



Partnerships for Environmental Public Health

Strengthening a Dynamic Environmental Public Health Network for Tomorrow:
Advancing science through critical reflection

Recommended Reading

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Capacity Building

Power, Privilege and Participation

Meeting the challenge of equal research alliances

Article on the importance of community-university partnerships and how to make the partnerships work.

Written by WEACTION. (Urban Habitat)

Access on the [EPA Web](#).

Communication

Climate Change in the American Mind

Americans' climate change beliefs, attitudes, policy preferences, and actions

<http://bit.ly/CCC-Report>

Introduction: President Obama, the leaders of Congress, governors, and mayors across the United States have all signaled their intention to institute new policies to achieve greater national energy efficiency and independence, development of clean, renewable energy sources, and reduced emissions of the greenhouse gases causing global warming. Climate change and energy are now at the center of local, state, national, and international policy deliberations. An executive national strategy to achieve these aims, however, must take into account the climate change and energy beliefs, attitudes, policy preferences, and actions of the American people, who will play a crucial role in the success or failure of these initiatives through their decisions as both citizens and consumers. Building public acceptance, support, and demand for new policies and helping people save energy at home and on the road will require education and communication strategies based on a clear understanding of what Americans already know, believe, and support, as well as what they currently misunderstand, disbelieve, and oppose. This report is the second in a series of studies conducted by the Yale Project on Climate Change and the George Mason Center for Climate Change Communication to answer these questions.

Communication and marketing as climate change-intervention assets: a public health perspective

Maibach EW, Roser-Renouf C, Leiserowitz A

[Am J Prev Med 2008 Nov;35\(5\):488-500](#)

Abstract

The understanding that global climate change represents a profound threat to the health and well-being of human and nonhuman species worldwide is growing. This article examines the potential of communication and marketing interventions to influence population behavior in ways consistent with climate change prevention and adaptation objectives. Specifically, using a framework based on an ecologic model of public health, the paper examines: (1) the potential of communication and marketing interventions to influence population behaviors of concern, including support for appropriate public policies; (2) potential target audiences for such programs; and (3) the attributes of effective climate change messages. Communication and marketing interventions appear to have considerable potential to promote important population behavior change objectives, but there is an urgent need for additional translational research to effectively harvest this potential to combat climate change.

Identifying like-minded audiences for global warming public engagement campaigns: an audience segmentation analysis and tool development

Maibach EW, Leiserowitz A, Roser-Renouf C, Mertz CK

[PLoS One 2011 Mar 10;6\(3\):e17571](https://doi.org/10.1371/journal.pone.017571)

Abstract

Background

Achieving national reductions in greenhouse gas emissions will require public support for climate and energy policies and changes in population behaviors. Audience segmentation--a process of identifying coherent groups within a population--can be used to improve the effectiveness of public engagement campaigns.

Methodology/Principal Findings:

In Fall 2008, we conducted a nationally representative survey of American adults (n = 2,164) to identify audience segments for global warming public engagement campaigns. By subjecting multiple measures of global warming beliefs, behaviors, policy preferences, and issue engagement to latent class analysis, we identified six distinct segments ranging in size from 7 to 33% of the population. These six segments formed a continuum, from a segment of people who were highly worried, involved and supportive of policy responses (18%), to a segment of people who were completely unconcerned and strongly opposed to policy responses (7%). Three of the segments (totaling 70%) were to varying degrees concerned about global warming and supportive of policy responses, two (totaling 18%) were unsupportive, and one was largely disengaged (12%), having paid little attention to the issue. Certain behaviors and policy preferences varied greatly across these audiences, while others did not. Using discriminant analysis, we subsequently developed 36-item and 15-item instruments that can be used to categorize respondents with 91% and 84% accuracy, respectively.

Conclusions/Significance:

In late 2008, Americans supported a broad range of policies and personal actions to reduce global warming, although there was wide variation among the six identified audiences. To enhance the impact of campaigns, government agencies, non-profit organizations, and businesses seeking to engage the public can selectively target one or more of these audiences rather than address an undifferentiated general population. Our screening instruments are available to assist in that process.

Ajzen, Icek & James Sexton. 1999. Depth of processing, belief congruence, and attitude-behavior correspondence. In Chaiken, S. & Trope, Y., *Dual Process Theories in Social Psychology*. Guilford Press: New York, pp. 117-140.

The present chapter explores some of the cognitive processes that may be responsible for correspondence or lack of correspondence between attitudes and behavior

The application of persuasion theory to the development of effective proenvironmental public service announcements

Bator RJ, Cialdini RB.

