

# Enhancing Students HIV/AIDS Prevention Skills through a Graphic Novel

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## Abstract

*South Carolina (SC) ranks 6th in the United States for new HIV cases (South Carolina Department of Health and Environmental Control, DHEC, 2011). To reduce this troubling trend, education and prevention efforts are needed to raise young adults' awareness of HIV/AIDS issues. Existing prevention information is rarely in a format that appeals to youth. Visuals in graphic novels can motivate students to read, and can aid in their understanding of text (see Carter, 2007, and Gavigan, 2011, for example). To meet this need, the researchers and a graphic illustrator, working with students in the SC Department of Juvenile Justice School District, developed an age-appropriate, culturally diverse graphic novel on HIV/AIDS, entitled, AIDS in the End Zone. It was tested with young adults in SC public libraries in 2013 using pre- and post- surveys to measure knowledge gains from reading the graphic novel. Preliminary results of the surveys will be discussed and focus group data will be presented. Ways in which the project could be replicated in other libraries and classrooms will also be discussed.*

**Keywords:** HIV/AIDS prevention, graphic novel, young adults, book club, libraries

## Introduction

HIV/AIDS infections are growing at an alarming rate for young adults in the United States (U.S.). Of all new HIV infections in 2006, 34% were among youth, ages 13 -24. By the end of 2006, nearly 56,500 young adults in the U.S. were living with HIV infection, or AIDS (Centers for Disease Control (CDC), 2010). Currently, there is no cure for the disease, which kills millions across the world each year. From its initial discovery in the Rakai District of Southern Uganda in 1982, the number of people infected and affected by the disease has risen dramatically. Women and youth are the populations most affected by the disease in Sub-Saharan Africa, with most new infections occurring in young adults between the ages of 15 and 24. In 2011, approximately 2.5 million people became newly infected with HIV (UNAIDS, 2012). In most of the countries that have generalized HIV/AIDS epidemics, less than 50% of young women have comprehensive and correct knowledge about HIV (UNAIDS, 2012). The state of South Carolina currently ranks 6th in the United States for new HIV cases, while the Columbia Metropolitan area (the state capital) ranks 10th overall (South Carolina Department of Health and Environmental Control, 2011). In order to reduce this troubling trend, education and prevention efforts are needed to raise young adults' awareness of HIV/AIDS issues. Although existing HIV/AIDS prevention information for young adults is accurate and informative, it is often not in a format that appeals to today's youth. Further, youth are more inclined to read and retain information if it is in an engaging format such as graphic novels that is popular with their generation. For the purpose of this paper, a

graphic novel is defined as an original book length story, either fiction or nonfiction, published in comic book style. The goal of this project was to produce a graphic novel that would provide the knowledge and resources young adults need to make informed decisions regarding HIV/AIDS, including how to reduce or eliminate risk factors, and where to get tested for HIV. In order to meet this goal, the investigators and a graphic illustrator, working in collaboration with students in the South Carolina Department of Juvenile Justice School District (SCDJJSD), developed an age-appropriate, culturally diverse graphic novel on HIV/AIDS. The graphic novel, *AIDS in the End Zone*, is being used with young adults in public and school libraries in South Carolina in 2013. Book club interventions are being conducted at public and school libraries, in which pre- and post-surveys, and interviews, are being used to measure knowledge gains and impact from reading the graphic novel. The study is the first of its kind to provide scientifically-based research that examines whether or not graphic novels can be an effective HIV/AIDS prevention tool for young adults.

This paper will present the process of creating the graphic novel with the incarcerated youth. In the United States, the term incarcerated youth refers to children under the age of 18 who have committed a crime that prohibits them from attending public school. The young men who participated in this project attend school in a contained facility where they are detained to serve out their jail time. In addition to describing how the young men created the graphic novel, some of the initial data from the surveys and focus groups will be presented. Further, the paper will describe the ways in which the project could be replicated in other libraries and classrooms.

## **Literature Review**

Due to the large influence of television, advertising, and the Internet, today's youth are an extremely visual generation of multimedia learners. As Flynt and Brozo (2010) wrote, 'Visual culture is a constant in students' daily lives.' (p. 526). Capitalizing on the influence of the visual culture on today's youth, this intervention program examines the role that graphic novels can play as a resource for increasing HIV / AIDS awareness among high school students. Studies show that the visuals in graphic novels can motivate students to read, and can aid in their understanding of text (Carter, 2007; Cary, 2004; Gavigan, 2011; Ivey & Fisher, 2006; Krashen, 2004).

