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Stigma Reduction on Reproductive Health

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Abstract

Women who seek abortion services face a myriad of barriers, stigma being one of the most prominent. Stigma can consist of impersonal structural barriers such as laws and regulations, or it can be as intimate as community beliefs and interpersonal reactions. These kinds of stigma can cause emotional, financial, and psychological distress and a feeling of isolation. To reduce stigma, a web-based interactive narrative was created as an abortion stigma reduction intervention. Once created, a study was conducted to gather data on the feasibility of the narrative. The aim of this paper is to analyze the feasibility of an abortion stigma-based interactive narrative. Participants (n=45) involved in this study were college students taking a Public Health course, and a mixed methods survey was used to collect data after participants played the interactive narrative. Students were surprised to learn about cost/finances; sixty-eight percent felt that they learned a lot from the interactive narrative, and their main takeaway from the narrative was that abortion stigma is more prevalent in nontraditional ways than originally thought. Based on the findings, the intervention was found to be promising and feasible. The results gathered will be used for process evaluation to guide future improvements.

Introduction

Abortion, while being the most debated reproductive health service, is a safe and common procedure and a right in healthcare. Reproductive health and rights are fundamental to one's health and survival and deserve respect and protection. Reproductive healthcare services are often stigmatized, and much discourse exists surrounding access to and having an abortion. Healthcare rights are affected at the local level. Although national policies must be followed, local policies can provide safety and security or severely restrict access. Engaging in community-based research (CBR) is one way that researchers and policymakers can protect local healthcare rights. Community-based research offers researchers the ability to identify and address health policy questions at the local level (O'Brien & Whitaker, 2011). Community-based intervention research can also be effective at changing local beliefs and attitudes and increasing support for stigmatized populations and health issues.

Stigma affects mental health, social relations, and even health outcomes (Cook & Dickens, 2014; Turan & Budhwani, 2021). To mitigate these symptoms, the stigma surrounding reproductive healthcare and abortion services needs to be reduced. The intervention tested in this study for stigma reduction is an innovative tool (a web-based interactive narrative) on abortion stigma. This study was designed to test the feasibility and acceptability of the narrative for general audiences. This initial pilot test was conducted with college students. The purpose of testing this interactive narrative on general audiences is to bypass a barrier typical of community-based research: being able to translate the research from the academic institution to the community (Krishnan et al.). Typically, in community-based research, there is a conduit involved, either a community stakeholder or partner, that brings together the research entity and the community (Krishnan et al.). In our case, being situated as part of the college community allows direct access to our target community without the addition of a conduit.

The tool chosen for this project, an interactive narrative, is a genre of immersive storytelling that allows the reader to participate in the story and choose among multiple options on a decision tree. This immersive experience can increase empathy for the protagonist (Saffran, 2014), but it is contended that interactive narratives can move beyond such subjective individual identification to make apparent extant institutional and systemic operations of stigma and shame that index barriers to care. Interactive narratives have the potential to change attitudes and beliefs around stigmatized and/or controversial topics at the individual, community, and institutional levels. This article will describe the implementation, the results, and the feasibility and acceptability of an interactive narrative designed to reduce the stigma associated with obtaining abortion services.

To mitigate abortion stigma and reduce harm, it is important to understand why someone would seek an abortion in the first place. This interactive narrative was designed to take a player through the mind of a woman who has determined that an abortion is needed, how and why that decision was made, and the process of attaining the medical procedure. Stigmatization is a deeply contextual, dynamic social process that disgraces individuals through particular attributes that he or she hold in violation of particular social expectations. Kumar, Hessini, and Mitchell (2009, p. 628) defined abortion stigma as "a negative attribute ascribed to women who seek to terminate a pregnancy that marks them, internally or externally, as inferior to ideals of womanhood." Consequently, those who are stigmatized by abortion have to deal with the associated abortion stigma as well as manage the stress of whether or not the stigma will be revealed (Quinn & Chaudoir, 2009). Such acts of stigma serve as a barrier to enacting change towards existing abortion laws. For example, in the United States, legal restrictions such as parental consent requirements, gestational limits, waiting periods, and mandated ultrasound viewing have increased the difficulty for women to obtain abortions and, subsequently, reinforce the notion that abortion is morally wrong. What's more, the overturning of Roe v Wade in June 2022 led to a marked increase in legal restrictions in multiple states (Center for Reproductive Rights, 2023).