Journal of Social Issues. 2000;56(3):527-541

Abstract

The goal of this article is to provide specific guidelines to help create effective pro-environmental public service announcements (PSAs). Campaign designers are encouraged to initially identify and investigate the optimal target audience and then draft and test reactions by samples of that audience using pilot messages. Designers are also advised to consider research on attitude persistence, memory, and social norms and apply this research to the message content and presentation style. The article concludes with an application of research from social psychology to a series of overall guidelines for effective PSAs. If environmental campaign developers follow these specifications, the chance of PSA success should be enhanced.

Crafting normative messages to protect the environment

Cialdini RB

Current Directions in Psychological Science. 2003 Aug;12(4):105-109.

Abstract

It is widely recognized that communications that activate social norms can be effective in producing societally beneficial conduct. Not so well recognized are the circumstances under which normative information can backfire to produce the opposite of what a communicator intends. There is an understandable, but misguided, tendency to try to mobilize action against a problem by depicting it as regrettably frequent. Information campaigns emphasize that alcohol and drug use is intolerably high, that adolescent suicide rates are alarming, and—most relevant to this article—that rampant polluters are spoiling the environment. Although these claims may be both true and well intentioned, the campaigns' creators have missed something critically important: Within the statement "Many people are doing this *undesirable* thing" lurks the powerful and undercutting normative message "Many people *are* doing this." Only by aligning descriptive norms (what people typically do) with injunctive norms (what people typically approve or disapprove) can one optimize the power of normative appeals. Communicators who fail to recognize the distinction between these two types of norms imperil their persuasive efforts.

Maibach, Edward & Roxanne Parrott. 1995. *Designing Health Messages: Approaches from Communication Theory and Public Health Practice*. Sage: Thousand Oaks, Ca.

How do you design an effective message for a health campaign? This book explores this question from both practical and theoretical perspectives. The contributors demonstrate the necessity of basing message design decisions on appropriate theories of human behavior and communication effectiveness by synthesizing and integrating knowledge and insights from theory and research in communication and health behavior change. This book will be an essential aid to designing messages for use in health communication campaigns.

[Read selected pages.](#)

Petty, Richard, Pablo Brinol & Joseph Priester. 2009. Mass media attitude change: Implications of the elaboration likelihood model of persuasion. In Bryant, J. & Oliver, M.B. *Media Effects: Advances in Theory and Research*. Routledge: New York, pp. 125-165.

[Read selected pages.](#)

Community Engaged Research

Measuring the success of community science: the northern California household exposure study

Brown P, Brody JG, Morello-Frosch R, Tovar J, Zota AR, Rudel RA

[Environ Health Perspect. 2012 Mar;120\(3\):326-31](#) (Full text available)

Abstract

Background:

Environmental health research involving community participation has increased substantially since the National Institute of Environmental Health Sciences (NIEHS) environmental justice (EJ) and community-based participatory research (CBPR) partnerships began in the mid 1990s. The goals of these partnerships are to inform and empower better decisions about exposures, foster trust, and generate scientific knowledge to reduce environmental health disparities in low-income, minority communities. Peer-reviewed publication and clinical health outcomes alone are inadequate criteria to judge the success of projects in meeting these goals; therefore, new strategies for evaluating success are needed.

Objectives:

We reviewed the methods used to evaluate our project, “Linking Breast Cancer Advocacy and Environmental Justice” in order to help identify successful CBPR methods and assist other teams in documenting effectiveness. Although our project precedes development of the NIEHS Evaluation Metrics Manual, it illustrates the record keeping and self-reflection anticipated in NIEHS’ Partnerships for Environmental Public Health.

Discussion:

Evaluation strategies should assess how CBPR partnerships meet the goals of all partners. Our partnership, which included two strong community-based organizations (CBOs), produced a team that helped all partners gain organizational capacity. Environmental sampling in homes and reporting the results of that effort had community education and constituency-building benefits. Scientific results contributed to a court decision requiring cumulative impact assessment for an oil refinery, and to new chemicals policies for consumer products. All partners leveraged additional funding to extend their work.

Conclusions:

An appropriate evaluation strategy can demonstrate how CBPR projects can advance science, support community empowerment, increase environmental health literacy, and generate individual and policy action to protect health.

Institutional review board challenges related to community-based participatory research on human exposure to environmental toxins: a case study

Brown P, Morello-Frosch R, Brody JG, Altman RG, Rudel RA, Senier L, Pérez C, Simpson R.

[Environ Health 2010 Jul 16;9:39](#) (Full text available)

Abstract

Background:

We report on the challenges of obtaining Institutional Review Board (IRB) coverage for a community-based participatory research (CBPR) environmental justice project, which involved reporting biomonitoring and household exposure results to participants, and included lay participation in research.

Methods:

We draw on our experiences guiding a multi-partner CBPR project through university and state Institutional Review Board reviews, and other CBPR colleagues’ written accounts and conference presentations and discussions. We also interviewed academics involved in CBPR to learn of their challenges with Institutional Review Boards.

Results:

We found that Institutional Review Boards are generally unfamiliar with CBPR, reluctant to oversee community partners, and resistant to ongoing researcher-participant interaction. Institutional Review Boards sometimes unintentionally violate the very principles of beneficence and justice which they are supposed to

uphold. For example, some Institutional Review Boards refuse to allow report-back of individual data to participants, which contradicts the CBPR principles that guide a growing number of projects. This causes significant delays and may divert research and dissemination efforts. Our extensive education of our university Institutional Review Board convinced them to provide human subjects protection coverage for two community-based organizations in our partnership.

Conclusions:

IRBs and funders should develop clear, routine review guidelines that respect the unique qualities of CBPR, while researchers and community partners can educate IRB staff and board members about the objectives, ethical frameworks, and research methods of CBPR. These strategies can better protect research participants from the harm of unnecessary delays and exclusion from the research process, while facilitating the ethical communication of study results to participants and communities.

Linking exposure assessment science with policy objectives for environmental justice and breast cancer advocacy: the northern California household exposure study

Brody JG, Morello-Frosch R, Zota A, Brown P, Pérez C, Rudel RA

[Am J Public Health 2009 Nov;99 Suppl 3:S600-9](#) (Full text available)

Abstract

Objectives:

We compared an urban fence-line community (neighboring an oil refinery) and a nonindustrial community in an exposure study focusing on pollutants of interest with respect to breast cancer and environmental justice.

Methods:

We analyzed indoor and outdoor air from 40 homes in industrial Richmond, California, and 10 in rural Bolinas, California, for 153 compounds, including particulates and endocrine disruptors.

Results:

Eighty compounds were detected outdoors in Richmond and 60 in Bolinas; Richmond concentrations were generally higher. Richmond's vanadium and nickel levels indicated effects of heavy oil combustion from oil refining and shipping; these levels were among the state's highest. In nearly half of Richmond homes, PM_{2.5} exceeded California's annual ambient air quality standard. Paired outdoor-indoor measurements were significantly correlated for industry- and traffic-related PM_{2.5}, polycyclic aromatic hydrocarbons, elemental carbon, metals, and sulfates ($r = 0.54-0.92$, $P < .001$).

Conclusions:

Indoor air quality is an important indicator of the cumulative impact of outdoor emissions in fence-line communities. Policies based on outdoor monitoring alone add to environmental injustice concerns in communities that host polluters. Community-based participatory exposure research can contribute to science and stimulate and inform action on the part of community residents and policymakers.

Environmental Health Disparities

The West End Revitalization Association's community-owned and -managed research model: development, implementation, and action.

Heaney CD, Wilson SM, Wilson OR

[Prog Community Health Partnersh. 2007 Winter;1\(4\):339-49](#)

Abstract

Background:

Principal investigators (PIs) of community-based projects are predominantly university faculty who partner with community-based organizations (CBOs) to find a place to conduct research in communities that will cooperate with their research objectives. University-managed research models (UMRMs) are not always beneficial for CBOs because the university usually manages the study, collects and owns the data, and leverages control at each stage of research, without priority to resolution of problems impacting the quality of life of participating communities.

Objectives:

We present the principles of community-owned and -managed research (COMR), as a new community-driven research model developed by the West End Revitalization Association (WERA), a CBO in Mebane, North Carolina.

Methods:

We describe WERA's development of COMR, compare the power hierarchies of COMR with traditional UMRMs, distinguish COMR partnerships from UMRM partnerships, discuss disbursement of funds, and control/ownership of data. As the PI of research activities, WERA drafted Memoranda of Agreement (MOAs) for all partners, including academic researchers, implemented quality assurance and control procedures, submitted community research protocols for institutional review, and retained data ownership for action, activism, and problem solving. COMR methods encouraged corrective action of environmental justice (EJ) problems in affected communities, including provision of public, regulated drinking water and sewer services.

Conclusions:

COMR promotes CBOs with demonstrated organizational capacity to PI and project manager. The COMR model goes beyond UMRMs and CBPR because it emphasized the credibility and capacity of CBOs to develop, own, manage, foster, and sustain viable research agendas to address ongoing environmental hazards and related threats to health and quality of life.