In order to reduce the high percentage of HIV/AIDS cases in young adults in South Carolina, and around the world, education and prevention efforts are needed to raise young adults' awareness of HIV/AIDS issues. Unfortunately, studies show that many young people are not concerned about becoming infected with HIV/AIDS (Kaiser Family Foundation, 2000). HIV/AIDS prevention campaigns are not often targeted to a specific, local community and they fall short of their intended prevention efforts (Albright, 2007). Successful prevention campaigns take into account the use of appropriate messages targeted to the specific population in an authentic, accessible format (Albright, Kawooya, & Hoff, 2006). Although existing HIV/AIDS prevention information for young adults is accurate, it is often not readily available or presented in a format that youth find appealing. Further, because of the high degree of illiteracy in South Carolina, and many places around the world, materials need to be available in a format that includes visual images, in addition to print.

Studies show that young adults are more inclined to read and retain information if it is in an engaging format, such as graphic novels, that is popular with their generation. There is increasing evidence that the use of graphic novels can enhance learning, and the artistic format can facilitate learning for students with varying learning styles and abilities (Botzakis, 2009; Flynt & Brozo, 2010; Gavigan, 2012; Krashen, 2004; Monnin, 2008). Adolescent readers need interventions that will motivate them to read. A greater understanding of the types of texts that are valued by adolescents is an important step in addressing the challenge of designing effective HIV/AIDS prevention programs.

Albright (2007) identified important components of successful HIV/AIDS prevention programs that are being applied throughout this study:

- Materials should be designed specifically for the target audience, and made available in the language of the target population. *AIDS in the End Zone* was written in the vernacular of the target population for the study: Columbia youth, aged 15-18, many of whom will be in the higher risk, African-American population.
- Because of the high degree of illiteracy in South Carolina, and around the world, materials need to be available in a format that includes visual images in addition to print.
- Considering the collectivist culture of the target population, information is likely to be shared in common spaces (e.g., schools, libraries, community centers, etc.). Making the graphic novel available in those spaces is likely to facilitate dissemination of the information.
- Peer education appears to be the most common approach to spreading the HIV/AIDS message. By including the target population in the development of the materials, word-of-mouth and sharing of information will be enhanced via peer networks.
- The use of fiction helps to make HIV /AIDS information more interesting, particularly for youth. The storyline and visual images will increase the appeal to the target population.

## **Methodology**

The purpose of this study was to produce a graphic novel that will provide the knowledge and resources young adults need to make informed decisions regarding HIV/AIDS, including how to reduce or eliminate risk factors, and where to get tested for HIV. The research questions guiding the study are:

1. How does reading a graphic novel about HIV/ AIDS affect adolescents' understanding of HIV/AIDS issues?
2. What are the ways in which adolescents respond to a graphic novel about HIV/AIDS?

A case study is the preferred methodology for this research because it allows investigators to retain the meaningful and holistic characteristics of authentic situations in natural settings (Yin, 2009). Since a case study can be used in combination with other methods, it can cover both the process and the outcomes. Both qualitative research and descriptive statistics were gathered in two phases. Data were collected through the use of a survey, interviews and observations. The investigators obtained permission to conduct this study from the University of South Carolina's Institutional Review Board.

Impact evaluation was measured by analysis of data from the focus groups and pre- and post-survey scores. The quantitative data analysis was designed to show knowledge gains and changes in attitudes among the participants. The qualitative data analysis was intended to provide insight into the nature of the materials' impact, and present clues as to which elements of the material were particularly effective in influencing knowledge and attitudes. Based on the data from the book club interventions, the graphic novel is being modified to incorporate suggested improvements.

## **Data Collection**

The project began in July, 2012, when the researchers, and a graphic illustrator, worked with male students in the South Carolina Department of Juvenile Justice (SCDJJSD) to develop a graphic novel for teens about HIV/AIDS. The creation of the graphic novel took place over a period of eight weeks, four sessions per week, and one hour per session. The work was done in two back-to-back English Language Arts classes, which had approximately 8-10

students in each class. The young men worked with the graphic illustrator and researchers to develop the plot, characters and setting, write the narrative, and tell the graphic illustrator how they wanted the illustrations to appear in the graphic novel. The illustrator returned each week with renditions of the illustrations, with the students making suggestions for changes throughout the project. The investigators observed the interactions between the students and the illustrator, taking notes of their observations throughout the eight weeks. This data was used to determine the effectiveness of the project. Additional data was collected through an interview with the young men after the graphic novel was completed. During this interview, the students were asked to share their views of the graphic novel and what they had learned from the process of creating it.

