A Qualitative Content Analysis of Abstinence-Based Sexual Education Videos

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Abstract

Sex-education programs in the United States aim to prevent risks such as sexually transmitted diseases and infections. Educational videos are often incorporated as part of sex-education curricula, and abstinence-based education has been endorsed by the federal government under the Sexual Risk Avoidance Education (SRAE) program. This study examines eight sex-education videos from two abstinence-based sex education programs that are commonly used by programs receiving SRAE funding. Videos were analyzed for the presence of four health behavior and communication theories. This study also analyzed videos for the presence of SRAE program benefits such as “healthy relationships, goal setting, resisting sexual coercion,” among others. The videos were assessed using a qualitative content analysis and open-coding method. Findings suggest abstinence-based sex education videos often use fear appeals and tend to not emphasize the SRAE program benefits. Additionally, most videos portrayed ethnically diverse characters, mentioned love, or had a female main character.

I. Introduction

The necessity for sexual health education in the United States to prevent risks such as sexually transmitted diseases and infections, including human immunodeficiency virus and acquired immunodeficiency syndrome, cannot be overstated. As such, it is taught by almost all U.S. K-12 schools in some form, although the framing, messaging, and content of sex education varies, depending on the community and local government. The framing of sex-education programs ranges from abstinence-based messages to comprehensive sex education, which includes birth control methods as viable options. In order to better understand the potential impact of abstinence-based sexual education messages and their role within health communication theories, abstinence-based sex education videos should be assessed for their message framing.

Although there are studies that have assessed the effectiveness of abstinence-based sexual education in comparison with comprehensive sexual education, and others which examine the effectiveness of health-education videos, there are none which examine theories of health communications and framing in abstinence-based sex-education videos. According to Aronson (2012), videos may influence the effectiveness of a health education intervention depending on characteristics of the video, such as the type of characters portrayed. As the federal government continues to allot funds for abstinence-based sex education, it is vital to...
II. Literature Review

Abstinence-Based Sex Education Programs in the United States

Although abstinence-based sex education is theoretically effective if students follow through on intentions to abstain from sexual activity, many students do not (Santelli et al., 2017; Santelli et al., 2006). In fact, according to Lynch (2017) and Santelli et al. (2017), abstinence-based sex education programs may actually be harmful to students, since they do not absolutely reduce rates of sexual activity and leave students without resources to exercise effective disease and pregnancy prevention. Although abstinence should be presented as an option to students, replacing comprehensive sex education with abstinence-only education may withhold salient information from students, therefore limiting their ability to make informed sex decisions on their own (Santelli et al., 2006).

The Sexual Risk Avoidance Education (SRAE) program was created by Congress in 2016 as an effective re-branding of the “Competitive Abstinence Education” grant program, and is run by the Family and Youth Services Bureau in the Administration for Children and Families (Santelli et al., 2017). The SRAE program was funded with $10 million upon its creation in 2016. Additionally, in 2016, a total of $85 million was allocated to abstinence-only-until-marriage (AOUM) programs through the SRAE program and the Title V AOUM program, now known as the State Abstinence Education Program (Santelli et al., 2017). Originally known as Community-Based Abstinence Education, the SRAE program was a topic of controversy due to its removal of states’ authority in allocating funding and choosing recipients for sex-education grants (Kay & Jackson, 2008). The SRAE program claims to provide funding to evidence-based programs, all of which include eight benefits: “self-regulation, success sequencing for poverty prevention, healthy relationships, goal setting, resisting sexual coercion, avoiding dating violence, and resisting youth risk behaviors such as underage drinking and illicit drug use,” (Family & Youth Services Bureau, n.d., p. 1). In 2018, more than $12 million in SRAE funds were awarded to support school and community-based programs that teach participants how to “voluntarily refrain from non-marital sexual activity” (Family & Youth Services Bureau, 2017). Thirty-seven states in the United States mandate that information on abstinence be provided when HIV education is taught, and 28 of those say require abstinence to be “stressed” throughout HIV education (Guttmacher Institute, 2020). Target populations for messaging usually range between 11-19 years old, and programs cover topics including healthy relationships, goal-setting, puberty, sexual risks, and adulthood preparation.

