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On Academics

WAR OR HEALTH? ASSESSING PUBLIC HEALTH EDUCATION AND THE POTENTIAL FOR PRIMARY PREVENTION

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In 2009, the American Public Health Association (APHA) adopted a policy statement describing the intersections of war and health and outlining the indispensable role public health practitioners, academics, and advocates should play in addressing these concerns. The policy asserts, "Because war affects all public health workers, both foreign and domestic, in profound and wide-reaching ways, it is critical that they embrace their responsibility to take a stand on how the profession of public health can solve this most important of public health problems."[1] APHA's policy affirms war as one of the most important, and increasingly significant, determinants affecting population health.

From World War II to 2002, there were 190 armed conflicts.[2] Direct and indirect loss of life increased to an estimated 191 million during the 20th century, a figure at least nine times larger than conflict-related loss of life in each of the previous four centuries.[2–5] Deaths due to armed conflict are now primarily among civilians rather than soldiers, accounting for 60%–90% of all war-related deaths.[2,5] Beyond these most obvious consequences, war causes morbidity—both physical and psychological—among civilians and combatants, displaces populations within and beyond national borders, destroys health-supporting infrastructure, causes environmental destruction, diverts human and financial resources, and dismantles human rights protections.[1,2,5] Despite its primacy in affecting public health, APHA's policy recognizes that war often goes unacknowledged in public health curricula.[1]

We examined the curricular offerings of the top 20 schools of public health (SPHs), based on *U.S. News and World Report*'s 2011 program rankings,[6] to assess how students are being exposed to the topic of war. We selected the top 20 schools because it is assumed that they may, as highly respected public health academic programs, set orthodoxy in public health education nationally. In particular, we examined whether primary prevention of war was emphasized. APHA's policy describes a strong tendency in public health to focus on secondary and tertiary prevention in the midst or in the aftermath of war, as primary prevention is "deemed too controversial or political."[1] This critique is consistent with ongoing debates in public health literature that point to public health's weakness and historically waning influence in political and policy matters in general.[7–14]

APHA's policy encourages SPHs to prepare future professionals with the skills to both prevent and respond to war. It points to several potential approaches to primary prevention, including mitigating political, economic, social, and demographic precipitators of war. The policy emphasizes monitoring national military budgets and analyzing associated diversions of resources from health and social needs. It states, "The significant resources and structures that many countries devote to preparing for war, including vast bureaucratic resources in each country's department of defense (or its equivalent), enhance the likelihood that countries will move toward war rather than its many alternatives."[1] This form of militarism is a significant phenomenon. The Stockholm International Peace Research Institute found that world military spending rose 5.9% in real terms from 2008 to 2009 to an estimated $1.5 trillion, representing a 49% increase from 2000.[15]

The call for upstream analyses and intervention advanced by the APHA policy is consistent with recent public health developments promoting a framework of social determinants of health. The World Health Organization formed a Commission on Social Determinants of Health and issued several publications affirming the

need for public health to address root causes, wherein war is mentioned as one important structural determinant of health.[16] The Institute of Medicine's 2003 reports on public health also promote the use of the ecological model in education and practice, to situate population health in social, economic, and political context.[13,14] Public health's orientation to primary prevention is affirmed in its statement of ethics[17] and is also emphasized within several competency frameworks advanced by the Association of Schools and Programs of Public Health (ASPPH).[18,19] The focus on root causes of war and primary preventive approaches advanced by APHA's policy resonates with broader calls for such attention across public health disciplines.

This analysis of public health curricula is particularly relevant as ASPPH continues to define competency frameworks for public health education, from undergraduate through doctoral levels. Interestingly, while ASPPH's recent global health competency project included war and related topics in its first Delphi round of negotiation, the final 46 competencies included no such specification of topical learning.[20] While several of the final competencies can be readily interpreted in support of greater understanding and competency in dealing with war, none calls specific attention to this critical priority for public health. Likewise, several other topics related to structural, political, and economic issues were eliminated as the global health competencies were distilled into final form. While the concerns raised by APHA's policy statement are specific to the topic of war, they may point to broader concerns about how public health education and training programs prepare the workforce to respond to upstream political and economic issues in general, which are often fundamentally connected to population health outcomes and health disparities.

METHODS

We reviewed the curricula of the top 20 SPHs[6] to understand how they currently address war. Using NVivo® 8 software,[21] we conducted a content analysis of the course catalogues for each school. Course catalogues were downloaded or accessed online in September 2011. At minimum, course titles and descriptions for all courses offered during the 2011–2012 academic year were included in the search and, for the majority of schools, all courses offered at the SPH at any time were included. The sample also contained course objectives for course listings when made available online by the SPH.