Once the graphic novel, *AIDS in the End Zone*, was finalized and published, it was used in May, 2013 in the Richland County Public Library system, located in Columbia, South Carolina. During this phase of the project, the participants included 40 young adult library patrons, ages 15 – 19. Each participant received \$20 cash as an incentive for participating in the study, and all of the students were provided a pizza party. Every participant was required to turn in an Informed Consent Form before they were allowed to participate in the sessions. All participants under the age of 18 were also required to have signed parental consent forms as well, prior to their participation in the study.

The investigators met for approximately 1-2 hours with focus groups at two Richland County Public Library branches. The first group had 7 participants and the second group had 33, for a total sample of 40 participants. The research protocol was the same for each of the groups. First, participants took a written HIV/AIDS knowledge/attitude pre-test, administered in print, but also read aloud by the investigators. The twenty-question test was designed by the investigators, based on existing documents in the field. Next, the participants read the graphic novel, *AIDS in the End Zone*, in its entirety. The investigators observed the participants as they read the graphic novel to note expressions of their first reaction (e.g., confused expressions, degree of appeal, body language, etc.). After reading the graphic novel, the participants took a post-test that was the same as the HIV/AIDS knowledge/attitude pre-test. Data from the pre- and post- tests enabled the investigators to measure the knowledge gained about HIV/AIDS from the reading of the graphic novel. After the post-survey, participants participated in a focus group interview to explore their views of the graphic novel, what they learned, and what modifications they thought needed to be made to the graphic novel. An interview protocol instrument was used to facilitate the discussion. Notes were taken throughout the session.

## **Results**

The analysis of the data was triangulated so that each important finding had at least three confirmations and assurances that key meanings are not being overlooked (Stake, 2006). Survey results, observations, and interview responses are being analyzed. The data is being read and re-read to determine patterns. The overall impact of the project was measured through analysis of data from the pre- and post-test scores and the focus groups. Cross-Tabs and chi-square are used to analyze the data, to reflect knowledge gains and changes in perceptions and attitudes among the participants. Qualitative data from the focus groups will be analyzed using content analysis to reveal the nature of the materials' impact, and will provide clues as to which elements of the material were particularly effective in influencing knowledge and attitudes.

Of the sample of 40 participants in the study, 80% were female and 20% were male. Participants ranged in age from 15-20, with a mean age of 17. The majority of participants was African-American (85%), followed by Caucasian (3%), and mixed ethnicity (12%). Preliminary results suggest that over one third of the participants (37%) considered themselves to be at risk of getting HIV, and 36% knew someone who has or had HIV or AIDS.

Impact evaluation was measured by analysis of data from the pre- and post-test scores and the focus group. Figure 1 compares the pre- and post- test answers to the question, “Can you get HIV/AIDS through genetic transmission?” There was a significant gain in accurate knowledge from the pre- to the post- test. Before reading the graphic novel, 75% of the participants believed that AIDS is genetically transmitted, which is an erroneous belief. After reading the graphic novel, this figure dropped to 53%, a positive knowledge gain of 22%.

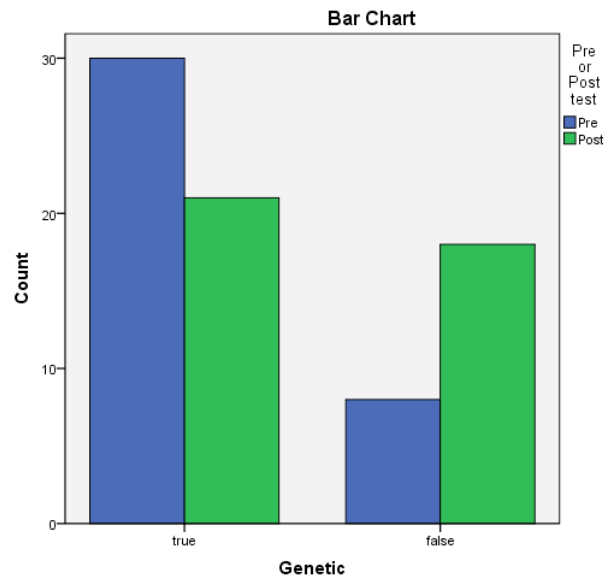


Figure 1. Can You Get HIV/AIDS through Genetic Transmission?