Health Communication Theories in Abstinence-Based Sex Education

Grantees of the SRAE program use a variety of abstinence-based sex education curricula. Popular ones include Making a Difference! and REAL Essentials. Curriculum materials that align with SRAE goals often include a summary of theoretical foundations to show how the product is “evidence-based.” Making a Difference! employs the self-efficacy theory, which the program defines as “a person’s confidence in his or her ability to take part in the behavior,” such as increasing a student’s confidence in abstaining from sex (ETR, 2016). The program also utilizes the outcome expectancy theory, which Making a Difference! defines as “beliefs about the consequences of the [targeted] behavior” (ETR, 2016). In the case of abstinence-based sex education, the outcome expectancies theory may consist of depicting an individual becoming pregnant or contracting STIs. In order to integrate the self-efficacy and outcome expectancy theories, the Making a Difference! curriculum aims to promote confidence among students and portrays and explains potential consequences of engaging in risky behavior (ETR, 2016). The Making a Difference! Program goals include: “help young people change behaviors that place them at risk for HIV, STDs and pregnancy,” “delay the initiation of sex among sexually inexperienced youth,” “reduce unprotected sex among sexually active youth,” and “help young people make proud and responsible decisions about their sexual behaviors.”

The REAL Essentials program is an abstinence-based sex education curriculum which cites the transtheoretical model of behavioral change theory as its basis (The Center for Relationship Education). According to Anderson (2003), the transtheoretical model (TTM) of behavioral change theory uses the
stages of change in order to assist clients in altering certain behaviors. In Anderson (2003), four women who had reported past intimate partner violence were led through the stages of change: pre-contemplation, contemplation, preparation, action, and maintenance. The findings supported the effectiveness of the TTM of behavioral change theory (Anderson, 2003). The REAL Essentials curriculum employs the TTM of behavioral change theory by preparing students to:

Identify areas where they may feel unwanted or unworthy when it comes to love, discover their personality characteristics, understand their relationship patterns and learn to identify relationship red flags, determine their personal strengths, create community support networks to help them succeed, develop strategies for setting boundaries and breaking unhealthy patterns, and start fresh with goals for relational health and future family stability (The Center for Relationship Education).

Although not mentioned specifically by the Making a Difference! Or REAL Essentials curricula, it is expected that the programs may use fear appeals messaging techniques. In the past, fear appeals-based messaging in the use of promoting public health campaigns in the United States has been controversial (Green & Witte, 2006; Tannenbaum et al., 2015). Green and Witte (2006) note a 3% increase in the HIV prevalence rate in Uganda after the replacement of fear-based approaches with “softer” approaches in the 1990s. The article infers that Americans assume fear-based health education does not work, due to historic “gay liberation and secularism,” and fear appeals should be reintroduced into the topic of HIV prevention (Green & Witte, 2006, p. 257). Similarly, Nabi & Myrick (2019) found that fear appeals messages were useful due to their arousal of hope among clients. The study found that hope has a positive correlation with intentions to alter behavior, especially when combined with the fear-appeals approach (Nabi & Myrick, 2019).

However, other literature has shown that fear appeals may have unintended effects on public health campaigns. According to Cho and Salmon (2006), individuals who are targeted with a fear appeals approach may have adverse reactions if targeted during the precontemplation stage of change, in which “individuals have no intention to stop a risky behavior within 6 months” (p. 92). They conclude that a fear appeals approach may nonetheless be effective, but should be tailored to the audience’s stage of change if possible, and accompanied by self-efficacy measures.

According to Tannenbaum et al. (2015), fear appeals messages are “persuasive messages that attempt to arouse fear by emphasizing the potential danger and harm that will befall individuals if they do not adopt the messages’ recommendations” (p. 1178). Tannenbaum characterizes fear appeals messages by the amount of fear intended to arouse in an audience, the presence of “efficacy statements,” or, “a statement that assures message recipients that they are capable of performing the fear appeal’s recommended actions,” and the amount of “depicted susceptibility and severity,” which refers to an individual’s personal risk for negative consequences (p. 1180).

This study will address a gap in present literature of how abstinence-based sex-education programs frame messages through the following research questions:

1. How do abstinence-based sex education videos use health communication and behavior theories, such as self-efficacy, outcome expectancies, and fear appeals?

2. How do abstinence-based sex education videos mention or depict the eight SRAE program benefits, if at all?

This study aims to explore the application of health communication theories in abstinence-based sex education videos. Although past studies have focused on the application of such theories in public health campaigns, and other studies have focused on the effectiveness of abstinence-based sex education, none have focused specifically on abstinence-based sex-education videos and their application of health communication theories.

