Zombie pandemic preparedness: a cautionary observation

Frank Houghton, Katie Del Monte, Daniel Glessner, Joyce Goff, Edward Hopkins, Krista Loney, Ghazal Meratnia, Jeremy Toms

The theme of zombies has been utilised as a student engagement tool across a range of disciplines, including international relations, geography, microbiology, physics, and epidemiology. Perhaps most notably, this theme has been adopted to explore mathematical modeling of disease diffusion. The zombie theme has also been used to engage with and educate the public about the danger of re-emerging infectious diseases, like rabies. The popularity of zombies in the entertainment industry offers the hope that using this theme will lead to increased public awareness, as well as interest and engagement in emergency preparedness.

Aware of this potential, the US Centers for Disease Control and Prevention (CDC) responded to widespread apathy towards emergency preparedness by launching a new initiative, Preparedness 101: Zombie Pandemic, in 2011, in an effort to reach younger populations. The initial blog posting, entitled "If you're ready for a zombie apocalypse, then you're ready for any emergency," generated phenomenal interest. The unprecedented level of public interest was demonstrated by the CDC's original tweet's strong trending on Twitter and the overflow of traffic to the CDC's website, which caused it to crash. Not surprisingly, this extraordinary level of interest raised hopes and expectations concerning the engagement of young adults in emergency preparedness. However, current results of research exploring the use of this tactic have been disappointing.

A randomised study of 340 undergraduate students conducted by Kruvand & Bryant, found that the group exposed to the CDC's zombie blog post were no more likely, and possibly even less likely, to either retain preparedness information or express intent to prepare to develop an emergency kit or plan. The authors conclude that, "trivialization of the preparedness topic may have occurred in the zombie campaign." A somewhat similar study of students, conducted by Fraustino & Ma, investigated the use of media type and a humorous ‘tongue-in-cheek’ zombie theme compared with a more traditional preparedness message. The authors reported that the zombie-themed group reported significantly weaker intentions to engage in preparedness.

Eastern Washington University's (EWU) Master of Public Health program at Spokane (Washington State, US) was invited to take part in a Sleep-Over For Science event as part of a federally-funded Area Health Education Centre (AHEC) initiative aimed at attracting rural youth into health science careers. Because the event took place just after Halloween 2015, and because event organisers were familiar with the CDC Zombie preparedness campaign, including its comic novella, posters, and Zombie Disease Detectives activities, the decision was made to incorporate a zombie theme to promote emergency preparedness.

Participants were 4–6 grade elementary school children, aged 9–12 years, with an average age of 10 (SD = 0.9). Thirty-eight percent of the participants were male, and all participants were living in rural areas. Fifty-four responses were collected from a pool of 80 participants, yielding a response rate of 68%. Active parental consent was a precondition of participation. Ethical permission for the study was given by the University's Institutional Review Board.

Following an activity to demonstrate the potential ease of disease diffusion, participants watched a specially prepared 3-minute video depicting a zombie
outbreak developing into a worldwide pandemic. The room was decorated with posters depicting boarded-up houses and graphics from the CDC Zombie Preparedness website. None of the posters, and no element of the video, featured firearms or weaponry. Participants were then asked to list the required elements of a survival kit. These emergency kit lists were subsequently examined and form the basis of this analysis. Participants were then given a copy of a Federal Emergency Management Agency (FEMA) brochure outlining 11 essential and 20 additional suggested elements of an emergency supply list; a discussion of this supply list followed.

The average number of items listed in each ‘emergency kit’ was 8.2 (SD=3.3), ranging from 3 to 16. Although the majority of kits mentioned food (87%) and water (76%), most other FEMA-suggested items were absent. Not only did the kits lack key elements necessary for a prepared emergency response, alarmingly, 56% (30) of lists clearly included weapons and firearms. Some children were very precise in their choice of firearms, with one respondent stating “Hatchet, AR 15, lots of ammo, M9”, while others simply noted “guns, amo, a lot of weapons” or “gun, nife, extra gun, bullets [sic]”.

Firearm and knife-related injuries and deaths among young people are a major global public health issue, particularly in countries such as the US. The results from this event, given the lack of basic emergency kit items and the explicit focus on weaponry, suggest a note of caution in using a zombie theme to promote emergency preparedness. A potential byproduct of zombie preparedness may be an unanticipated focus on, and glorification of, guns and knives. Further research is required to explore this potential adverse focus in more depth.

Author information:

Frank Houghton, MPH Program Director, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US; Katie Del Monte, MPH Candidate, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US; Daniel Glessner, Graduate Student Assistant, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US; Joyce Goff, Program Specialist, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US; Edward Hopkins, Graduate Student Assistant, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US; Krista Loney, AHEC Director, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US; Ghazal Meratnia, MPH Candidate, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US; Jeremy Toms, Graduate Student Assistant, Department of Public Health & Health Administration, Eastern Washington University, Spokane, Washington, US

Corresponding author:
Frank Houghton, Program Director MPH & HSAD, Eastern Washington University, Rm 232, Phase 1 Building, 668 N. Riverpoint Blvd., Spokane, WA, 99202, US. fhoughton@ewu.edu

URL:
REFERENCES: