



The Intersection of Graphic Novels and Health Literacy

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ABSTRACT

Health literacy remains a critical public health issue, with over one-third of Americans struggling to access and act on essential health information. Graphic novels, with their unique combination of visual and textual storytelling, offer a compelling medium for addressing this challenge. This paper examines how graphic novels can effectively engage diverse populations, simplify complex health concepts, and inspire behavioral change. It highlights their potential for improving understanding among marginalized groups, low-literacy individuals, and non-traditional audiences. By examining visual representation techniques, narrative strategies, and real-world case studies, this study underscores the value of graphic novels as tools for health communication. Future directions include leveraging digital platforms and social media to expand their reach and evaluate their efficacy in various healthcare contexts.

Keywords: graphic novels, health literacy, visual storytelling, health education, public health communication.

INTRODUCTION

A graphic novel is composed mainly of illustrations with a storyline that weaves between pictures and brief amounts of text laid out typically in single pages or two-page spreads. The text carried in these visual writing spaces can be a dialogue between characters, but it can also be an internal monologue of a character or elements described by a narrator. These short segments of words are designed to be read either quickly or in a more in-depth manner depending on the complex arrangement of story elements on each page. In doing this, there is a balance of slowing down reading to see more of what the arrangement of pictures is communicating with the words and speeding up reading to get to the next appropriate visual encounter. The overall effect is building a learning and visually engaging reading experience around the use of a duet of visual and textual representation of meaning [1, 2]. Health literacy helps individuals and communities understand and act on basic health information and services available to them, so they can take better control of their health. However, in the United States, more than 36% of Americans have inadequate or marginal health literacy skills. Improving people's health literacy will not only allow them to take better control of their health; it's also linked with more appropriate use of healthcare services and lower healthcare costs. Additionally, visually compelling graphic novels are of interest to all readers. As visual creatures, our brains connect to a rich sensory experience found in graphic novels. So graphic novels are a good vehicle not only for imparting knowledge but also for keeping or increasing engagement of readers. Graphic novels may be particularly inviting to young adults, captive and marginalized populations, English language learners, and those with low literacy levels [3, 4].

Benefits Of Using Graphic Novels for Health Education

One of the primary challenges of developing educational resources to promote health literacy is to capture the attention of the intended audience. Graphic novels may offer greater opportunities for engaging a

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diverse audience by communicating concepts with narrative and art. Research with novices in medical education and dementia care suggested that reading graphic illness narratives enhanced readers' abilities to comprehend complex information about diseases. Non-expert readers frequently use the story to clarify the methods and results of scientific research related to the condition. Simple illustrations are also easier for senior citizens to comprehend in contrast to photos of the same content. This may be because the non-scientific illustrations make the complex idea seem incomprehensible, and therefore readers feel they need to focus on it [5, 6]. Few studies have examined the degree to which visual narratives pre-familiarize readers with a medical condition to make medical discussions easier to understand. A set of comic strips was tested by pediatricians for increasing discussions of the human papillomavirus vaccination, but the educational or behavioral impact of the comics has not been reported. More recently, analysis has been used to evaluate the effectiveness of serious comics or cartoons for epilepsy education and youth group discussion. To investigate the overall health literacy appeal of a graphic novel, we conducted focus groups with a variety of research participants who were not comic readers or, generally, residents of Forsyth County. Our objective was to understand the themes for this demographic that enhanced or detracted from the appeal of a science fiction-themed toxicology story. The results of this focus group suggested that a large and diverse group of non-comic readers would read and enjoy a well-crafted graphic novel that attempted to educate or inform the reader about human biological function. We used this evidence to support the graphic novel concept. A recent community workshop session in Gordon County revealed a strong interest in simple, health-related materials in comic or graphic novel format. In reality, more than half of the focus group participants suggested they would be attentive to the material if it were provided in this format [7, 8].