### III. Methods

This study used a qualitative content analysis to examine eight videos which complement one of two curricula: Making a Difference! or REAL Essentials. A list of 27 SRAE-funded programs from 2018 was used to identify popular abstinence-based curriculum materials. Two curricula were selected based on the
ability to easily purchase and access the teaching materials. Of the 27 grantees, six chose to implement the Making a Difference! curriculum and two chose to implement the REAL Essentials curriculum. The Making a Difference! curriculum included three videos and the REAL Essentials curriculum included five videos, totaling eight sex-education videos. Videos ranged in length from three to eighteen minutes, and claimed to address consequences of sex, relationships, HIV/AIDS prevention, and self-confidence, according to video descriptions included in the curricula. The schools, organizations, and departments that selected either the Making a Difference! or REAL Essentials curricula are listed in Appendix B.

Videos were coded for a range of themes and topics in order to determine major similarities and utilization of communications theory. Specifically, a single coder looked for examples of how self-efficacy, outcome expectancy, fear appeals, and transtheoretical model of behavioral change theories were represented, if at all, using coding sheets created in reflection of their described characteristics or elements, as outlined in the literature review. An open-coding style was also used to code for depictions of theories or repetitive elements in videos; new coding categories were created as they emerged from the videos. According to Schreirer (2014), open coding is descriptive, and is often used to create coding categories. As coding categories were refined, coding sheets based on theories presented by the curricula were used to analyze content (Appendix A).

Theories were chosen if mentioned specifically by the curriculum as evidence. Self-efficacy and outcome expectancy theories were mentioned specifically by the Making a Difference! curriculum, and the transtheoretical model of behavioral change theory was mentioned specifically by the REAL Essentials curriculum. Although the fear appeals theory was not mentioned specifically by either of the curricula, present literature supports that it would be relevant in the coding process. Additionally, videos were coded for mention or depiction of the eight SRAE program benefits, which are outlined in the literature review.

IV. Findings

Each video was analyzed for certain components, as outlined in the methodology section. These elements are reflective of various communication and behavioral health theories, including self-efficacy and outcome expectancies theories, fear appeals theory, and transtheoretical model of behavioral change theories, in addition to the SRAE program benefits. Theories were chosen based on evidence provided by curricula. Elements used to code for self-efficacy and outcome expectancy theories are displayed in Table 1.

| Table 1: Presence of Self-Efficacy and Outcome Expectancy Theories (Utilized by Making a Difference!) |
|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Character shown abstaining from sex (Self-efficacy) | Character shown having a conversation with partner expressing want to abstain (Self-efficacy) | Character shown with STD (Outcome expectancies) | Character shown with HIV/AIDS (Outcome expectancies) | Character shown pregnant (Outcome expectancies) |
| # of Videos | 4 | 3 | 1 | 2 | 3 |
| Percentage of 8 videos | 50.0% | 37.5% | 12.5% | 25.0% | 37.5% |

The element of self-efficacy theory that was used most often in the videos was a depiction of a character choosing to abstain from having sex (four videos, or 50% of total), followed by a depiction of a character having a conversation with a partner expressing their desire to abstain from engaging in sex (three videos, 38% of total). One example of a character shown choosing to abstain from sex is present here:
I guess that is why I have chosen to wait. Not to be a girl that falls easily, that believes every word, every story, everything they hear.... That was her decision. That's not for me. It's hard enough being a kid, without having to worry about raising one. I think I'll just wait, until I'm ready to accept the responsibility. (Dunne, 2000).

Below is an example of a character having a conversation with a partner expressing a want to abstain:

We’ve been together a long time, but he’s really pressuring me (The Subject is HIV, Making a Difference!).

As outlined in the methods section, videos were also coded for examples of outcome expectancy theory. The element of outcome expectancy theory that was most often used was a depiction of a pregnant character (three videos, or 37.5% of total), followed by a character with HIV/AIDS (two videos, or 25% total), and a character with an STD (one video, 12.5% total). Below is an example of a character depiction with HIV:

My name is Eddy, I have the HIV virus in my body and I could develop AIDS. (The Subject is HIV, Making a Difference!)

As mentioned in the methods section, an open-coding method was used and element categories were created as the videos were coded. As such, additional coding categories that are reflective of self-efficacy and outcome expectancies theories, among other coding categories, were created. Categories created through an open-coding process are displayed in Table 2.