Steps to combat these barriers can start small, such as reducing stigma, but grow into something large enough to take on structural barriers, like decriminalizing abortion and federalizing it as an individual's right in healthcare. The barriers to care, such as the aforementioned waiting periods and mandated ultrasound viewings, would need to be eliminated as checkmarks to receive an abortion. Through community-based research, communities have increased the legitimacy of their work among funders, other stakeholders, and, most importantly, policymakers ("Benefits of Community Engaged Research," n.d.). At its very core, community-based research's goal is to ensure that all participants get what they need ("Benefits of Community Engaged Research," n.d.). Our goal is to examine the feasibility and acceptability here, but more broadly, effect change to ensure that members of every community receive the healthcare they need.

Interactive narratives can be an effective means of reducing stigma because they facilitate experiences and serve as critical impetuses to take action in solidarity with people whose lives and experiences are unlike their own (Singding et al., 2016). Stigma theory describes multiple levels of stigma, broken down into eight different types: public, self, label avoidance, courtesy, stigma power, automatic stigma, and double or multiple stigmas (Sheehan et al., 2016). This interactive narrative focuses on community, self, and public stigma (specifically, structural stigma). When abortion stigma is felt on these three levels, it creates effects in women that affect their well-being beyond the actual healthcare services: women can experience negative physiological consequences and will often forgo reproductive care (Cook & Dickens, 2014; Turan & Budhwani, 2021). This is not because women are stigmatized for seeking reproductive care itself but rather because abortion stigma manifests as negative stereotypes, prejudice, and discrimination. Interactive narratives have been applied to changes in empathy and prejudice (Parrott et al., 2017), but their utility in creating awareness and altering attitudes with structural-level issues has been under-explored.

Interactive narratives offer the opportunity to illuminate structural stigma to demographics that may not traditionally be exposed to the realities of abortion. Reducing stigma amongst the general public can increase the likelihood that the public will make informed decisions. When voters are armed with knowledge and are presented with extremes, voters show up and give their opinions. A prime example of this is the state of Ohio in this past election cycle, voting to "Enshrine the right to abortion in the State Constitution" (Zernike, 2023). The experience of going to school for an undergraduate degree is characterized as a time of realization, self-discovery, and meeting people most unlike you. Put simply, it is a time of growth. Choosing college students as the target community and exposing participants to the realities of the decision-making process of an abortion for the feasibility study was because a goal of CBR is to learn from the community: knowing what is effective in reaching our audience and what kinds of information are meaningful to them. Educating participants is not simply about expunging false information and stereotypes but about equipping participants with the knowledge that stigma permeates across levels.

The interactive narrative tested in this study contains a fictionalized instance of an abortion (fictionalized in the sense that the story presented in the interactive narrative is a composite of multiple firsthand accounts), and participants were asked about liking the narrative, realism immersion, and control. To gauge feasibility and acceptability, end-user responses to the abortion stigma interactive narrative have been assessed. The results will increase the understanding of how these unique educational initiatives work and will provide important feedback in the development of the narrative.

Methods

The first step in this project was an analysis of stigma theory and how the different types of stigma (self, social, and structural) lend themselves to reproductive healthcare. The articles gathered were used to conduct a thorough literature review on abortion stigma. This was a qualitative analysis of sources that broke down the different types of stigma and how self, social, and structural stigma looks when it comes to access to and the process of receiving an abortion.

Once the literature review was completed, autobiographical accounts were reviewed, focused on the narrator's account of barriers, women receiving abortions, inequity, and stigma. Firsthand accounts were gathered from sources including qualitative research studies, memoirs and articles written for activism purposes, and other fictionalized accounts put together from works of truth. After gathering approximately 15 accounts, a narrative analysis was conducted to guide storyline development for the interactive narrative (Coulter & Smith, 2009). Narrative analysis included identifying story elements (characters, plot, setting, etc.), and those elements were used to "re-story" original fragmented narratives into a holistic account that aids in the interpretation of the phenomenon being investigated.

After the narrative analysis was completed and the protagonist decided on, the interactive narrative was built using Twine software ("Twine / an Open-source Tool for Telling Interactive, Nonlinear Stories," n.d.). The protagonist of the interactive narrative is a mother of two young children who accidentally gets pregnant before her second child's second birthday. She is a stay-at-home mom, and their finances are tight; a third child was not in the family's plans, and her decision is to terminate the pregnancy. Over half of women (61%) who seek an abortion are already mothers (Finer, 2022). This character was chosen to reflect data that is surprising to many yet truthful to real experiences.