Our initial quantitative analysis identified courses dealing with war and related topics. We used 17 search terms to denote attention to war, which were truncated to capture all variations of each term (Figure 1). We eliminated courses that made reference to these terms based on alternative meanings (i.e., where "defense" was used in "thesis defense" or "conflict" was used in "conflict of interest").

We then undertook qualitative analyses of the data. First, we coded the set of war-related courses as either reactive (i.e., they only referenced responding to war or related phenomena [e.g., disasters, complex emergencies, and refugee health issues] after the fact) or preventive (i.e., they examined how to prevent war or war-related events). The latter categorization was quite generous and included any courses that indicated any exploration of the causes of war or made statements about the need to prevent war or related events. Second, we completed an inductive thematic analysis of these courses to understand the primary themes, concepts, and skill sets that were the focus of each course description and its learning objectives.

OUTCOMES

The course listings for the top 20 SPHs totaled 6,266. Of this total, 128 courses (2%) were captured by our 17 search terms and were considered war-related.

Figure 1. Content analysis of war-related themes in curricular offerings of the top 20 schools of public health: U.S., 2011–2012[a]

Search term	*Number of courses*
War(s)	19[b]
Conflict(s)	27[b]
Genocide(s)	1
Military/militarism	6
Defense	0
Arms	0[c]
Weapon(s)	4[c]
Nuclear	5[c]
Proliferation	0[c]
Terror/terrorism/terrorist(s)	13
Peace	2
Security	10
Humanitarian	30[d]
Disaster(s)	61[d]
Emergency/emergencies	64[d]
Refugee(s)	21[d]
Preparedness	27[d]
Total	128

[a]Each course listing may have several keywords, making the total of citations greater than the number of courses.

[b]Unique courses using any of these key terms (n=31)

[c]Unique courses using any of these key terms (n=6)

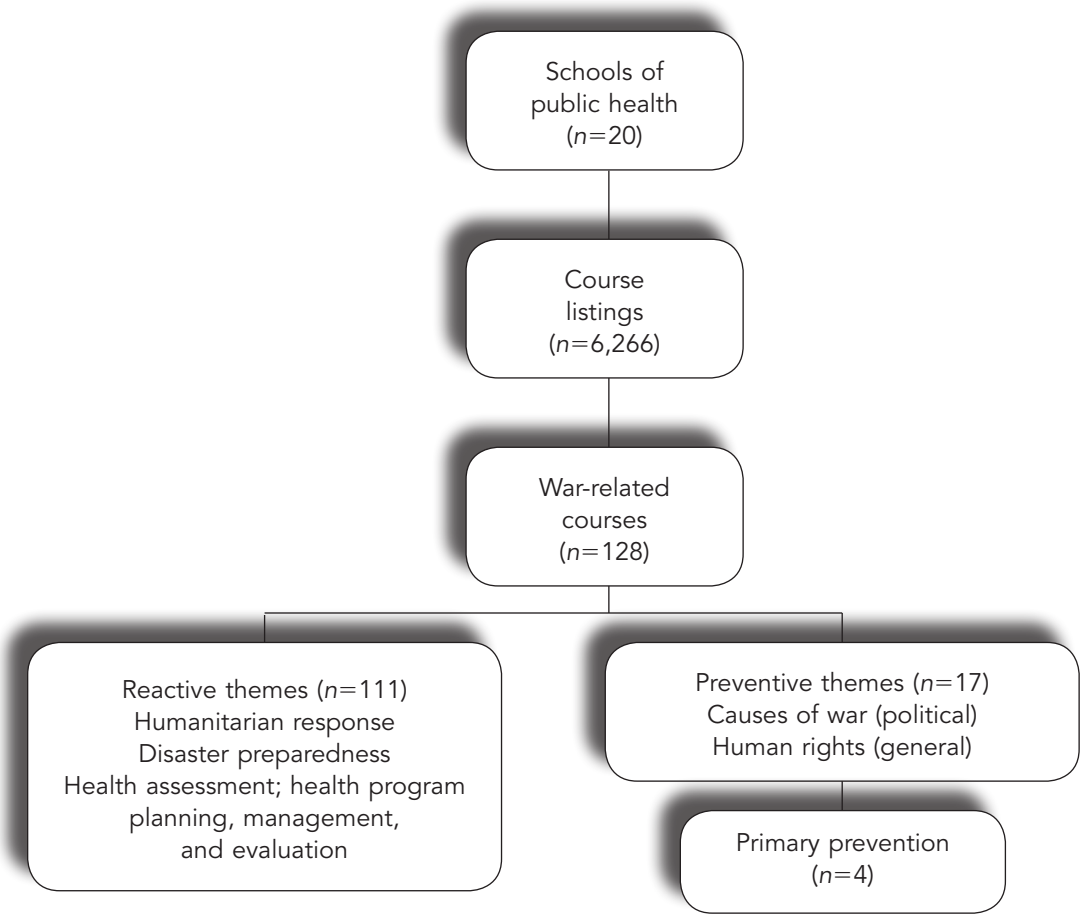
[d]Unique courses using any of these key terms (n=111)

However, these terms captured courses addressing a broad number of topics. Only 31 courses (0.5%) specifically referenced war and/or armed conflict. Figure 1 shows the results of this initial quantitative analysis, wherein a clear trend emerged. The cluster of terms dealing with arms proliferation, which was one theme related to primary prevention—including arms, weapon(s), nuclear, and proliferation—captured only six courses. However, the cluster of terms that primarily indicated a focus on the inevitability of and/or the aftermath of war and disaster, including humanitarian, disaster(s), emergency/emergencies, refugee(s), and preparedness, captured 111 courses.

Our qualitative analysis revealed a similar trend (Figure 2). We categorized 111 of the 128 war-related courses as clearly reactive, including 25 of the 31 courses specifically mentioning war or conflict. The majority of these courses (n=89) focused on disaster preparedness, emergency response, and humanitarian relief. These courses presented a number of concrete skills for responding to crises, including planning, implementation, and management of response programs (n=37 courses); data collection and needs assessment skills specific to disaster settings (n=26 courses); evaluation of response programs (n=14 courses); and communication skills specific to disasters and emergencies (n=11 courses). These courses also focused on a number of special populations and key topics pertinent to armed conflict and disaster settings, including refugees and displaced populations (n=22 courses); special needs of women, children, and other vulnerable populations (n=16 courses); mental health issues (n=14 courses); food and nutrition (n=11 courses); environmental health (n=8 courses); and sexual/reproductive health (n=6 courses).

Seventeen courses raised preventive themes. Six of these courses included an exploration of the causes of war; however, where they were explicit about these causes, they included only political precipitators such as failed states. Four were courses on human rights and discussed a general goal to realize human rights, wherein war was used as a case example. Three

Figure 2. Reactive and preventive approaches to teaching war and health at the top 20 schools of public health: U.S., 2011–2012



explored intersections of social, economic, and political factors connected to global priorities. Only four of these courses advanced what we categorized as a "primary preventive framework" (i.e., discussing weapons as a threat to public health; the importance of prevention of radiation, including by nuclear sources; and crisis prevention, although the latter theme could be interpreted as secondary prevention within conflict). No course listings attended to the topic of military spending, or militarism in general, and its contribution to precipitating war.

LESSONS LEARNED

These data reveal several trends concerning how future public health professionals are being prepared to deal with war. First, there is a general dearth of courses focused specifically on war as a public health problem. It may be that the relatively larger number of courses that focused on disasters and emergencies included some focus on the example of war. We may have missed these courses due to a limitation of this research, which relied on course titles, descriptions, and learning objectives—all of which varied in length and detail—rather than comprehensive syllabi. Nonetheless, if these descriptions are meant to distill the most important themes of a course, we can assume that an absence of the mention of war indicates that this topic is not a major focus of the course.

Second, where SPHs are addressing war and disaster, there is a clear investment in imparting specialized skill sets, methods, measures, and technologies for constructing responses in the aftermath. These approaches can be understood as secondary or tertiary prevention where they attempt to mitigate health consequences or promote long-term recovery.

Finally, and perhaps most importantly, preparation for war and/or disasters and their health consequences is not commensurate with training in skills required for primary prevention. Only five courses (0.08%) explored the precipitators of war, a logical starting point for considering potential approaches to primary prevention. Where they do focus on precipitators of war, the major focus is on weak or developing states that are prone to collapse. No courses, however, consider the primacy of military spending, military industrial influences, or military practices of powerful states. The latter finding is particularly paradoxical given the location of these SPHs within the world's largest spender on defense and largest purveyor of arms—the United States—which accounts for 48% of military spending globally[22] and 60% of total arms sales of the top 100 arms-producing nations.[15,23]

As APHA's policy highlights, one appropriate approach to the primary prevention of war is the monitoring and analysis of military budgets vis-à-vis their public health effects. Such analyses have been undertaken often by economists, sociologists, and political scientists, as well as policy institutes and nongovernmental organizations. For instance, highly reputable and Nobel Prize-winning economists recently estimated true U.S. spending on the wars in Iraq and Afghanistan, arriving at a figure of $3–$5 trillion, some of which is due to the long-term health needs of veterans and their families.[24–26] Others have calculated annual U.S. military spending, accounting for the many expenses not within the Department of Defense's (DOD's) budget, such as non-DOD war spending, homeland security, veterans programs, military pensions, military aid, peacekeeping, and debt due to past military spending,[27,22] the latter of which is an estimated 22%–44% of the current debt in the U.S.[27,28] Organizations such as the National Priorities Project have focused particularly on trade-offs, considering what might be accomplished if defense spending were redirected toward health and social priorities.[29] In a broader sense, critics from many academic fields have traced the evolution in the U.S. of the military industrial complex and a permanent war economy, considering the many implications for domestic and global social welfare.[30–40] They often recall the words of President Eisenhower, when he warned about the dangers of U.S. militarism in his farewell address.[41]

Analyses of war, its precipitators, and possible preventive approaches, whether stemming from economics or peace studies, provide a potential framework that could enhance public health curricula through interdisciplinary approaches, as APHA's policy suggests.[1] However, public health is not itself silent on issues of war and health. There is a small but growing body of work documenting the health-specific consequences of war and considering the roles and responsibilities of public health professionals.[2,5,42–46] These recent publications present research and analysis that could be foundational in expanding SPH coverage of war and health.

APHA's policy statement highlights war as one of the most important threats to realizing optimal population health, both globally and domestically. It also highlights a gap in public health education regarding teaching war and health, an observation that is substantiated by our analysis of the top 20 SPHs. While this assessment is not comprehensive of all programs, these schools represent a substantial fraction of the 49 total accredited SPHs at the time of this study and, as the highest-ranked programs, may set orthodoxy in

public health educational approaches.[47] Our findings also support APHA's suggestion that, where attention to war exists in public health curricula, it focuses on secondary and tertiary prevention and neglects primary prevention. This finding suggests a troubling trend whereby public health is not living up to its commitment to primary prevention, as expressed by its statement of ethics and core competencies. Likewise, in an era in which public health literature promoting social determinants of health and upstream analyses abounds, this research highlights one topic where identifying and addressing the determinants shaping health may, as APHA's statement suggests, be evaded in deference of its political nature.

CONCLUSION

Our findings provoke a number of questions. Why is it that SPHs are not exposing students to the political and societal issues that promote militarism and lead to war? Why do health economics courses not include training in the analysis of public expenditure trade-offs that favor military programs over health and social programs? Why do health communications courses not examine the links among modern media, military policy, and military spending? Where are the analytical techniques applied to public policy to examine the connections between the political process and the military industrial complex? Does epidemiology not have important application in demonstrating the linkages among industry, politics, and the military to the detriment of health for all? How can public health better prepare students not only with the critical analysis skills to question the politics of war and health, but also the skills of intervention to enact primary prevention?

Just as the earliest practices of public health by individuals such as Farr, Shattuck, and Griscom demonstrated association and causality between filth and illness,[48] public health today must question contemporary structures that perpetuate a cycle of poor health outcomes. Tracing the root causes of war will entail political and policy analysis and intervention, which may not be the comfortable domain of public health practice today, as noted in ongoing debates in the public health literature. However, rich inspiration exists in the work of the founders of public health, who, rather than responding reactively to workplace injuries, created occupational health and safety standards, and rather than repeatedly responding to the health consequences of overcrowding, enacted tenement inspections.[11,12,48–51] As Freudenberg and Kotelchuck noted, "We sell our profession's history short if we cannot explicitly discuss the political and ideological conflicts that shape the health of the public."[9]

SPHs should offer a comprehensive curriculum in the underlying factors leading to war and effective measures of prevention. There is a need for interdisciplinary dialogue and analysis to obtain a full understanding, and economists, political scientists, communications specialists, sociologists, environmentalists, psychologists, and even military personnel can contribute to a comprehensive curriculum addressing the prevention of war. A working group is needed to suggest curricular content, appropriate readings, case studies, and discussion guides.

Interdepartmental and interfaculty collaboration will be incredibly enriching. Most importantly, however, public health must strengthen its own research, teaching, and engagement on war and militarism, as these issues lie squarely within public health's core responsibility to protect and promote health. Toward this goal, ASPPH's educational competency frameworks should more explicitly encourage a focus on war, militarism, and other important political and economic factors shaping health globally and domestically. War is among the greatest health crises of our times, and it requires public health's leadership—at all levels—to address it.

Following presentation of these findings at the 2011 American Public Health Association Annual Meeting, the authors established a collaborative working group to foster national dialogue among academics, students, and advocates committed to the primary prevention of war. The authors encourage interested colleagues to contact the corresponding author and to participate in this work.

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