The Native Comic Book Project: Native Youth Making Comics and Healthy Decisions

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Abstract

Background American Indians and Alaska Natives have traditionally used stories and drawings to positively influence the well-being of their communities.

Objectives The objective of this study was to describe the development of a curriculum that trains Native youth leaders to plan, write, and design original comic books to enhance healthy decision making.

Methods Project staff developed the Native Comic Book Project by adapting Dr. Michael Bitz's Comic Book Project to incorporate Native comic book art, Native storytelling, and decision-making skills. After conducting five train-the-trainer sessions for Native youth, staff were invited by youth participants to implement the full curriculum as a pilot test at one tribal community site in the Pacific Northwest. Implementation was accompanied by surveys and weekly participant observations and was followed by an interactive meeting to assess youth engagement, determine project acceptability, and solicit suggestions for curriculum changes.

Results Six youths aged 12 to 15 (average age=14) participated in the Native Comic Book Project. Youth participants stated that they liked the project and gained knowledge of the harmful effects of commercial tobacco use but wanted better

integration of comic book creation, decision making, and Native storytelling themes.

Conclusion Previous health-related comic book projects did not recruit youth as active producers of content. This curriculum shows promise as a culturally appropriate intervention to help Native youth adopt healthy decision-making skills and healthy behaviors by creating their own comic books.

Keywords Comic books · American Indian/Alaska Native · Health education · Tobacco

Background

American Indian and Alaskan Native (AI/AN) youth use commercial tobacco more often than youth from other racial and ethnic groups [1]. Recent research indicates that AI/AN youth from certain regions of Alaska and the Northern Plains have the highest prevalence of commercial tobacco smoking of all US youth [2]. This high prevalence may be due to a combination of circumstances, including easy access to tobacco, socioeconomic life stresses, and parental and peer influences [3, 4]. In addition, AI/AN youth have a disproportionate burden of risk factors for cancer, not only from smoking tobacco but also from other cancer precursors, such as obesity [5–9]. Given this background, developing healthy decision-making skills is vitally important for Native youth.

To address disparities in commercial tobacco use by this population, the Native People for Cancer Control program at the University of Washington partners with tribes in Washington, Wyoming, Alaska, Montana, Idaho, Oregon, and North and South Dakota to improve cancer education, training, and outcomes. Native People for Cancer Control is

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one of 25 community networks programs funded by the National Cancer Institute. Program staff developed a grass-roots youth program known as the Native Comic Book Project (NCBP) as an education and outreach intervention integrating comic book creation and healthy decision making with Native storytelling.

Comic books have been used in the USA and worldwide as health educational tools to communicate with diverse audiences [10–16]. A history of the National Institutes of Health states that comic books were part of its public health educational campaigns as early as the 1930s [17]. More recently, Marvel Comics and Elks USA collaborated on “Hard Choices,” a Spider-Man comic focused on preventing underage drinking [18]. In Seattle, the King County Public Health Department produced a free comic book on preparing for pandemic flu, available in 19 languages to residents of King County, Washington [19].

However, few studies of comic books have assessed their effectiveness as educational tools. In one such study, the World Health Organization designed an educational comic book for Egyptian school children as part of a program to eliminate lymphatic filariasis. The comic significantly reduced fear of the disease and promoted positive attitudes both toward affected patients and toward mass drug administration as the prevention method of choice [20]. Another study, focusing on hepatitis awareness, involved more than 1,500 French secondary school students who received a comic strip illustrating various scenarios of hepatitis C infection. Pre- and post-intervention assessments showed that knowledge significantly increased in students who read the comic strip [21]. In a third example, 954 high school students in Gabon received an intervention targeting knowledge, attitudes, and behavior concerning AIDS in the form of a comic book about condom use. Study surveys demonstrated a substantial improvement in students' understanding of AIDS transmission. Additionally, the authors found that each comic book was read by an average of 7.5 people, underscoring the potential reach of this medium [22].

Notably, all these educational comic books were produced by adults and professional organizations for youth, not by the target audience themselves. Given the tradition of storytelling in Native communities, project staff hypothesized that comic books might be an excellent vehicle to reach and engage AI/AN youth. They considered that an intervention would be more likely to succeed if its methods were consistent with AI/AN cultural practices and especially if youth could be involved as active producers of the educational content. Staff therefore developed the content of the NCBP along with a series of train-the-trainer sessions to build the skills needed to implement the project. Staff then tested the feasibility and acceptability of the train-the-trainer sessions and conducted a pilot test of the NCBP itself. These activities were envisioned as a first step toward demonstrating the effectiveness of a

culturally appropriate tobacco health intervention for AI/AN youth.

Methods

Development of the Native Comic Book Project

The NCBP was launched as a community education project of Native People for Cancer Control. It was adapted from Dr. Michael Bitz's Comic Book Project [23], which was founded in 2001 as an after-school program to teach literacy and the arts. The Comic Book Project emphasizes creativity and self-expression, as students produce their own comics from the initial stage of brainstorming an idea through the final production [24]. Dr. Bitz's 2002 pilot project involved more than 700 children at 33 sites in New York City. In subsequent years, the Comic Book Project was implemented in additional cities across the USA, reaching more than 50,000 youth. It was eventually expanded to include thousands more youth in after-school programs focused on financial literacy across New York City.

In 2008, Native People for Cancer Control began collaborating with Dr. Bitz and others to develop the NCBP. We tailored the curriculum to be culturally relevant to AI/AN youth in both rural and urban settings. Because a primary goal of the NCBP is to improve the health of Native youth and their communities, we incorporated a new and integral component, namely, teaching youth how to make healthy choices in daily life. Our leading partner in this endeavor was the Decision Education Foundation [25], particularly Chris Spetzler, who helped us incorporate sound decision-making principles [26]. Native People for Cancer Control also partnered with Roger Fernandes, a Native storyteller, educator, and artist in the Seattle area, to incorporate Native storytelling.

The NCBP was designed to be delivered in a series of 1- or 2-h sessions that can be implemented either during a 2-day workshop or over several weeks. The curriculum consists of 16 lesson plans, along with activity booklets, manuscript starters, comic book canvases, resource sheets, examples of completed comic books, a PowerPoint presentation on healthy lifestyles for cancer reduction, and pre- and post-training assessments. Each of the 16 lesson plans includes goals and activities in comic book creation and healthy decision making. Lesson plans also incorporate Native stories relevant to youth, using the framework of the “Hero's Journey.” This is a narrative structure described by Joseph Campbell and detectable in many popular Hollywood films [27]. Characterized by seeking an older person for advice, the Hero's Journey offers helpful parallels with Native traditions of respected elders who pass their knowledge to youth. The content of the train-the-trainer

sessions and the pilot project received ethical approval from the institutional review board of the University of Washington.

Train-the-Trainer Sessions

Native People for Cancer Control offered five 2-day train-the-trainer sessions in Native communities in the Pacific Northwest in November of 2008 and January, June, and August of 2009. A total of 30 Native youth leaders participated in these sessions, after learning about them from their peers and from e-mails sent by project staff. At least one of the project design partners (Michael Bitz, Chris Spetzler, Roger Fernandes) also participated in each training session. Train-the-trainer sessions included a project overview, a discussion of community and organizational needs, instruction in teaching methods, and a review of curriculum sessions. We also introduced several comic book games and drawing exercises that were not part of the original Comic Book Project. These sessions provided an opportunity to gather informal participant feedback on various aspects of the project.

After the train-the-trainer sessions concluded, two youth leaders expressed interest in implementing the NCBP with youth in their own tribes. Project staff were invited to pilot test the curriculum at one tribal community site.