Data Collection

During the Spring semester of 2023, the interactive narrative and study design were submitted for IRB approval and approved for participant use. Participants were asked to play through the narrative and then complete a short survey. The survey contained quantitative and qualitative items. Quantitative items assessed the acceptability of the interactive narrative (4 items using a 3-point Likert scale) and the amount of narrative transportation and persuasion experienced (8 items using a 7-point Likert scale). Acceptability items included “How much did you like the narrative?” “How likely are you to recommend it to a friend?” “How likely are you to use the narrative on your own?” and “How much did you feel you learned?” Narrative Transportation and Persuasion items assessed how responsible the participant felt for the outcome and decisions, the level of realism of the narrative, connections to the character, and immersion in the narrative. The survey ended with five open-ended questions that detailed the impact of playing through the interactive narrative. Quantitative questions were taken from Parrott, Carpentier, and Northup (2017), and qualitative ones were taken from Steinemann and colleagues (2017) and Green and Jenkins (2020). No identifying data were collected from the participants, and Qualtrics was used as the survey host.

The population selected for this study were college students in the Public Health major elective courses, and the interactive narratives were offered alongside two alternative interactive narratives as extra credit in the course during the second half of the semester. Participants chose one option to play through; at the end of the alternative assignments, there was a short written reflection to be completed for extra credit. At the end of each reflection and the questionnaire, there was a generic statement saying thank you and please submit this screenshot for extra credit. The screen was made to look the same for all three, so neither the researcher nor the professor knew which assignment the student chose to complete.

Data Analysis

Data used in the analysis had to meet certain criteria: a fully completed survey had to be submitted, and the time captured of the duration of the survey had to be over 90 seconds. Of the completed surveys in the research study, 45 were kept as valid surveys. Survey questions were separated into three parts: Acceptability (close-ended items using a three-point Likert scale), Narrative Transportation and Persuasion (close-ended seven-point Likert scale questions), and qualitative (open-ended) questions. Descriptive statistics were used to examine close-ended responses, and a thematic analysis was applied to open-ended responses. Themes were examined across questions rather than within each specific question. Data and results are reported in this fashion.

Results

The results of the study showed positive ratings for the interactive narrative. In Figure 1. the results of the Acceptability Rating items are displayed. The four items covering the acceptability of the narrative were surveyed with a three-point Likert scale, ranging from 1-not much/a little, 2-neutral, to 3-a lot/very much. Most participants responded favorably to the interactive narrative. Specifically, participants reported that they liked the narrative and felt that they learned a lot from it. The question that they had the more neutral response to was “How likely are you to use the narrative on your own?” with 20 participants (44%) responding neutral. This could simply mean that the purpose of such an interactive narrative in daily life was not explained since this is a feasibility study. More than half (68%) of participants reported that they felt they learned a lot from this interactive narrative. In any educational situation, moving all participants to a place where they feel they have learned a lot is the goal. In this feasibility study, sixty-eight percent of participants learned a lot, which is a promising result. Abortion is a widespread topic discussed all across the nation and in the media, and while the topic can be taboo to some, there were participants who played through the narrative having prior knowledge of facets that were highlighted. Even so, with nearly 30 participants learning something new or amending previously learned information, it is indicative of the interactive narrative being feasible and achieving intended outcomes.

