Quantifying and Visualizing the History of Public Health Comics

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Abstract

Comic books can potentially be a useful tool for education in public health crisis, especially in areas with high rates of illiteracy. This research presents the results of a quantitative survey of public health comics, from the 1940's to the present. The data shows how the form and function of these comics has changed. The results show that one of the top challenges to public health professionals interested in using comic books to solve a health crisis in in locating them, as a significant amount of this material is produced and distributed in channels outside of traditional archiving and cataloging.

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1 Introduction

Illiteracy is never a good thing, but it can mean life and death in a public health context. Unfortunately, many of the world's most pressing public health problems are situated in areas with high rates of illiteracy. Comic books are a natural fit for this problem. Comics have a long tradition of sharing information through images without having to rely too heavily on text. Comics books are also low cost, easily portable, and don't require electricity or other technology, meaning they can be used in virtually any environment.

In fact, comic books have addressing issues in the public health sphere since before World War II (Grand Comics Database 2013), however the categorization and organization of comics can make finding them difficult. Some comic books are categorized as graphic novels, and thus are treated like traditional books. However, what we might think of as traditional comic books have often been immune to the indexing and organization that has accompanied most media. Even as new, commercial comic books have moved towards digital distribution, the search functionality within them is limited or altogether absent. It is difficult enough to be a person with a low-level of literacy who is involved in a public health crisis, it should not be difficult for health information professionals to find materials appropriate to the problem.

There are organized efforts to help public health professionals interested in the use of comic books to meet professional goals. The web site Graphic Medicine (http://www.graphicmedicine.org) has been running since 2007, and features reviews of dozens of comic books and graphic novels that tackle health issues from around the world. Bert Hansen's paper, Medical History for the Masses: How American Comic Books Celebrated Heroes of Medicine in the 1940's, shows that comic books have been used commonly in public health education for over 70 years. The main problem with an organized study of comic books in public health stems from their production and cataloging. For example, under the Dewey Decimal System, all comic books are files under the number 741.5.

Commercial graphic novels tend to be categorized like traditional books, at least in libraries. Finding public health works that fall into this category is no more or less difficult than finding other books on the same subject. Traditional, periodical comic books tend not to be archived by most public or academic libraries, and are generally only found in libraries that have special collections, such as Indiana University's Lilly Library. On the surface these might seem like a minor footnote in the world of public health information, however organizations like Planned Parenthood have employed comic books in public health

campaigns since the 1950's. Ongoing comic series of the 1940's, like True Comics and Science Comics, regularly featured public health related materials. Many public health comics are very difficult to find using traditional research methods, and are often ignored by comic book archivists. For example the online comic archive titled The Grand Comics Database has information on over 400,000 comic books, but does not have information on the Planned Parenthood comics, which is especially interesting as some public health comics have included mainstream superheroes like Spider Man. For example, Marvel Comics and Planned Parenthood published a comic book together about birth control in 1976 (Lee 1976). The third venue for public health comic books are individual titles produced by both NGO's and governmental agencies. These comics were often produced for a single limited print run and are often not distributed widely enough for libraries or other archives to collect.

Fortunately remnants of many public health comics reside in pockets of the Internet maintained by individual hobbyists and writers. Besides the previously mentioned website Graphic Medicine, which is run by medical and academic professionals, people have archived old public health comics for both nostalgic and comedic intent. This research is based on a survey of 254 public health related comic books and graphic novels, from 1940 to the present.

The first step in assessing the contents of public health comic books was a wide attempt at finding as much of this material as possible. The first line of inquiry stemmed from previous academic work in the area. Although there is not extensive academic writing on the subject, papers by Green (2010), Williams (2011) and Hansen (2004) provided pointers towards historical and influential uses of comics in health. McAllister's 1992 paper on comics in the AIDS crisis also helped identify comics from that era. Interestingly one of the best archives for public health related comics was assembled for comedic intent. Ethan Persoff's website *Comics With Problems* is an archive of comics from around the world, and is frequently cited by academic authors on the topic. Internet searches based on these materials lead to other sources, like the American Social Security Administration's archive of vintage comics produced to promote social well-being.

As these comics were located they were categorized in a database, with appropriate metadata, such as year published and health topic addressed. Once this database was completed the comics were also categorized by the type of intended learning, based on a modified version of Gagne's learning taxonomy. The comics were sorted into four categories: Historical Information, Preventative Instruction, Shaping Attitudes, and Personal Narrative & Exploration. The Historical Information category is a modified version of Gagne's category of learning called Verbal Information. Verbal information is largely based on knowledge of facts, and the comics in this category are historical overviews of health science breakthroughs. The Preventative Instruction category is based on Gagne's category of learning called Intellectual Skills. In the Gagne context, Intellectual Skills is about procedural knowledge, and in this category is made up of comics on how to avoid health problems. The Shaping Attitudes category is based on Gagne's category of attitudinal learning, meaning the intent of these comics is to shape mental processes that impact future decision-making. Lastly, the category titled Personal Narrative and Exploration is based on Gagne's Cognitive Strategies category of learning, meaning comics that are meant to help people shape their own thinking and problem solving. Gagne's taxonomy has a fifth category, Motor Skills, but none of the comics found were intended to teach people how to do exercises or other physical activity.

2   Conclusion

The results showed that public health comic books have grown over time, in terms of length, topic, and complexity. Of the comics surveyed for this research, only 7 could be understood by people with limited literacy skills, a series of comics on birth control from Nigeria produced by Planned Parenthood in 1985. Thus nearly 97% of public health comics surveyed require at least some level of literacy to understand. The average length of the materials surveyed grew from 12.6 pages for the materials produced in the 1940's and 1950's to and average length of over 106.3 pages for materials produced after the year 2000. The instructional

aim of the comics surveyed also changed from more simple objectives to more complex and cerebral goals. The early public health comics were overwhelmingly aimed at either historical information and preventative instruction. These early public health comics generally were aimed at teaching children about the origins of medical and scientific breakthroughs, or aimed at teaching readers procedures to avoid medical maladies. As time progressed, more of the comics were aimed at attitudinal goals, such as drug abuse prevention and acceptance of AIDS sufferers. In the last 20 years the trend was towards more long form works, and the comics found were often reflective pieces that narrate the author's struggle with physical or psychological disease.

From an information perspective, the biggest challenge in the use of use of public health comics is in locating them. While more modern graphic novels might be easy to locate, there is a significant amount of material that is not cataloged in an easily accessible way. A significant percentage (29.3%) of the public health comics found were located through nontraditional means, and were not subject to traditional cataloging methods.

The results of this research show that there is still room for improvement in the use of comic books in the public health sphere. It is clearly a positive sign that comics have been used for a growing range of public health concerns, however the potential strengths of comics in reaching illiterate populations has not been fully utilized. Comic books in public health in many ways mirror the growth of comic books as a media, growing from material that is simplistic and meant for children to material that can have depth and is intended for adults. In a public health crisis potentially helpful media material should be readily accessible, and unfortunately too much of this material is not archived appropriately.

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