Theories and Theorists in Public Health Response to Bioterrorism

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Introduction

Bioterrorism Preparedness and Response Plans for a covert or an overt attack exist in most if not all public health departments, department of health services, and health care facilities where practice drills and exercises are conducted on the regular basis. Public health practitioners are not only responsible for ensuring the fast and accurate identification of the causative agent of a bioterrorism attack and assuring the protection of the population, but are also responsible for forecasting individual and community response to a terrorist attack, risk perception, and diffusion of fear. In this paper I will examine the theory of reasoned action (intrapersonal) and the theory of social networks/social support (interpersonal) health behavior theories as fundamental principles that provide an explanation for individual and community action incorporating social justice principles into preparedness and response in an emergency such as a bioterrorism event.

Theory of Reasoned Action

The Theory of Reasoned Action (TRA) was developed by Martin Fishbein and Icek Ajzen in 1980 which states that “intention to perform a behavior is a function of attitudes toward engaging in the behavior and perceived normative pressure to perform that behavior” (Ajzen & Fishbein, 1980). The TRA tenet is that individual behavior is dependent and driven by the person’s attitude toward a behavior and that attitude towards the behavior is their concept of the subjective norm. A person’s attitude consists of a belief that the behavior will produce certain outcome and how the person evaluates that outcome. If the outcome is beneficial then intend or participation in the particular behavior is more likely to occur. According to Azjen & Fishbein, (1980) subjective norm is influenced by the people around the individual since each person has a
perception of what others around believe the behavior should be. The social or subjective norm is determined by the person’s belief of what other think she/he should do and by the person’s motivation to comply with those important person’s desires and wishes. The behavior then can be expressed as results of peer pressure from friends, significant others, family, celebrities, community and church leaders, co-workers, and even celebrities.

The TRA has been used in predicting and explain behavior including use of contraceptives, breast examinations, voting, consumer purchases, smoking, drinking, use of seat belt and helmet, disease prevention, consumption prevention, exercise, dieting and more (O’Keefe, 2002). Laws, rules, and orders by officials prohibiting or encouraging a behavior may also have an impact on individual’s behavior to either participate in a behavior and be inclined or not inclined to comply. Attitude toward a behavior can lead to an intention to act or not to act leading to a particular behavior which in a bioterrorism event may affect the person’s willingness to respond. Crane et al (2010) conducted a study to assess community healthcare provider’s ability and willingness to respond to emergencies resulting from bioterrorist attack. The researchers used the TRA theory to help model an individual willingness to respond, the behavioral intentions of perceived threats or benefits for responding, ability to successfully respond, and the perceived level of risk to the responders. Various demographic factors such as age, gender, race, and education and well as length of employment, current position, work duties, and employment status were assessed to explain the willingness to responding in an emergency.

The TRA is related to voluntary behavior, later on the addition of perceived behavior control to TRA created the theory of planned behavior (TPB) which predicts deliberate behavior since behavior can be deliberate and planned (Ajzen, 2002). Items that can be researched with
TPB are whether to check oneself for disease, use condoms when having sex, or accepting the smallpox vaccine in a possible bioterrorism attack (Kaltman, et al., 2006).

**Social Support Theory**

Social support defined as the perception and actual assistance available from other people in the form of social networks was first described during the mid-1970s by epidemiologists in the studies of causal relationships associated with stress, mortality, and morbidity (Cassel, 1976). Social support and the relationship with physical and mental health have been documented in many disciplines (psychology, medicine, sociology, public health, nursing, and social work) and in a wide spectrum of conditions (stress disorders, eating disorders, cardiovascular disease, cancer, stroke, diabetic control, and rheumatoid arthritis to name a few) (Taylor, 2011). Social networks can be extended family, church groups, work groups, friends, neighbors, who socialize regularly. Social groups have special characteristics which include: structural; size and density as to the extent that the member know each other, interactional; mutual sharing, durability in the relationship, intensity in the frequency of interaction, and dispersion as the ease of members contact with each other, and functional; social support, connection to resources, and social identity maintenance (Campbell, 2001).

Social support; a protective factor on the effects of stress and health, and social networks; the web of social relationships, help people cope with stressful events such as a bioterrorism event (Boscarino, 2006). The terrorist attacks of September 11, 2001 that killed 3,000 people and changed the global picture on war in the Middle East compounded with the anthrax attacks that followed the attacks in New Jersey caused high psychological distress not only locally to New York residents, but nationally and globally (Boscarino, 2006). Social support and social networks along with the recognition of the need for volunteers evolved after the 9/11 in
programs to train “lay health advisors” (LHA). LHA complement the specialized role of professionals and serve as a source of help in the community providing emotional support by showing trust and concern providing attentive listening, instrumental support offering to help by providing real labor, informational support by providing suggestions and advice, and appraisal support affirming each other and giving feedback (Campbell, 2001).

**Conclusion**

In public health studies, especially in epidemiology and directly related to social epidemiology, integration of health promotion theories help us as public health practitioners in our attempt to explain health behavior, health behavior changes, health determinants, and distribution of health and disease. Besides the classical chain of infection theory and naturalistic theories of disease causation which are based in an imbalance of the relationship of the individual and the internal and external environment the two theories I chose, the theory of reasoned action and the social support theory are essential to public health research as they relate to predict individual and public response to bioterrorism.

**Five Classics Influential Works/Books in my Current Public Health Practice**

1. The Coming Plague by Laurie Garret.
2. CDC’s Strategic Plan for Bioterrorism Preparedness and Response.
5. Ethics and Infectious Diseases by Michael Selgelid, Margaret Battin, and Charles Smith.
References