Pilot Project and Evaluation

In 2009, the NCBP curriculum was pilot tested with AI/AN youth at one tribal site in the Pacific Northwest. Staff worked with Native youth leaders to plan, implement, and evaluate the curriculum in this community. We collaborated closely with community members, attending to local knowledge and assets in order to ensure that the NCBP aligned with cultural values of family, community, place, and personal gifts. The NCBP was implemented during a summer after-school youth program with the assistance of a trained community health intern from a local university. Given the youth program's time constraints, the 16 regular weekly sessions were restructured as two weekly 2-h sessions held over a period of 8 weeks.

When the pilot project concluded, we used methods of community-based participatory research to conduct curriculum evaluations that emphasized tribal self-determination and community ownership of the evaluation process [28]. To augment weekly participant observations conducted during the implementation, we used mixed-methods evaluation tools, including brief pre- and post-project surveys of participants and youth leaders. Because this was a feasibility project, the surveys focused on evaluating youth engagement, decision-making items, and NCBP acceptability, rather than on tobacco knowledge.

Project staff also interviewed the tribe's public health educator and the lead NCBP trainer and conducted a post-project interactive meeting with Native youth leaders, youth participants, and their parents. The goal of the interviews and interactive meeting was to gather feedback on the curriculum, ideas for disseminating the NCBP, and suggestions for improving it. Staff sought answers to the following questions: How and why did the project design work for the intended users? How did planning efforts support the project? How was the project implemented? What was effective? What modifications can be made? What outcomes were achieved and how? Project staff took notes to record statements by meeting participants, preserving anonymity.

Staff also tested a Comic Strip Evaluation Tool that interactively measured outcomes by asking participants to complete the last frame of a comic strip (Fig. 1). In the last frame, participants indicated what they would say to friends who were making a decision about cigarette smoking and peer pressure. With the results of our evaluations, we prepared an action plan for modifications to build on the project's success.

Results

Pilot Project

Six youths aged 12 to 15 (average age, 14) participated in the pilot project. Youth participants included two eighth graders, three ninth graders, and one tenth grader. Four participants worked independently, and two teamed up to create a single comic book, so that a total of five comic books were completed. After the pilot project concluded, all participants had new story ideas and planned to create additional comic books.

Given the small sample size and the anonymity of pre- and post-training surveys, neither group nor individual comparisons over time were possible. Nevertheless, one survey item in particular yielded interesting results. In response to the statement, "Young people can make a difference in their community," youth were more likely to indicate strong agreement after participating in the NCBP. In addition, post-training surveys elicited comments such as these:

"It was fun and I learned a lot."

"I loved making the comic book—it was very fun."

"It was hard but fun!"

Youth participants in the interactive meeting were enthusiastic about implementing a future NCBP in their communities. Feedback also revealed that four of the six participants found the session on Native storytelling and the Hero's Journey to be helpful in creating their comic books. Although participants reported that they were unfamiliar with Native stories or

Fig. 1 Our Comic Strip Evaluation Tool was a three-frame comic strip that invites the participant to complete the third frame

myths, many could relate to the Hero's Journey and articulated this personal connection in their comics. Creating comic books allowed them to use information on tobacco to tell their own stories about why they chose to be smoke free. Youth also indicated that the lessons and instructions were easy to follow.

However, the tribe's public health educator, the lead trainer, and the participants' parents all agreed that too many concepts were covered in the curriculum (e.g., decision making, storytelling, coloring), especially given the limited time frame. One youth participant stated, "Overall it was very intense, [there was] too much to absorb in a short time frame." The on-site coordinator concurred, saying, "I encourage all teachers to make a comic book and practice every session as if they were a student. There is a lot of work involved in it." Participants and trainers also suggested including additional resources in the curriculum, such as project planning tools, comic games, examples of comic books, icebreakers, and leadership activities. Among their suggestions were to further simplify the NCBP, to make the Decision Education Foundation model more culturally relevant, and to design a comic strip that would demonstrate how the model works in relation to a health topic, such as cigarette smoking.