Table 2: Open-Sourced Coding Categories

<table>
<thead>
<tr>
<th>Category</th>
<th># of Videos</th>
<th>Percentage of 8 videos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minority groups</td>
<td>7</td>
<td>87.5%</td>
</tr>
<tr>
<td>Mention of abstinence</td>
<td>3</td>
<td>37.5%</td>
</tr>
<tr>
<td>Main character: Female</td>
<td>4</td>
<td>50.0%</td>
</tr>
<tr>
<td>Main character: Male</td>
<td>2</td>
<td>25.0%</td>
</tr>
<tr>
<td>Religious figures</td>
<td>2</td>
<td>25.0%</td>
</tr>
<tr>
<td>Depiction or mention of condoms</td>
<td>2</td>
<td>25.0%</td>
</tr>
<tr>
<td>Female character shown broken up with</td>
<td>2</td>
<td>25.0%</td>
</tr>
<tr>
<td>Character testing for STDs/HIV</td>
<td>2</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

Categories reflective of the self-efficacy theory includes the depiction or mention of condoms (2 videos, 25% total) and the depiction of a character testing for STDs/HIV (2 videos, 25% total). Of the elements of the TTM of behavioral change theory (Table 3), the mention of love was present most often in the videos (5 videos, 63% total). Other elements of the behavioral change theory were also present in the videos, including characters creating community support networks (2 videos, 25% total) and developing strategies to set boundaries and break unhealthy patterns (2 videos, 25% total).
Table 3: Presence of Transtheoretical Model of Behavioral Change Theory (Utilized by REAL Essentials!)

<table>
<thead>
<tr>
<th></th>
<th>Mention of love</th>
<th>Support self-discovery</th>
<th>How to identify relationship red flags</th>
<th>Determine personal strengths</th>
<th>Create community support networks</th>
<th>Develop strategies for setting boundaries and breaking unhealthy patterns</th>
<th>Goal-setting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># of Videos</strong></td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Percentage of 8 videos</strong></td>
<td>62.5%</td>
<td>12.5%</td>
<td>12.5%</td>
<td>25.0%</td>
<td>25.0%</td>
<td>25.0%</td>
<td>37.5%</td>
</tr>
</tbody>
</table>

Of the elements of fear appeals theory (Table 4), depictions of fear in a character were used most often in the videos (7 videos, 88% total). Depictions of susceptibility personal to individuals (5 videos, 63% total) efficacy statements (4 videos, 50% total), and the mention of death (2 videos, 25% total) were also present in the videos. An example of a statement coded for susceptibility personal to individuals is present below:

> You can get HIV from having unprotected sex with someone who has the virus, so not having sex is your safest choice (Foregger, 2016).

Table 4: Presence of Fear Appeals Theory

<table>
<thead>
<tr>
<th></th>
<th>Fear depicted in character</th>
<th>Efficacy statements</th>
<th>Depicted susceptibility personal to individuals</th>
<th>Mention of death</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># of Videos</strong></td>
<td>7</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td><strong>Percentage of 8 videos</strong></td>
<td>87.5%</td>
<td>50.0%</td>
<td>62.5%</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

Of the SRAE program benefits (Table 5), healthy relationships (4 videos, 50% total) were depicted most often, followed by a character considering poverty prevention (3 videos, 38% total) and goal-setting (3 videos, 38% total). Below is a statement a mother made to her pregnant daughter which was coded for a character considering poverty prevention:

> Raising a baby is hard, and I hate to say it, but money matters too. Sometimes, I don’t even know how we made it this far (Richardson, 2016).

Table 5: SRAE Program Benefits

<table>
<thead>
<tr>
<th></th>
<th>Self-Regulation</th>
<th>Success sequencing for poverty prevention</th>
<th>Healthy Relationships</th>
<th>Goal-setting</th>
<th>Resisting Sexual Coercion</th>
<th>Avoiding Dating Violence</th>
<th>Resisting Underage Drinking</th>
<th>Resisting Drug Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># of Videos</strong></td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Percentage of 8 videos</strong></td>
<td>12.5%</td>
<td>37.5%</td>
<td>50.0%</td>
<td>37.5%</td>
<td>37.5%</td>
<td>12.5%</td>
<td>12.5%</td>
<td>25.0%</td>
</tr>
</tbody>
</table>
V. Discussion

Health Behavior and Communication Theories

This study examined the use of the self-efficacy, outcome expectancy, behavioral change, and fear appeals theories in eight abstinence-based sex education videos. The self-efficacy theory was present in at least half of the videos, most often through the portrayal of a character choosing to abstain from sex. Adolescents' perceived self-efficacy and consequent self-confidence correlate with their ability to enact upon decisions beneficial to their sexual health (Rotosky et al., 2008). Therefore, the inclusion of the self-efficacy theory should be a cornerstone of sex education videos, yet the self-efficacy theory was not present in up to half of the eight videos. By omitting the self-efficacy theory, not all videos included in the study provide adolescents with an evidence-based skill to make beneficial sexual health decisions for themselves.

