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Mind the Gap: Approaches to Addressing the Research-to-Practice, Practice-to-Research Chasm

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The 4-step public health model has been well-touted and applied as an approach toward improving population-level health.^{1–3} It outlines a 4-step sequential process that moves from studying a health problem epidemiologically (ie, defining the problem and identifying risk and protective factors) to empirically developing and testing effective interventions to address that problem and ending in widespread dissemination and adoption of evidence-based, effective interventions in practice and community-based settings (see the Figure).² While public health has for the most part developed and successfully applied the first 2 steps in this model, which often take place in controlled, scientific-technical environments (eg, developing surveillance systems, etiological studies), there is a conceptual “leap of faith” that occurs between the third (development of effective interventions) and the fourth (widespread adoption) steps. Specifically, we continue to struggle as a field to ensure widespread adoption of interventions that have been studied and found to be effective—often described as the research-to-practice gap.³ There has also been concern around the “practice-to-research gap” or the relevance of research to the needs of decision makers and community stakeholders.^{4,5} To address this concern, there have been continuous calls for knowledge to flow from practice to the academic domain to inform more relevant research and transferrable science and ensure that important practice-based knowledge is included as evidence (or “what is known”), is valued, and disseminated.^{4,6,7}

The closing of these gaps has been the focus of much discussion and research as key stakeholders seek greater impact and returns on their investments of time and resources.^{4,8,9} An entire field of translation science (which includes dissemination and implementation sciences) has developed around addressing the research-to-practice gap,^{9,15} and, to a far less extent, the practice-to-research gap.^{8,16} Yet, these gaps persist and continue to pose an intractable, and multifaceted problem to the field of injury and violence prevention, with real-world implications in the lives of families and communities.³

This commentary proposes an approach to research and practice integration drawn from other disciplines that involves the development and promotion of scholar-practitioners and a focus on practice-based research. Specifically, we describe the concepts of scholar-practitioner and practice-based research, with a focus on a type of participatory, practice-

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based research—action research (AR)—that is complementary to a scholar-practitioner model. These approaches offer the field of injury and violence prevention an innovative way to not only bridge the gap between research and practice but also integrate the 2 to glean more relevant, actionable, and timely knowledge to improve practice and contribute to population-level change. While this article provides a theoretical basis for a scholar-practitioner and practice-based evidence approach to research and practice integration, emerging examples of how these scholar-practitioner and AR approaches have been applied in the field of injury and violence prevention are also presented in this issue.¹⁷

Scholar-Practitioners in Public Health

Public health is not the only applied field challenged by the research-to-practice gap. There are ubiquitous descriptions of the gap and calls to address it across a diversity of disciplines, from human resource development to ecology.^{18–22} Different approaches to addressing the gap have been offered including promotion of evidence-based practice,^{7,23–25} increased facilitation of collaboration and communication between researchers and practitioners,^{26–28} specialized training or coaching to enable practitioners to be better consumers and users of research,^{11,29} promotion of community-based participatory or practice-based research,^{8,30–33} increased inclusion and consideration of practitioner and community concerns and questions in the development of research agendas and projects,^{8,30} and better and more translation and dissemination of research findings to practitioner and decision-maker audiences for inclusion in practice.^{9,12,26} Despite these calls and attempts at a solution over the past 20 years, the gap does not appear to be closing.³ In addition, most of these approaches are fairly unidirectional, promoting a “science push,” approach without a “practice-to-science” feedback loop and maintain distinct roles and identities for researchers and practitioners that often maintain the gaps.

One promising approach that is not often part of the research-to-practice gap conversation, but that would serve to integrate science and practice, is the development and promotion of scholar-practitioners in public health. The idea of scholar-practitioners is not new.^{19,34} In fact, other fields (eg, education, counseling psychology, community psychology, organizational development, human resource development) describe and have a history of cultivating and promoting scholar-practitioners.^{19,21,35} There are several definitions of the term (and equivalent terms, eg, researcher-practitioner, reflective practitioner, scientist-practitioner, pracademic) in the literature.^{19,34–37} However, common across these definitions is the idea that a scholar-practitioner is a professional who is both a producer *and* a consumer of knowledge for the purposes of continuously improving his or her practice and organizational effectiveness, *as well as* developing and improving theory and science.³⁵

Scholar-practitioners value both theory and practical application. They use theory and research to inform their practice and use their practice as a source for new learning and insights to develop new theories and models. They also conduct research (usually in practice settings) and disseminate their findings to both researcher and practitioner audiences. Through this work, they operate as boundary spanners* who act in partnership with both academics and practitioners and move back and forth between these 2 domains.^{19,35} Wasserman and Kram³⁵ describe a continuum between “pure scholar” and “pure

practitioner” on either end, with scholar-practitioners falling somewhere in the middle, yet often privileging one or the other based on their context—even as they engage in both. Ruona and Gilley³⁶ also offer a model that categorizes practitioners along a continuum based on their use of and contribution to research and practice (eg, atheoretical practitioner, practitioner, reflective practitioner, and scholar-practitioner). This model provides even more nuance to the ways that practitioners enact their roles and engage their work, including their engagement with scholarship. While there will always (and necessarily) be professionals who identify distinctly as scholars/researchers, or practitioners, there is an important and distinct role for scholar-practitioners in the integration of science and practice in public health, and injury and violence prevention more specifically.

There are many individual and collective benefits to enacting and promoting the scholar-practitioner role. Scholar-practitioners engage in “ongoing disciplined inquiry”³⁸ and self-reflection that not only benefits their fields but can also contribute to necessary self-renewal and professional development through improved praxis.^{39,40} The scholar-practitioners’ commitment to rigorous and intentional reflection on their practice, and its effectiveness, can benefit public health. If practitioners are considered primarily “the hands”⁴¹ of public health (although we would argue that they are much more), their ability and commitment to engaging in ongoing disciplined inquiry about their practice are critical. Finally, not only can scholar-practitioners span boundaries and bridge communication and perspective gaps between researchers and practitioners but they can also take direct action on this integrated work. They can serve as knowledge brokers, translating and disseminating science.^{28,42} They are also well suited for developing and implementing much-needed practice-based research. This is particularly true for scholar-practitioners who reside in practice settings and are intimately connected to the work being done and community sentiments and values.

There appear to be very few substantive disadvantages to promoting and utilizing scholar-practitioners to bridge the research-to-practice gap, especially within the current and long-term context of public health professionals who identify primarily as researchers or practitioners. However, “before Wasserman and Kram identify several more personal/professional challenges experienced by scholar-practitioners themselves.” Wasserman and Kram³⁵ identify several more personal/professional challenges experienced by scholar-practitioners themselves. Namely, their study participants described a perception that one part of their identity (eg, scholar or practitioner) was more valued depending on their context (ie, academic vs practice). Related, this included a persistent sense of marginality regardless of context, of being neither fully “this” nor “that.” In addition, because scholar-practitioners tend to focus on and be based primarily in either a practice or academic setting for practical purposes, this often creates a tension to balance the priorities, preferences, and expectations of the setting—writing and publishing new knowledge for scholarly audiences in academic settings or taking outcome-focused action and demonstrating value in practice settings.

These challenges require scholar-practitioners to explore over the course of their careers how

*Wasserman and Kram distinguish boundary spanners from boundary crossers (eg, people who “explore [sic] venues and possibilities that foster relationships and professional exchanges between people who primarily identify as [a scholar or practitioner]”, (p13) defining boundary spanners as people who are engaged in both scholarship and practice. Also, boundary spanners are different from “knowledge brokers,” who mostly serve as science-practice communicators and translators, although some of their work may include knowledge brokering.³⁸

to best integrate or balance the sometimes competing roles in a way that best aligns with their own and their context's needs and values. It is possible that these dilemmas could limit the overall credibility and effectiveness of scholar-practitioners depending on their context. In Wasserman and Kram's³⁵ study, most of the scholar-practitioners were able to manage or accept these tensions and even leverage the 2 roles.

Practice-Based Research

There have been calls in public health for more practice-based research.^{4,8,43,44} Often these discussions are an implicit request for more relevant research or evaluation conducted in practice settings primarily by researchers in partnership with practitioners or communities. While this approach helps ensure that research addresses timely and relevant practice and community concerns, it continues to reify the notion of distinct knowledge and practice domains.

There has been important movement, however, toward a more integrated approach to practice-based research. For example, the emergence of community-based participatory research (CBPR), in fields of health and environmental studies, and the accompanying call for a more participatory, reciprocal, and action-focused approach to research on the improvement of health and well-being.^{32,45,46} Also, the Association of Schools of Public Health describes practice-based research as an important competency for public health practice. They define practice-based research as "systematic inquiry into the systems, methods, policies, and programmatic applications of public health practice,"^{44(p2)} and outline a variety of approaches to "science-based inquiry" in practice settings (eg, field epidemiology, systematic reflection on practice experience). They also describe "applied scholarly public health practice" as the cornerstone of practice-based research, implicitly connecting practice-based research with the work of scholar-practitioners.

Practice-based research not only includes research conducted *in* practice settings (eg, organizations and communities) but also includes research *on* practice, especially on how interventions are implemented and the decision making and thinking involved in their implementation.⁴⁷⁻⁴⁹ An assumption that should be made explicit is that practitioners would be intimately involved in conducting the research. Regardless of the focus and approach, the primary distinguishing characteristics of practice-based research are that it is systematic and produces some level of generalizable (or transferable) knowledge that improves practice and decision making.

Practice-based research is needed to better include those "in the field of action" in problem definition and in the development of timely and relevant research questions. We also need it to capture, study, and describe the effective (or ineffective) work happening in the field. Practice-based research that integrates scholar-practitioners is an emerging approach in the field of public health; however, the challenge still remains to increase knowledge, awareness, and use of this approach more broadly in public health and to increase the extent to which it is valued as a legitimate form of scholarship.⁴¹

Action Research for Practice-Based Evidence

Action research is a particular type and one illustration of practice-based research that may be particularly well-suited for scholar-practitioners and meets the current demands for more relevant, actionable knowledge in public health. While AR has been most popular in Europe and within certain disciplines in the United States (eg, education, community psychology, business, and organizational studies), there have been limited considerations of it in public health as a viable approach to practice-based research.^{8,43} Action research is a research approach and method that is related to CBPR. One primary distinction is that AR privileges action or intervention within a system in contrast to much CBPR that is participatory but may not be as immediately action-or change-focused.^{32,33} Action research also shares common elements with “stakeholder involvement approaches” that have emerged from the field of program evaluation.⁵⁰

There are different types and methods of AR (eg, action inquiry, action science, appreciative inquiry, collaborative inquiry). However, as the name suggests, what they all share is an action orientation that seeks to solve pressing problems facing an organization or community while generating new learning that both builds the capacity of the problem solvers (also described as coresearchers) and produces transferable knowledge that can be useful in other contexts.^{51–53} The key, interdependent features that distinguish AR from other research approaches and everyday problem-solving are listed and described in the Table. Because of its action orientation and close link to practice, AR is particularly well-suited for and can be readily utilized by scholar-practitioners (and practitioners).

Action research and related methodologies (eg, CBPR, empowerment evaluation) frequently include community/organizational capacity building and empowerment as explicit goals and values of research.^{32,54,55} This empowerment framework, coupled with the other elements of AR focused on iterative and reflexive learning and application, is particularly well-suited for addressing health inequities³² and provides particular promise for addressing complex, consistently changing behavioral issues such as injury and violence. Action research builds the capacity of practitioners and communities to become more responsive to the emergent and shifting contexts and systems that affect injuries and violence and therefore has great potential for sustainability in injury and violence prevention efforts.

Challenges and Next Steps

While the cultivation of scholar-practitioners and promotion of AR are promising approaches to integrating research and practice for injury and violence prevention, adopting these approaches are not without potential challenges. First, they require recognition of the validity of practitioner/practice-based knowledge, evidence, and ways of knowing in public health. There is emerging recognition in the field of public health for the value of this more comprehensive consideration of evidence, but much work remains to be done to expand beyond a focus solely on more traditional research approaches and forms of evidence in public health to include more practice-based evidence and knowledge in prevention approaches.^{1–4,8} Also, expanding scholar-practitioner and AR approaches in public health will require new training and skill development within the public health workforce. This, in

turn, requires schools and faculty that both value and are prepared to teach and support students in these approaches.

Efforts to address some of these challenges have already begun, and consideration has been given to strategies that promote and support scholar-practitioner and AR approaches in public health.^{56,57} For example, there are standards and quality criteria for public health practice scholarship, which outline *facilitating* and *restraining* factors for the development of scholarly practice in schools of public health, and recommendations for key action items necessary for the development of academic public health practice.⁵⁶ Other ways to further scholar-practitioners and AR in public health include recognizing and supporting those who already identify as scholar-practitioners in public health settings and explicitly creating training and career paths in schools of public health and organizations (including academia) for scholar-practitioners and CBPR and AR approaches. There are already a few graduate programs in the United States that explicitly aim to develop scholar-practitioners and researchers skilled in conducting AR (eg, University of Georgia's Learning, Leadership, and Organization Development EdD program; and Fielding Graduate University).²¹ Finally, the development of AR projects in practice and community settings that include scholar-practitioners as key members of the research team or that feature true researcher-practitioner teams will be a key part of enacting these approaches.¹⁷

Conclusion

The cultivation of scholar-practitioners and AR approaches in public health provides an opportunity for leveraging the strengths and knowledge of both academic and practice-based contexts and has the potential to more efficiently and effectively bridge research and practice. While we do not argue that scholar-practitioners and AR approaches should *replace* traditional roles and methods in public health research and practice, we do propose that these approaches be integrated as valued and important pieces of a comprehensive approach to injury and violence prevention in public health. Our primary intention for this article is to spark further discussion about the value for the field of more explicitly encouraging and supporting scholar-practitioners and partnerships between academic and practice settings—that feature practitioners as full and equal thought-partners. We offer that the most effective way to bridge the gap between research and practice is to blend the lines between the 2 realms and encourage crossover and integration.³⁵ The development and promotion of scholar-practitioners and AR methodologies, which are common in other disciplines, are one potential way to do this in public health. Employing these approaches to public health inquiry and action has the potential not only to bridge the gap between research and practice but also to eliminate it all together. This will result in programs and approaches that have been developed, studied, and applied in partnership with those who are responsible for their implementation, thus increasing the likelihood of wide-scale and sustainable adoption and impact. Those of us working in public health, and on the prevention of injury and violence in particular, could thus shift their focus away from “minding” or traversing the gap between research and practice and turn toward a more truly integrated course that closes it.

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References

1. Sleet DA, Hopkins KN, Olson SJ. From discovery to delivery: injury prevention at CDC Health Promot Pract. 2003; 4(2):98–102. [PubMed: 14610978]
2. Mercy JA, Rosenberg ML, Powell KE, Broome CV, Roper WL. Public health policy for preventing violence Health Aff. 1993; 12(4):7–29.
3. Hanson Dw, Finch CF, Allegrante JP, Sleet D. Closing the gap between injury prevention research and community safety promotion practice: revisiting the public health model Public Health Rep. 2012; 127(2):147–155. [PubMed: 22379214]
4. Green LW. Closing the chasm between research and practice: evidence of and for change Health Promot J Aust. 2014; 25(1):25–29.
5. Yohalem N, Tseng V. Commentary: moving from practice to research, and back Appl Dev Sci. 2015; 19(2):117–120.
6. Gutiérrez KD, Penuel WR. Relevance to practice as a criterion for rigor Educ Res. 2014; 43(1):19–23.
7. Puddy RW, Wilkins N. Understanding Evidence Part 1: Best Available Research Evidence. Atlanta, GA: Centers for Disease Control and Prevention; 2011.
8. Green LW. Making research relevant: if it is an evidence-based practice, where's the practice-based evidence? Fam Pract. 2008; 25(suppl 1):i20–i24. [PubMed: 18794201]
9. Wandersman A, Duffy J, Flaspohler P. Bridging the gap between prevention research and practice: the interactive systems framework for dissemination and implementation Am J Community Psychol. 2008; 41(3/4):171–181. [PubMed: 18302018]
10. Hawkins JDCatalano RFKuklinski MREncyclopedia of Criminology and Criminal Justice Communities that careNew York, NY: Springer; 2014 393408
11. Fixsen D, Blase K, Metz A, Van Dyke M. Statewide implementation of evidence-based programs Except Child. 2013; 79(2):213–230.
12. Thigpen S, Puddy RW, Singer HH, Hall DM. Moving knowledge into action: developing the rapid synthesis and translation process within the interactive systems framework Am J Community Psychol. 2012; 50(3/4):285–294. [PubMed: 22777207]
13. Woolf SH. The meaning of translational research and why it matters JAMA. 2008; 299(2):211–213. [PubMed: 18182604]
14. Chinman M, Hunter SB, Ebener P. The getting to outcomes demonstration and evaluation: an illustration of the prevention support system Am J Community Psychol. 2008; 41(3/4):206–224. [PubMed: 18278551]
15. Saul J, Wandersman A, Flaspohler P, Duffy J, Lubell K, Noonan R. Research and action for bridging science and practice in prevention Am J Community Psychol. 2008; 41(3/4):165–170. [PubMed: 18317921]
16. Mitton C, Adair CE, McKenzie E, Patten SB, Perry BW. Knowledge transfer and exchange: review and synthesis of the literature Milbank Q. 2007; 85(4):729–768. [PubMed: 18070335]
17. Smith S, Wilkins N, Marshall SW. The power of academic-practitioner collaboration to enhance science and practice integration: injury and violence prevention case studies J Public Health Manag Pract. .
18. ShortD, KeeferJM, StoneSJ. The link between research and practice: experiences of different professions and implications for HRD. Paper presented at: AHRD 2006 International Conference; 2006; Columbus, OH.
19. Kormanik MB, Lehner RD, Winnick TA. General competencies for the HRD scholar-practitioner: perspectives from across the profession Adv Dev Hum Resour. 2009; 11(4):486–506.

20. Starkey K, Madan P. Bridging the relevance gap: aligning stakeholders in the future of management research *Br J Manage.* 2001; 12(s1):s3–s26.
21. Sewell DR. The scholar-practitioner model as a basis for promoting researcher, practitioner, and educator collaboration in physical science and information technology graduate education. *Paper presented at: Pan-American Advanced Studies Institute, Grid Computing and Advanced Networking Technologies for E-Science;* 2005; Mendoza, Argentina.
22. Roux D, Rogers K, Biggs H, Ashton P, Sergeant A. Bridging the science-management divide: moving from unidirectional knowledge transfer to knowledge interfacing and sharing *Ecol Soc.* 2006; 11(1):4.
23. Brownson RC, Chiqui JF, Stamatakis KA. Understanding evidence-based public health policy *Am J Public Health.* 2009; 99(9):1576–1583. [PubMed: 19608941]
24. Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: a fundamental concept for public health practice *Annu Rev Public Health.* 2009; 30:175–201. [PubMed: 19296775]
25. Baumbusch JL, Kirkham SR, Khan KB. Pursuing common agendas: a collaborative model for knowledge translation between research and practice in clinical settings *Res Nurs Health.* 2008; 31:130–140. [PubMed: 18213622]
26. Wilkins N, Thigpen S, Lockman J. Putting program evaluation to work: a framework for creating actionable knowledge for suicide prevention practice *Transl Behav Med.* 2013; 3(2):149–161. [PubMed: 24073166]
27. Conte C, Chang CS, Malcolm J, Russo PG. Academic health departments: from theory to practice *J Public Health Manag Pract.* 2006; 12(1):6–14. [PubMed: 16340508]
28. Neal JW, Neal ZP, Kornbluh M, Mills KJ, Lawlor JA. Brokering the research-practice gap: a typology *Am J Community Psychol.* 2015; 56(3):422–435. [PubMed: 26310694]
29. Kretlow AG, Bartholomew CC. Using coaching to improve the fidelity of evidence-based practices: a review of studies *Teacher Educ Spec Educ.* 2010; 33(4):279–299.
30. Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice* *Annu Rev Public Health.* 2008; 29:325–350. [PubMed: 18173388]
31. Leung MW, Yen IH, Minkler M. Community based participatory research: a promising approach for increasing epidemiology's relevance in the 21st century *Int J Epidemiol.* 2004; 33(3):499–506. [PubMed: 15155709]
32. Wallerstein NB, Duran B. Using community-based participatory research to address health disparities *Health Promot Pract.* 2006; 7(3):312–323. [PubMed: 16760238]
33. Wallerstein N, Duran B. Community-based participatory research contributions to intervention research: the intersection of science and practice to improve health equity *Am J Public Health.* 2010; 100(S1):S40–S46. [PubMed: 20147663]
34. Ruona WE, Lynham SA. A philosophical framework for thought and practice in human resource development *Hum Resour Dev Int.* 2004; 7(2):151–164.
35. Wasserman IC, Kram KE. Enacting the scholar-practitioner role: an exploration of narratives *J Appl Behav Sci.* 2009; 45(1):12–38.
36. Ruona WE, Gilley JW. Practitioners in applied professions: a model applied to human resource development *Adv Dev Hum Resour.* 2009; 11(4):438–453.
37. Posner PL. The pracademic: an agenda for re-engaging practitioners and academics *Public Budgeting Finance.* 2009; 29(1):12–26.
38. Schorr L, Farrow F. An evidence framework to improve results. *Paper presented at: Harold Richman Public Policy Symposium, Center for the Study of Social Policy;* 2014; Washington, DC.
39. Gallagher T, Griffin S, Parker DC, Kitchen J, Figg C. Establishing and sustaining teacher educator professional development in a self-study community of practice: pre-tenure teacher educators developing professionally *Teach Teacher Educ.* 2011; 27(5):880–890.
40. Herbet TR. The scholar-practitioner concept and its implications for self-renewal: a doctoral student's perspective *Scholar Pract Q.* 2010; 4(1):33–41.
41. Stover GN, Bassett MT. Practice is the purpose of public health *Am J Public Health.* 2003; 93(11):1799–1801. [PubMed: 14600042]

42. Ward V, House A, Hamer S. Knowledge brokering: the missing link in the evidence to action chain? *Evid Policy*. 2009; 5(3):267–279. [PubMed: 21258626]
43. Hughes I, Reason P, Bradbury H. *The Sage Handbook of Action Research: Participative Inquiry and Practice Vol. 2. Action research in healthcare* London, England: Sage; 2008 381393
44. Potter MA, Quill BE, Aglipay GS. Demonstrating excellence in practice-based research for public health *Public Health Rep*. 2006; 121(1):1–16. [PubMed: 16625723]
45. Viswanathan M, Ammerman A, Eng E, et al. *Community-Based Participatory Research: Assessing the Evidence Summary*. Rockville, MD: Agency for Healthcare Research and Quality; 2004 Evidence Report/Technology Assessment No. 99. Publication 04-E022–2.
46. Minkler M, Blackwell AG, Thompson M, Tamir H. Community-based participatory research: implications for public health funding *Am J Public Health*. 2003; 93(8):1210–1213. [PubMed: 12893597]
47. Schon DA. *The Reflective Practitioner: How Professionals Think in Action* . Vol Vol. 5126. New York , NY: Basic books; 1984.
48. Schön DA. Knowing-in-action: the new scholarship requires a new epistemology *Change Mag Higher Learn*. 1995; 27(6):27–34.
49. Werner U. Reflective practice in the civil society: the contribution of critically systemic thinking *Reflect Pract*. 2000; 1(2):247–268.
50. Fetterman D, Rodriguez-Campos L, Wandersman A, O’Sullivan RG. Collaborative, participatory, and empowerment evaluation building a strong conceptual foundation for stakeholder involvement approaches to evaluation (a response to Cousins, Whitmore, and Shulha, 2013). *Am J Eval*. 2014; 35(1):144–148.
51. Coghlan D. Action research in the academy: why and whither? Reflections on the changing nature of research *Irish J Manage*. 2004; 25(2):1–10.
52. Coghlan D, Brannick T. *Doing Action Research in Your Own Organization*. London: Sage; 2014.
53. Reason P, Bradbury H. , eds. *Handbook of Action Research: Participative Inquiry and Practice*. Thousand Oaks , CA: Sage; 2001.
54. Fetterman DM. Empowerment evaluation *Eval Pract*. 1994; 15(1):1–15.
55. Fetterman DM, Wandersman A. *Empowerment Evaluation Principles in Practice*. New York, NY: Guilford Press; 2005.
56. Merrill R, Stern B. *Demonstrating Excellence in Academic Public Health*. Washington, DC: The Association of Schools of Public Health; 1999.
57. Morris M, Hutchinson J. Practice makes perfect: developing public health practice *J Epidemiol Community Health*. 1999; 53(11):683. [PubMed: 10656094]



FIGURE.
The Public Health Model

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TABLE

Key Features of Action Research

Feature	Description
Collaborative and participatory	AR includes key stakeholders in the research outcomes as full partners or coresearchers throughout the process. AR is typically based on the mutual concerns of the primary research and stakeholders (ie, coresearchers).
Action and change-oriented	AR is problem-focused and aims to generate knowledge for the purpose of developing and applying solutions in real time. As part of this, action researchers intervene within the system (eg, community or organization) in which they are working to improve practice, outcomes, or effectiveness.
Iterative and emergent	AR is typically conducted in multiple action-inquiry cycles that include variations of planning, acting, observing, and reflecting. New questions, interventions, and methods emerge throughout the process.
Reflexive	Throughout the problem-solving/research process, action researchers and stakeholders reflect on their actions, thoughts, assumptions, and insights for deeper understanding of the problem they are working on and their approaches to addressing it. In addition to any new insights into the issue at hand, this is an important part of the learning that builds capacity to address other current and future problems.
Knowledge generating	AR seeks to generate and disseminate transferrable, new knowledge beyond the current setting for the benefit of other contexts and knowledge communities. This distinguishes AR from everyday problem-solving, organizational consulting, or evaluation.

Abbreviation: AR, action research.