes did not actually change from reading the information presented in the study, but they responded more positively in the post test because they assumed that was the purpose of the information they just read.

A possible explanation for the higher responses for North Carolina as compared to Boone might be a “not in my backyard” phenomenon. Participants in this study were students at a university in the town of Boone, North Carolina. Having an SEP in Boone is much more local or relevant to that audience than the state of North Carolina as a whole. Participants may have potentially felt comfortable with the idea somewhere else, but not in their own town.

There are several possible explanations as to why the personal narrative did not influence attitudes more than statistics. One possible explanation would be the narrative we used discussed the lack of access to a SEP and the negative consequences from that. Rather than addressing the benefits and the positive aspects of the SEP, the narrative addressed the issues that arise without

them. Writing in this negative tone could have might have given readers a negative perception of SEP. Another option would have been to discuss what the positive results would have been if there had been access to an SEP. This perspective may have played a role in the narrative not having as much of an impact.

Another possible implication would be the usage of the narrative personalization factors. In this narrative we utilized factors such as identification, individualization, and naming an identifiable victim. Other ways to personalize narratives include using inner states descriptions (how the character feels). It is possible our narrative was lacking components that may have increased attitude change for SEPs. The addition of inner states descriptions in our narrative would have given participants the opportunity to know how Taylor, the main character, was feeling and what she was thinking. This would have added a subjective, personal layer to the objective scenario we described in our narrative.

Limitations to this study include the participant pool. Participants were all undergraduate psychology students from a southeastern university. Participants were an average age of 19.9. With our sample size averaging at the age of 19.9, there could potentially be generational effects. Older people and younger people might have different attitudes about funding syringe exchange programs. There could even be differences among older people and younger people about attitudes for criminalization of drugs. Younger people also have less life experience compared to older people. Life experience could play into the way a person responds to this survey.

Syringe exchange programs are viewed as a progressive idea in the United States culture. Additionally, political affiliation could skew the results of this study. In our exploratory analyses we found a negative relationship between political orientation and attitudes toward SEPs. This means as conservative views increase, support for SEPs decreases. Conservative individuals tend

to have less sympathetic views toward drug use and typically advocate for more hardline policies, which could place them at odds with SEPs.

Future research should include a wider range of participants so that the results can be generalized to other populations. Despite these limitations, this study reveals that people's attitudes toward SEPs can improve with a relatively small amount of information. While the type of information did not have the predicted effect, this research is still beneficial in improving attitudes toward SEPs.

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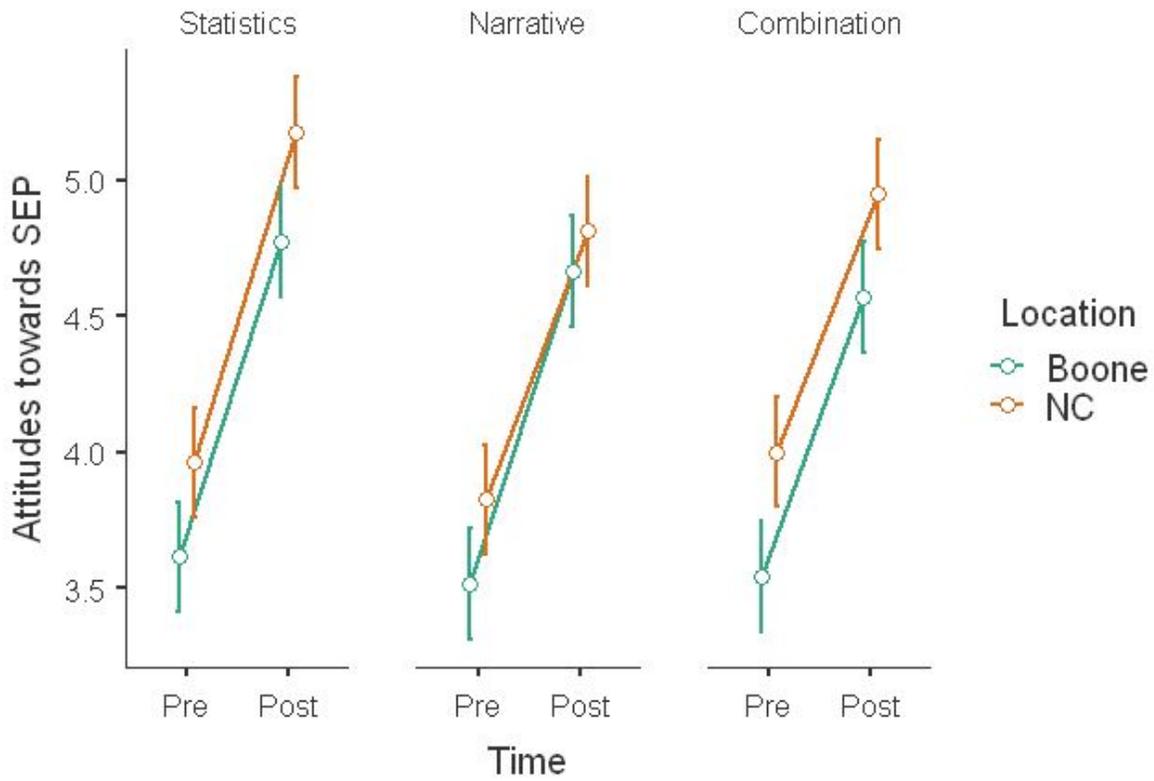