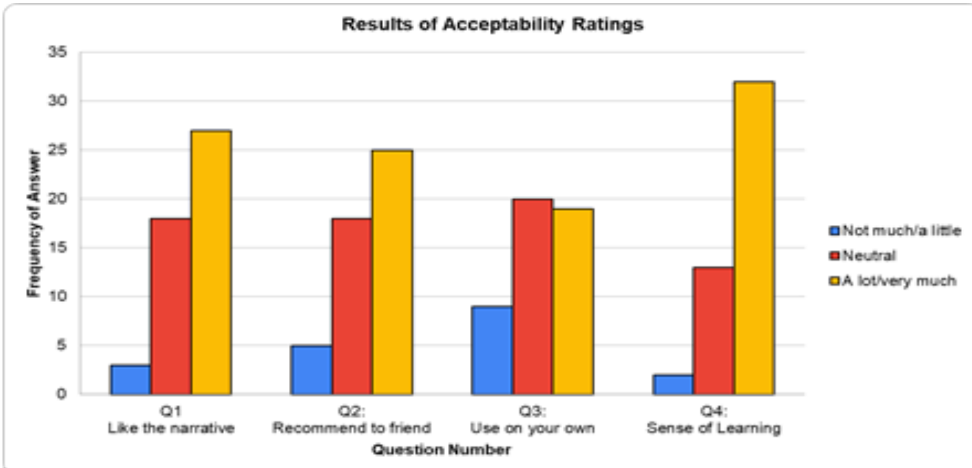

Figure 1. Frequencies of Acceptability Ratings

The second set of quantitative questions is displayed in Table 1, with means and standard deviations. A seven-point Likert Scale was used for these questions, ranging from strongly disagree (1) to strongly agree (7), with neutral being numerically represented as four. The results are positive, with the exception of immersion and emotional affect. Most indicators are on the positive side of neutral, with all but two items having a mean of greater or equal to 5. To look at participants' connection to the character, they were asked if they wanted the character to succeed in her goals or if they felt they had a good understanding of her. These questions are important because the plot needs to be true to the lived experience of many women as they navigate reproductive healthcare access and transport participants into the main character's head to understand how and why the decisions are made. The mean for participants when asked if they felt they understood the main character's position was 6.00 (1.03) out of a 7-point scale and 6.22 (1.05) for wanting the character to succeed in her goals. Additionally, participants felt that this pattern of events could have really happened or have happened to someone before (mean 6.28, standard deviation 0.89). To examine immersion, participants were asked if they forgot themselves and felt fully absorbed in playing the narrative. The mean response was 4.91, with a 1.70 standard deviation. This captures a wide range of responses where some participants felt absorbed but not all. This provides room for improvement to increase immersion for the next iteration of the interactive narrative.

Immersion and affected emotions were the lowest means, with both being answered on average as neutral. The mean response to the item "The narrative affected me emotionally" is most interesting because in Table 2, we found that there were a lot of emotional responses to the interactive narrative, yet the average mean reported was 4.59 (neutral).

Table 1. Narrative Transportation and Persuasion

Question	Mean	Standard Deviation
I felt responsible for the outcome	5.09	1.35
I felt responsible for the character's decision	5.04	1.33
I felt the event really happened or could've happened	6.28	0.89
I forgot myself and was completely absorbed	4.87	1.69
I have a good understanding of the main character	5.89	1.14
I understand the reason the main character does what she does	6.00	1.03
I wanted the character to succeed in achieving her goals	6.22	1.05
The narrative affected me emotionally	4.59	1.75

Table 2 provides examples of participant open-ended responses that detail the impact of playing through the narrative. The qualitative questions were more varied in length and type of response, with responses ranging from one or two words all the way up to a brief paragraph. Results were analyzed by groupings: actionable responses, empathy/sympathy, frustration, stress/discomfort, personal response, and understanding. Questions asked in this section targeted participants' emotional responses, education on the subject matter, and impact. Participants were then asked about any emotions that were brought up while they played through the narrative. Responses fell into a few categories: anxiety, frustration, mixed emotions, relief/happiness, and negative emotions such as regret, anger, sadness, and guilt were grouped together. The most common response was nine respondents reporting mixed emotions; this was categorized as any combination of two or more emotions and was not categorized as wholly negative. The combinations were varied, from "upset and uncomfortable," "scared, ambitious, determined, sacrificing," to "doubt, empathy, and anger."

The intention of the feasibility study was to pinpoint what participants were learning from the interactive narrative. There is a lot of information on abortion, and sadly, a lot of misinformation and fear. Our intention was to distinguish which parts were new to our participants and if they recognized the plot points we anticipated. To answer this, we asked participants, "What was something that surprised/stood out to you while participating?" participants were most surprised about two things: the cost of financing an abortion and that the main character was already a mother and was pregnant again. Approximately 25% of respondents reported one of the two aforementioned sentences. A third piece that was new to four participants was the role of clinic escorts and the aggressiveness of protestors. The remaining few responses included combination responses, surprise that the main character made the decision she did, and surprise at the format of the interactive narrative.

Table 2. Impact of playing the narrative

Empathy/Sympathy

- I felt a lot of empathy for the character. This was someone who could literally be you or anyone you knew.
- I felt sad for her and nobody knew what she was going through so she couldn't get that comfort.
- I felt sympathy for the parents, especially the mother.
- It felt like I was a bit emotional when she had to go through that by herself. She said she felt alone and it felt difficult to move on which really touched me.

Stress/Anxiety

- This caused a lot of anxiety for me, for very personal reasons.
- Stress, sadness, and I was feeling a little worried too.
- I was anxious and a bit worried for the character.