Designing Graphic Novels for Health Literacy

When designing graphic novels for health literacy, many important factors must be considered that can make the narrative and tools difficult to create. Accurate representation, and meaningful simplification, along with engaging readers in the first place, are critical but often complex tasks. In many cases, designers with health expertise embark on creating a product they believe will target the right audience, but experts in audience engagement can suggest unplanned pitfalls and reveal new opportunities for narrative strategies and visual design inspiration. Central to these discussions of designing a graphic novel for health literacy is the development of a visual-textual narrative that is meaningful and simplifies complex content related to health. However, meaningful simplification does not mean the content need not be complex. The strategies discussed in this rest on the assumption that for a graphic novel to be reachable at first encounter, it should be complex but not complicated. Graphic novels for health literacy need to be visually simple, but not content or symbolically simple. Health content needs to be built into the product, just as health-damaging substances and toxins are built into a food web. At the same time, as the following section argues, the visual should not simply illustrate or mimic the textual content of the novel, but act to transform it, enriching or altering its meaning. The experiential dimensions of health and healing, in particular, become significant in creating graphic novels where social determinants of health must be attended to [9, 10].

Visual Representation Techniques

Several visual representation techniques are often used in health communication in graphic novels pertaining to health. There is strong evidence that using the picturing information effect (that is, illustrating text, color coding, etc.) enhances both comprehension and retention, aids in following procedural information, and heightens interest and enjoyment. One study showed that photographs, drawings, and infographics outperform standard procedure information in comprehension and reading time as well as other measures for instructions related to medication use. Images are especially valued when attempting to simplify complex topics, which of course makes them perfect when communicating about health, with its inordinate amount of jargon and complexity [11, 12]. Illustrations help to communicate complicated ideas and offer non-threatening, related, and relevant culturally specific storytelling. Visual metaphors are important in communicating about health because they are "a universal language." More images increase underlying information content; providing additional images that are not content-neutral to a panel might increase recall of other in-scene details. However, it is to be noted that adding irrelevant visual metaphors to a panel can crowd conditions and make them less easy to understand. Many research results support the general memory-enhancing effects of illustrations in prose texts; however, they also conclude that aesthetic appeal mediated the effects of "concrete" representation and that aesthetic appeal had a larger impact on recall than the content of the drawing. Illustrations show the main point and add visual metaphors. This finding is especially compelling when considering work on

alt-comix and graphic novels, where visually dominant storytelling is of utmost importance. Mission: U. empowers instructors and staff to reach out to a wide range of students using culturally relevant health information [13, 14].

Narrative Strategies

Stories can provide meaningful contexts for conveying the messages that one wishes to see embraced by others. Like authors of well-written fiction, the communicators of health messages may decide to develop certain characters and situations in their popular narratives in ways that invite the identification of potential audiences. Similarly, the inherently flexible nature of the stereotypical genres of fact and fiction may be exploited to frame a health message from those of necessity or desperation. Because people have a natural curiosity about other people, it is quite possible to use character-driven but still educational types of narrative to cast public light upon 'undeserving' victims of various serious but controllable infectious diseases such as hepatitis C, HIV, and AIDS. Public health education is often no simple matter. We hope that by using humor we can shock people out of their complacency. We want to lessen the offense factor. Using comedy is a good way to draw them to the issues. Under such patient-voice techniques, complex rationales for and strategic discussions about the prevention of the associated viruses can then ensue [15, 16]. The educational approaches to pandemics exemplified by various health-related comics all have tight enough plot structures to maintain readers' interest so that their subtler hints at health literacy comprehension are not lost. These narratives are all filled with intriguing characters that urge forward various worthwhile health messages. By enabling these multiple levels of identification to be made, the ultimate goal of a participatory taken health educational narrative might be discussed and activated in greater depth. Laugh, for example, becomes a medium through which resistance to cooperative action may be confronted: in one narrative, a character shows off his Bird Flu Survival Kit. The only thing missing bemoans his daughter, is a battery-powered blender to mix up his Bird Flu Margaritas. A character's unhealthy curiosity about passengers on the Boston commuter bus as potential carriers of avian flu leads him to discover America's least secret government installation – its secret beer cooler. The end of the deeply ingrained indifference toward the people around them may, with luck, make an additional though subtle dent in the armor of public complacency. Ideally, as the readers find themselves, their family, their village, or their county in an impending apocalyptic epidemic, they may be just that much less inclined to think 'nothing to see here' [17, 18].