Figure 1. Participant Support for Syringe Exchange Programs Before and After Assignment to Information Conditions

Appendix A

Harm reduction programs are focused on minimizing the harm associated with drug use. Harm reduction recognizes that many people who are misusing substances are not ready for treatment and therefore abstinence is not the goal for these people. The goal is to limit the risks associated with the drug use that is occurring.

According to the Centers for Disease Control and Prevention (CDC), Injection Drug Use (IDU) increases the risk for contracting viruses such as Human Immunodeficiency Virus (HIV) and Hepatitis C virus (HCV). Sharing needles offers a direct route for the disease to enter the bloodstream. People who inject drugs can significantly decrease their risk of acquiring and transmitting HIV, HBV, and HCV by using a sterile needle or syringe for every injection. However, there are barriers such as prescription requirements and legal restrictions on needle possession that prevent access to clean needles. In efforts to reduce the transmission of blood-borne pathogens (like HIV and HCV), legislative policies have been passed in 16 states, including North Carolina, authorizing needle and syringe exchange sites.

Syringe exchange programs allow individuals to anonymously dispose of used needles and acquire new, sterile needles. These services are free of charge. Without syringe exchange programs, individuals need a prescription in order to legally obtain clean needles. The syringe exchange programs provide security on site, educational materials, naloxone kits, and personal consultations for mental health and substance use disorder treatment. In addition to providing information about quitting, the goal of syringe exchange programs is to help people who have the goal of quitting or reducing their drug use, but are still using drugs. There are currently 31 Syringe Exchange Programs (SEP) across the state of North Carolina permitted to distribute clean needles and safely dispose of used needles.

Appendix B

According to the Center for Disease Control and Prevention:

- In the United States, Injection Drug Use has been found to be one of the most common means of HIV transmission.
- In 2016, injection drug use (IDU) contributed to nearly 20% of recorded HIV cases.
- Numerous studies have looked at the effectiveness of syringe exchange programs in reducing HIV transmission.
 - A series of three-year longitudinal studies examining New York's legislation of Syringe Exchange Programs from 1990-2002 showed decreases in HIV prevalence from 50% to 17%. In other words, the prevalence of HIV among drug users in that area decreased from 50% to 17% after the syringe exchange programs were implemented.
 - Examination of the District of Columbia's lift of the congressional ban on Syringe Exchange Programs, which allowed the Washington D.C. Department of Health and Human Services to initiate a Syringe Exchange Program, showed a 70% decrease in new HIV cases among Injection Drug Users and a total of 120 HIV cases averted in two years.

Appendix C



Taylor lives in North Carolina. She grew up in a small, rural town. Like many of her peers, she began using illegal drugs recreationally as a teenager to connect socially. As Taylor continued using drugs, she became addicted, using them more frequently. She has been injecting cocaine for a few years. Taylor tried to get sober a few times. In addition to trying to quit, she also wanted to use clean needles so she could reduce the chance that she would get a disease like HIV from her drug use. Unfortunately, Taylor did not have access to a Syringe Exchange Program. Therefore, she had no way to obtain clean needles, as needles can only be purchased with a prescription from a doctor. Like many other individuals who inject drugs, she has been sharing needles with other people to inject drugs. By sharing needles, Taylor increased her risk for contracting blood-borne diseases and other illnesses. After a couple years of sharing needles, she contracted HIV and Hepatitis C. Recently, Taylor's health has been rapidly declining. If she had access to clean needles during the time that she was trying to quit using cocaine, it is possible that she would not have contracted HIV and Hepatitis C.

Appendix D

Before participating in this study, how familiar were you with syringe exchange programs?
Not at all familiar - Somewhat Familiar - Moderately Familiar - Very Familiar - Extremely Familiar

As a reminder, your answers to this question will remain confidential.
Do you know anyone who has injected illicit drugs?

Yes
No
Unsure
Prefer not to answer

How Important is religion to you?

Not at all important - Somewhat Important - Moderately Important - Very Important

With regards to your political view, how would you classify yourself?

Very Liberal - Moderately Liberal - Neither Liberal nor Conservative - Moderately Conservative
- Very Conservative

What is your current age?

What is your gender?

Man

Woman

Transgender

Preferred response not listed (please type preferred response)

Prefer not to answer