Other Emotions (Sad/Angry/Frustrated/Mixed)

- The only emotion I felt was the woman crying and feeling lonely not being with her husband. It felt sad.
- I felt a little sadness for the character and her life circumstances and felt a little remorseful on my decisions.
- Doubt. Empathy. Anger at the regulations/questions asked before receiving care.

Call to Action

- It made me want to continue research about this topic.
- It made me want to be more of an activist on abortion.

Personal

- Big impact because I've gone through this thinking process before.
- I felt overwhelmed because this is a very realistic situation and it can have a huge impact on one's life.

Acknowledge/Understanding

- It made me see that while people often say that no one could possibly let their pregnancy go on before "deciding" what to do, that isn't really that simple. The decision can be made much earlier, but the logistics of trying to act on the decision can take so much time.
- It allowed me to think critically and understand abortion more.

Discussion

Most commonly, participants learned about cost and felt mixed emotions while playing through the interactive narrative. In this analysis, emotions were grouped by themes presented by respondents. Emotion categories were determined by responses that identified a specific emotion, such as “I felt sympathy...” or “I was anxious...” Once the general categories were determined, those themes were used to group related responses; for example, "I felt sad for her and nobody knew what she was going through so she couldn't get that comfort" was grouped in the empathy/sympathy group. If the response had more than one obvious or subtle emotion, that response was determined to be “mixed emotions.” There were fewer responses that contained emotions such as sadness, anger, and frustration. In these responses, often more than one emotion populated, and because of the nature of the emotions felt in the response, it was accordingly categorized as negative in the analysis.

Cost and finances are a facet of structural stigma, but they are not the only part; the focus should be shifted to access as a holistic barrier and broader inclusion of community and interpersonal stigma throughout the interactive narrative. Since participants are learning most about cost, going forward, there would be some changes made to the interactive narrative. The importance of cost is a needed cornerstone of the interactive narrative and a huge barrier to accessible reproductive health, but it is not the sole barrier, nor is it the most stigmatizing. Tailoring the cost to being location-specific would potentially curb some of the extreme surprise that was reported. The current numbers used were national averages, but seeing as there might be cost differences based on state prices and taxes, as well as the price of limited access in some states, differentiating based on locality might be needed.

In addition, a limited number of participants experienced distress to the extent that they cried while participating in this study. One participant did express that they cried from empathy for the main character and that this was more personal than they anticipated. The purpose of the interactive narrative study is not to make people cry, nor is it to make them distressed or upset. The reality of reproductive healthcare can be upsetting and distressing. Being faced with multiple hurdles in the way of an individual taking care of their body and family can be upsetting and distressing. With so few participants reporting such extreme duress and over half of the participants reporting liking the narrative, extreme change does not need to be made. A stronger trigger warning of the subject matter and needed awareness that such ferocity of emotions might be felt will be included in future iterations of this project. Strong emotional response to the interactive narrative can be useful to its process evaluation: while such duress to the point of crying would not be categorized as enjoyment, the feeling of appreciation can still occur. In recent years, researchers have found that appreciation and enjoyment can be analyzed separately in interactive narratives (Steineman et al., 2017). Appreciation is when the interactive media is "meaningful, moving, and thought-provoking," but sometimes these same experiences do not elicit the enjoyment that becomes "fun" (Steineman et al., 2017). In the case of our participants being moved to the point of tears, they could appreciate the narrative for its ability to educate without naming enjoyment as something they experienced. Enjoyment can be tied to other experiences, such as "willingness to share the interactive narrative with other people or starting to play in the first place" (Steinemen et al., 2017). Appreciation was positively associated with prosocial behavior—the behaviors associated with helping, sharing, and caring for others—but enjoyment and appreciation are both wanted in an interactive narrative (Steinemen et al., 2017). This distinction may explain why only half of the participants liked the narrative and would recommend it. Asking after enjoyment in the qualitative data did not fully capture the intended data, whereas appreciation items would have given a better insight into actionable results from participants.