Project staff categorized the suggested improvements into six domains: (1) present examples of Native comic books by Native artists, (2) incorporate more comic book and decision-making activities, (3) spend less time on lectures, (4) allow more time to learn how to incorporate healthy decision making in the comics, (5) dedicate more time to decision making and healthy choices related to tobacco abuse, and (6) offer more hands-on opportunities to share what participants learned.

Discussion

This pilot project demonstrated the success of the NCBP as a means of engaging Native youth, along with its potential for implementation in a tribal community. The project was not

designed or powered to assess changes in knowledge or behavior. Rather, its purpose was to evaluate the feasibility and acceptability of a culturally appropriate curriculum based on the Decision Education Foundation model.

Few previous reports on the use of comic books to improve public health have included rigorous or quantitative evaluations of their influence on knowledge and attitudes [20–22]. Instead, raising awareness on health topics such as HIV transmission has typically been the focus of such campaigns [10–12, 17–19]. In efforts that included evaluations, both qualitative methods and pre- and post-intervention surveys were used to measure knowledge, acceptability of the comics, and subsequent reduction of at-risk behaviors [13, 14, 20–22]. These efforts have shown that comic books can significantly improve knowledge and behaviors among youth [13, 20–22]. No previous study, however, has reported on the use of culturally adapted, youth-focused comic books created by youth themselves.

Post-project evaluations of the NCBP demonstrated that youth of junior high and high school age gained knowledge of Native stories, expanded their knowledge of tobacco, and built confidence in creating comic books. Their feedback suggested that the curriculum would benefit from further integration of the concepts of comic book creation, healthy decision making, and Native storytelling.

To respond to the needs of our partners, we are adding new resources to the NCBP toolkit, such as comic book games, Native storytelling references, and a list of supplies. We are also further adapting the Decision Education Foundation model to indigenous culture and creating a flowchart of activities for integrating this model with Native storytelling and the Hero's Journey. Along with our partners, we are completing an overarching NCBP logic model and evaluation framework that can be used to develop locally relevant logic models and assessment tools. Logic models are typically used to articulate the ways in which an intervention is understood or intended to produce particular results. As such, they represent a key construct in the efforts of Native People for Cancer Control to achieve results that benefit participating communities.

In addition, NCBP staff are pursuing recommendations to integrate the curriculum into Native-focused after-school classes for fifth to eighth graders. To this end, we are partnering with volunteer organizations such as Centers for Service Learning and seeking the assistance of colleges to provide staffing, training, recruitment, and support, as well as to conduct follow-up activities.

This study has several limitations. First and foremost, the NCBP was a small, unfunded, community-based project that continuously evolved during its development and implementation. The limited number of participants in the train-the-trainer series and the pilot test prevented rigorous or comprehensive analyses. Nor was there any opportunity to examine the influence of the NCBP on actual tobacco-related behaviors or long-term outcomes. These factors limit any conclusions that can be drawn regarding short- or long-term changes in attitudes or behaviors pertinent to commercial tobacco use among Native youth. Nevertheless, the NCBP garnered the enthusiastic collaboration of our community partners.

In summary, Native People for Cancer Control launched the NCBP as a youth-focused community education effort that combined a comic book curriculum, instruction in healthy decision-making skills, and Native storytelling traditions. We demonstrated the acceptability of the NCBP as well as the feasibility of training youth leaders to implement this project with local resources and staff. As a set of activities for participatory health promotion and primary prevention, the NCBP has the potential to increase community knowledge of cancer risk factors that are most pertinent to youth. Perhaps the most critical goal of the NCBP is to enhance youths' decision-making skills, which may be transferable to diverse health conditions and situations. By encouraging good life choices in at-risk and hard-to-reach minority youth, the NCBP curriculum addresses a major cancer risk factor, commercial tobacco use, at the most fundamental level. Future studies are needed to document changes in knowledge, attitudes, and behaviors among youth motivated by innovative interventions such as the NCBP.

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Conflicts of Interest The authors declare that they do not have a conflict of interest.

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