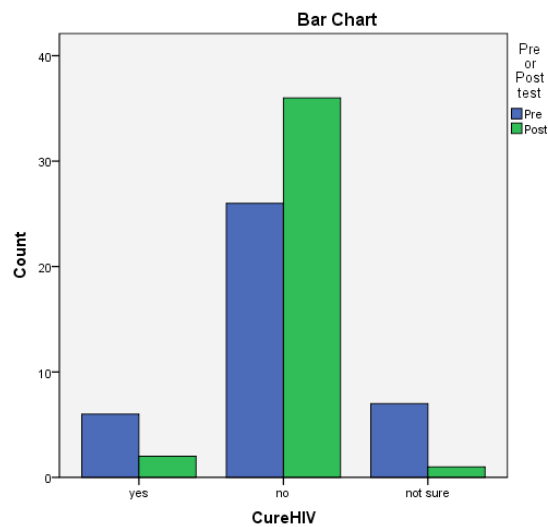
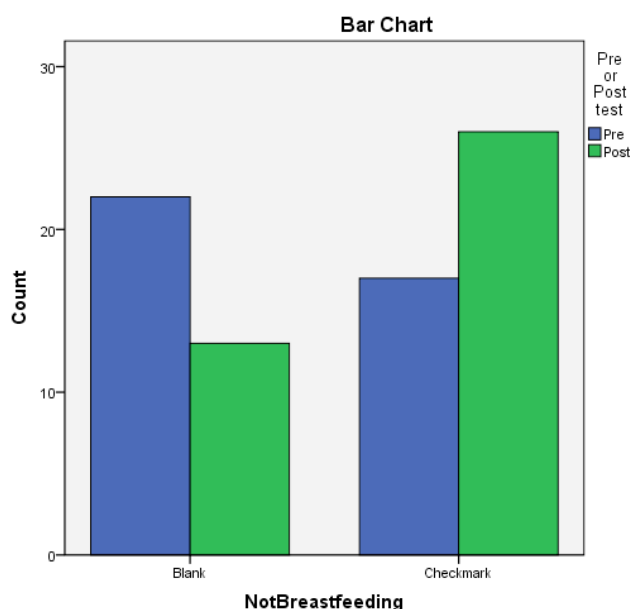


Figure 2. Is There a Cure for HIV?

There was a similar knowledge gain when asked the question, “Is there a cure for HIV?” (Figure 2). Prior to reading the graphic novel, 66% of the study participants said no, while 15% said yes. The correct answer is no, so 15% were misinformed. After reading the novel, the number of participants who said no increased to 92%, while the number who answered yes, dropped to 5%.

Another finding was the number of participants who selected “Breastfeeding” as a way to prevent transmission of the disease. The correct answer is that because the HIV virus can be transmitted through breastmilk, breastfeeding is a means of transmitting HIV from mother to child. As a result, not breastfeeding is a means by which to prevent transmission. The results of this question are presented in Figure 3. Fifty-six percent of the study participants did not consider breastfeeding as a means of HIV/AIDS transmission, prior to reading the graphic novel. After the intervention, there was a significant change in their answers, where 66% of the participants correctly recognized that breastfeeding is a way of transmitting HIV/AIDS. There were additional increases in the knowledge gains; however, they were less significant than the ones presented here.



**Figure 3. What are the Methods of Preventing HIV/AIDS Transmission?  
Please check all that apply.**

Focus group results are currently being analyzed and are shedding insight into the nature of the materials' impact, and clues as to which elements of the material were particularly effective in influencing knowledge and attitudes. If the evaluation of the project continues to yield positive results, additional funding will be sought to replicate the program across the state in other school districts and states, nationwide, and in Africa.

## Discussion

The knowledge gains were not as dramatic as was anticipated by the researchers. Preliminary results suggest that there may be an age effect, however. Correlating age with the three knowledge gains presented above, suggests that the younger the age, the more likely participants were to select the wrong answers prior to the reading of the graphic novel. Upon further exploration, the researchers were informed that most of the participants in the study over the age of 15 had taken high school health science where information on HIV/AIDS had been presented. While the knowledge of the older students appears to reflect this education, additional research is necessary to test this hypothesis. Overall, preliminary results appear promising, although the graphic novel may be more effective with young adults who have not yet had any HIV/AIDS education, i.e., in South Carolina, those in 8<sup>th</sup> or 9<sup>th</sup> grade (ages 14-15).

This project enabled the students who created *AIDS in the End Zone*, and the participants who read the graphic novel, to enhance their life skills. In their document, *Skills for Health*, the World Health Organization (WHO) defines life skills as 'abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life' (2013, p. 3). Taking part in this project had a significant effect on the students' and participants' ability to deal more effectively with HIV/AIDS issues, important life skills. The youth who created the graphic novel also developed inter-personal skills for communicating and interacting effectively with others. In addition, the young adults who read *AIDS in the End Zone* used their cognitive skills for analyzing and using information in the graphic novel to increase their understanding of HIV/AIDS. The project also helped both the incarcerated youth and the participants in the project to face the realities of life with diseases such as HIV/AIDS. Another important outcome of this project was the realization that the process used to create the graphic novel can easily be replicated across a variety of curriculum areas, in school libraries and classrooms. The students believed that the visuals in graphic novels helped scaffold their understanding of the text, and they were eager to use them in other ways. As one of the students told us, "I would rather read a graphic novel than a textbook because pictures get to the point quicker." Another said, "Visual with text was more fun to read. Instead of envisioning it, you can actually see the scenes playing out." The students also enjoyed the creative process of combining the text with the illustrations. They recommended that the process be implemented in their science and social studies classes. They also thought that it would be effective to create graphic novels about other social issues, such as bullying, alcoholism, etc. When asked how they would advise librarians and teachers who wanted to work with students to create graphic novels, the students offered the following suggestions:

- 'If a student can't draw, they can write well – you have to work with others in class groups.'
- 'All students should be involved. There should never be someone not doing something.'
- 'Don't assign the students tasks – have them pick based on their strengths'

Another outcome of the project was the students' awareness of the ways in which the process of writing the graphic novel helped to improve their literacy skills. They made the following comments:

- 'It is a fun way to develop writing skills while learning about the topic'
- 'You develop a story line and plot.'
- 'You are learning a lot of different things including social and communication skills'
- '(It) helped us brush up on writing skills because it was a different genre / different way to express yourself – not full sentences'
- 'It helped writing skills – helped with the flow of the story'
- 'It gave us the experience to write a book and be a part of a creative thing.'

Throughout the project, these students collaborated to develop multiple literacy skills, which are needed to navigate the mediasphere in which they live. As Michael Bitz, founder of the Comic Book Project, states, '...in the process of creating comics, students are extending literary pathways that, in the end, address the basic literacy concepts we're all trying to get at' (Bitz in Viadero, 2009, p.1). Further, allowing students to tell their stories through a visually appealing graphic medium helps students realize that writing is not boring (Crilly, 2009). For these, and a variety of reasons, the potential for allowing students to create graphic novels in libraries and classrooms is enormous. Whether librarians and teachers have students use paper and pencil, or one of the growing number of "create your own comics" websites, the process can teach students literacy skills, such as developing a plot, characters, dialogue, and settings.

## Conclusion

The quest to provide effective HIV/AIDS prevention resources for young adults must examine the texts that they value, such as graphic novels. This is the first study of its kind to provide scientifically-based research that examines whether or not graphic novels can be an effective HIV/AIDS prevention tool for young adults. The project has the potential to significantly impact young adults in South Carolina, and beyond, since participating students should acquire a greater knowledge of HIV/AIDS issues after participating in the graphic novel intervention. Further, the findings of this study will provide insight into the effectiveness of graphic novels as an educational tool for young adults, specifically in the field of HIV/AIDS prevention. The study has significant implications in the field of education because it addresses important issues regarding visual literacy, adolescent literacy, and HIV/AIDS prevention for young adults. Further, the process of creating the graphic novel and the study's methodology could easily be replicated across the curriculum, as well as for social issue topics such as bullying, addiction issues, etc. School librarians can use this model, and collaborate with classroom teachers to help their students create graphic novels that will help them become college and career-ready, goals of the Common Core State Standards (CCSS).

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## Biographical notes

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