There was surprise with how the main character's mom reacted, and coupled with 68% of participants reporting that they felt they learned a lot in this study, it is telling that perhaps abortion stigma is not discussed as much as abortion is as a whole. Focusing on the facets of abortion stigma, rather than abortion itself, has room to provide for the most education and growth. This direction is immensely helpful, as it directs the interactive narrative's future iterations toward what is meaningful to our college-age community. The abortion itself is not as meaningful to our participants as the versions of the stigma felt by the protagonist. Our participants are college-age, and most have not started families yet. The protagonist is slightly older than the typical undergraduate age and is in a different life stage than most college students: she is a married mom of two when she falls pregnant again. Stigma reduction through more traditional means, such as rote education, may not be as meaningful to the college-age community as education through an interactive model. The interactive model allows participants to fully engage with the decision-making process as if they were in this situation and to come closer to empathy. In future iterations, expanding upon interpersonal and intrapersonal stigma can reiterate plot points, such as decisions to get an abortion, consequences from friends and family, and drive empathy and sympathy. One such drawback to the current version of the interactive narrative and of achieving this goal is that not every participant chose the branch that led the participant to see the mother's reaction. Greater emphasis will be placed on interpersonal stigmatizing reactions for all participants to see rather than just one or two limbs. Furthermore, the main storyline branches will be equalized so that each branch has similar anti-stigma plot points rather than independent, analogous pieces.

The immersion component of this study was not as high as anticipated. Most commonly, participants were given a lot of information about abortion and were very surprised by a wide range of items. To mitigate this, participants could be given broader background information prior to playing, and financial numbers could be more tailored to a specific region for increased realism. When we look at realism and immersion, the item on believing the events really happened or could have happened had the highest mean with the smallest standard of deviation. This increased our confidence that realism was achieved with the narrative. While our confidence was increased, the immersion component tells us quite a bit about the usefulness of this type of research. Interactive narratives have not been explored and studied to the extent that more traditional methods of stigma reduction have been used. Since the immersion component was lower than anticipated, and a key component of an interactive narrative is immersion in the story, and as the protagonist, this tells us that there is a need for more research on how to better immerse participants. By collecting qualitative responses from participants, we are collecting data for future iterations of this and other interactive narratives, but there is still plenty more to study. If we analyze this from a larger, structural level, lower immersion has implications for the ability of community members to believe their peers, friends, and family members should they be privy to a decision such as seeking and receiving an abortion. Strengthening the immersion component is not only important to make this story more engrossing but also to increase the likelihood that participants will understand that the plot is not simply a story; it is a lived experience.

Limitations

There are some limitations to the study. Mainly, the sample size is limited to college students, specifically those taking a public health course severely limits the generalizability of the study. A further limitation is the sample size. The interactive narrative was offered to 3 courses and as extra credit. With many of the responses being invalid, the small usable sample size is a limiting factor in the analysis of the data. Participants were surprised at the quantity of content of the narrative, so while it was believable, the amount of information needed to make an informed decision about reproductive healthcare was large. In future studies, participant groups could be broken down into three groups: folks with more information, folks with the same information, and folks without information playing through the study to gauge the realism and immersion in more detail. Another limitation is that the branches do not all have the same purpose as the others: one branch has a greater focus on interpersonal stigma, one on community stigma, and one on intrapersonal stigma. To reach the greatest potential of future studies, all branches of the interactive narrative would have pieces, albeit emphasized differently, of each kind of stigma so that regardless of the branch the participant chooses, learned outcomes are more uniform. A last object of limitation for this study is that appreciation and enjoyment be surveyed equally in any further mixed method review. While the results were acceptable, having siloed appreciation and enjoyment unknowingly, in future studies, both items will be measured by qualitative and quantitative measures for the most accurate measurement of the objectives.

Conclusion

Abortion stigma permeates many levels of daily life. Testing the feasibility of this interactive narrative on college students and emphasizing the demographic as a community has provided insight into what this community finds to be meaningful education and effective methods of stigma reduction. Some data was presented in unanticipated ways, but the presentation provided further insight into what the participants connected and engaged with, as well as what didn't work for them.

Overall, this interactive narrative serves as a promising way to engage people in reducing reproductive healthcare stigma. The participants did connect with the study's objectives, and the majority learned something by the end of their time playing. Due to the minor surprise at the skew of the results, there is room to expand on those objectives and understand how participant conclusions were made. Shifting focus by expanding on the contents of the narrative will catch future participants in the areas where they fell through in this iteration or where plot points weren't fleshed out.

From a community-based research perspective, an interactive model of education and stigma reduction is useful, including meaningful connections to the stigmatized topic and how to maximize the effectiveness of the interactive narrative. Even if the road to reducing abortion stigma is long and has many challenges, beginning the journey can have long-lasting effects on this community. As we have seen in real time, communities and voters are making their voices heard and their needs known. This interactive narrative was shown to be feasible as a device to educate college students on the realities of abortion stigma and the barriers in the way of accessible care. Using a presently uncommon mode of stigma reduction is one method to meet community needs using direct information from the community to create change and reduce stigma.

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