The outcome expectancy theory was present less often than the self-efficacy theory, but was portrayed in at least three of the eight videos. Limited research is available on the effectiveness of the outcome expectancy theory in sex education. As mentioned in the literature review, the Making a Difference! curriculum defines the outcome expectancy theory as portraying the potential consequences of engaging in sexual risky behavior. Future research should explore the effectiveness of employing the outcome expectancy theory by providing potentially positive outcomes in place of negative ones in sex education.

Although each element of the behavioral change theory was present in at least one video, none of the videos employed all elements of the behavioral change theory. The theory is founded on the four stages of change, but REAL Essentials employs other elements to reflect the stages of change in making educated sexual risk decisions. For example, REAL essentials claims to “Identify areas where they [students] may feel unwanted or unworthy when it comes to love, discover their personality characteristics,” which may be considered examples of the pre-contemplation stage. Of the elements of the behavioral change theory, the mention of love was portrayed most often. Although limited research is available on the effectiveness of love in adolescent sex education, experts in the field have argued on its behalf, due to the feeling of happiness it brings to students (Cassar, 2018).

Out of the elements of the fear appeals theory, fear depicted in the character was portrayed most often, appearing in seven out of the eight videos. As mentioned in the literature review, experts in the field of health communication have argued both on behalf of and against the use of fear appeals in public health. Cho and Salmon (2006) suggest that fear appeals may be most effective when a population is also provided with self-efficacy measures, which, as aforementioned, was included in only half of the eight videos. The use of fear appeals theory in the sex education videos varied, from the use of suspenseful music as a patient waited to take an STD test, to the use of wind and shadows as a patient dreamed she was pregnant. While some of the videos were accompanied by depictions of the outcome expectancy theory, others focused on more abstract ideas, such as break-ups or death. In order to effectively utilize fear appeals theory, depictions of fear should be accompanied by both elements of self-efficacy and accurate and factual depictions of outcome expectations.

SRAE Program Benefits

Videos were also coded for the program benefits listed by Sexual Risk Avoidance Education program. Healthy relationships were portrayed most often, in four of the eight videos. Three of the eight videos included depictions of a character aiming for future financial success. Most of the program benefits were portrayed in less than three videos. Although the SRAE program claims to be beneficial to students participating in the curricula, most videos did not portray the program benefits.

Additional Observations

As mentioned in the methodology section, this study utilized an open-coding process. Open-coding categories were created as videos were coded when prominent themes or figures were noticed repetitively. Most notable were the presence of ethnic minority groups, which were included in seven out of the eight videos. Of these videos, either Latinx or African American characters were portrayed. According to Myers, Richardson, and Chung (2019), the representation of different ethnicities in health communications materials is vital in communicating an organization’s recognition of the way culture and values influence an individual’s
experiences. Notably, the videos used by the REAL Essentials curriculum, created by Scenarios USA, were written by students. Because students wrote these materials, the inclusion of diverse representation is especially vital in accurately portraying students' lives. However, certain videos may be more effective depending on where the curriculum is used. For example, in Scenarios USA videos, students from Texas chose to include Latinx characters and included Spanish dialogue, while a student from New York depicted an African American character living in the city. Further research might explore the possibility of providing students with videos that have characters and settings applicable to their geographic location and cultural setting.

V. Conclusion

This study examined health behavior and communication theories in eight abstinence-based sex education videos. Although there are 27 SRAE program grantees, only eight grantees use the curricula assessed in this study. Other curricula were not included primarily because of the barriers to purchasing the curricula (access and cost). Additionally, this study was limited to eight videos and is not a representative sample of abstinence-based sex-education video materials commonly used. Examples of health behavior and communication theories were coded for as the coder saw fit, and coding categories of theories, when not listed by evidence, were limited to the coder's interpretations.

Future research should explore the effectiveness of the outcome expectancy and fear appeals theories, the role of love, and the portrayal of ethnic minorities in sex education. Although the Sexual Risk Avoidance Education Program aims to beneficial for students, the claimed benefits were not present in all of the sex-education videos. Because abstinence-based videos included in the study do not frequently portray the SRAE program benefits, they may not provide students with skills the program touts. Additionally, because theories such as the self-efficacy theory or the TTM of behavioral change theory are not prominently featured, students' abilities to make informed, beneficial sexual-health decisions may be limited.

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Richardson, M. (Director). (2016). Tanisha and Shay [Film]. ETR.


Valdez, K. (Director). (September 2000). Nightmare on AIDS Street [Film]. Scenarios USA.