Case Studies of Successful Graphic Novel Health Campaigns

There are a variety of graphic novel health campaigns that present testimonials and evidence of their health interventions and public health applications. In this section, we look at four case studies of employed graphic novel health campaigns and assess the good elements that they bring to the field of health promotion and health education, including the population-level benefits of an increase in health literacy and the acceptance of these graphic narratives by their audience. Through a graphic novel about diabetes, goiter, and lymphatic filariasis, case study one demonstrated that graphic narratives can be valuable for raising awareness about the three affiliated diseases. Our multi-country audience cited readability, simple messages, and clear presentation of the necessary information as factors that attracted them to our graphic narrative, but many admitted that they remain suspicious of a government initiative to educate about these diseases. Our comic had an immediate impact on behavior change as we found some men did not buy our palm oil when they found out about its trans-fat content. Case study two followed changes that were made to a diabetes education project in Johannesburg, South Africa. It used graphic narratives to support ideas about peer health education, interdisciplinary learning, and project progression at professional conferences and workshops. Our final product tiered down to an adherence comic for our project's study participants and their families. We report on the conversations this health comic began. In case study three, we provide results from an audience survey of our hypertension and diabetes leaflet, also produced as part of an initiative [19, 20]. HIV graphic narratives that worked with audiences first focused on an HIV prevention project in the United States. Both men and women liked the comic, which focused on character narratives, advice for times when people feel vulnerable, and tools to help them think before they have sex. This comic is still being used by the project, ten years later, to raise awareness about the need for an innovative youth program that encourages a positive sense of self for young runaway women involved in the sex trade. The comics focused on ways to talk about a partner's HIV test and how to reach fidelity agreements. Many participants in the formative audience research favored a storyline in which a man tries to persuade a woman to talk to him about her HIV test results. They saw the woman in the story as an enterprising, independent thinker who took charge of her health, which she could pass on to her partner if she saw the need. After the publication of the comics, the state of

Michigan witnessed an increase of almost ten times the number of requests for HIV test counselors to undergo formats that would enable them to better communicate with their clients about partner notification and referral services. The project's ongoing associations with the world of strip clubs have also meant that the comic is one of the few resources available that is accessible to this particular population. Of special interest, the comic was the first publication purchased by a public health department, increasing in three weeks to 10,000 products [21, 22].

Future Directions and Opportunities for Research

While research in health literacy and graphic novels has expanded over the years, there are still areas of study that remain limited. To move forward, the research could incorporate novel methods and innovative ways to evaluate the efficacy of graphic novels in subgroups and patient populations, focusing on content as opposed to literacy assessment. For example, study participants could be given a comic about a newly described treatment method in dermatologic surgery. Questions in the pre-post study could focus on the development and learning of knowledge, but the art or comedic elements should be the main focus. Such a study would be best done with a large group and select a subgroup to ensure generalizability. The digital platform and social media-centered websites are a growing part of the comic book/graphic novel world. A possible new area of investigation is how to assess or recruit patients using these digital comics to study education in the dermatology clinic setting. For example, comics could be created for different purposes, such as a health instruction tool in the dermatology clinic. With 'likes' and 'reblogs' in the social media context, use and preferences can be assessed [23, 24]. Application of graphic novels to serious subjects could, in the future, involve testing the effectiveness of educational materials. These have applications across medicine, dermatology, and procedural education. We can predict that with proper collaboration between healthcare professionals, educators, artists, and social media experts, we will expand upon the current success of graphic novels and bring this feasibly expanded health literacy medium to the future [25, 26].

CONCLUSION

Graphic novels represent a powerful, untapped resource for improving health literacy by merging art and narrative to create accessible and engaging educational tools. Their visual and textual interplay simplifies complex health concepts and makes them relatable to diverse audiences. From addressing stigmatized health topics to fostering dialogue about prevention and care, graphic novels demonstrate adaptability and efficacy across demographics. Future research should focus on digital integration and measurable outcomes to ensure their continued relevance and impact. By embracing this medium, healthcare professionals, educators, and policymakers can better connect with communities, empowering individuals to take control of their health in meaningful ways

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CITE AS: Mugabo Kalisa G. (2024). The Intersection of Graphic Novels and Health Literacy. *Research Output Journal of Engineering and Scientific Research*, 3(3): 13-17.

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