Community-engaged environmental justice research at University of Massachusetts Lowell

Siqueira CE

[Am J Public Health 2009 Nov;99 Suppl 3:S485-7](#) (Full text available)

The Vida Verde Women's Co-Op: Brazilian immigrants organizing to promote environmental and social justice.

Gute DM, Siqueira E, Goldberg JS, Galvão H, Chianelli M, Pirie A

[Am J Public Health 2009 Nov;99 Suppl 3:S495-8](#) (Full text available)

Abstract

We reviewed the key steps in the launch of the Vida Verde Women's Co-Op among Brazilian immigrant housecleaners in Somerville, MA. The co-op provides green housecleaning products, encourages healthy work practices, and promotes a sense of community among its members. We conducted in-depth interviews with 8 of the first co-op members, who reported a reduction in symptoms associated with the use of traditional cleaning agents and a new sense of mutual support. Critical to the co-op's success have been the supportive roles of its academic partners (Tufts University and the University of Massachusetts, Lowell), effective media outreach, and a focus on advancing social justice. Next steps include implementing a formal business plan and assessing the appropriateness of cooperatives in other industries.

Theater of the Oppressed

The Forum Theatre of Augusto Boal: A Dramatic Model for Dialogue and Community-Based Environmental Science

Sullivan J, Lloyd RS

Local Environment 2006;11(6):627-46

Abstract

Community oriented environmental science combines the inclusive, action-oriented goals of environmental justice communities and the rationalist methodologies of science in an effort to balance urgent social and physical needs with research protocols, precise analysis and carefully measured conclusions. Community-based participatory research acknowledges that local expertise and networks, adverse social and economic consequences of environmental degradation and community beliefs and attitudes are vital factors that affect both overall community health and research outcomes. A unique CBPR approach to inclusive outreach and education is Community Environmental Forum Theatre (CEFT), developed through the National Institute of Environmental Health Sciences Center in Environmental Toxicology at the University of Texas Medical Branch/Galveston TX. CEFT integrates the dramaturgy of Augusto Boal's Theatre of the Oppressed and the democratizing dialogic process of Paulo Freire into the design and implementation of environmental health research, community health care and education. CEFT projects throughout the Texas petrochemical belt have used this form of interactive workshop and energized public performance to increase knowledge of toxicological concepts, develop risk awareness, extend and strengthen coalitions, create action agendas and promote community advocacy skills. Boal image-making techniques help to deconstruct concepts such as exposure pathways, dose response, differential susceptibilities, multiple stressors/cumulative risk and the healthy worker effect. Image-based ethnographies provide insight into risk perceptions, risk communication outcomes and overarching community dynamics impacting environmental justice. CEFT project efficacy is evaluated via a multi-frame process focused on goals specific to the roles of the scientific/environmental health outreach specialist, the community development artist/practitioner and the advocate for environmental health and justice issues

Environmental Justice and Augusto Boal's Theatre of the Oppressed: a Unique Community Tool for Outreach, Communication, Education and Advocacy

Sullivan J, Parras J

[Theory in Action 2008 Apr;1\(2\):20-39](#) (Full text available)

Abstract

Our article, *Environmental Justice and Augusto Boal's Theatre of the Oppressed: a Unique Community Tool for Outreach, Communication, Education and Advocacy*, describes this transformative process, explores the theoretical and scientific influences behind the method and unpacks the collaborative dynamic modulating the efforts of community activists, non-profit environmental professionals and academics to achieve and refine their working relationship. The text is accompanied by photos from actual sessions that illustrate how the methodology embodies concepts from environmental and social sciences to promote scientific literacy, and also uses short uncomplicated scenes to show how environmental injustices adversely affect both physical and mental health, and the larger economy of impacted communities. The fact that 85% of these towns and neighborhoods are communities of color underscores the fact that race and class are keys to the struggle for environmental justice. The Forum Theater methodology also provides a dialogic structure for deconstructing these deep-seated, bitterly divisive issues with sensitivity and respect.

Forum Theatre Skills & Concept Demonstration

Video (on Center to Eliminate Health Disparities / UTMB website)

This video footage documents a Theatre of the Oppressed work session at the Environmental Protection Agency's Community Involvement Conference (CIC), Buffalo NY, July 2005. Participants include EPA community Involvement personnel from various agency regions, representatives of community based environmental justice organizations, and public health practitioners.

[Read more.](#)

El Teatro Lucha de Salud del Barrio: Theater and Environmental Health in Texas

Article on the use of Forum Theatre in a long term community engagement project under the NIEHS "EJ Partnerships for Communication" program

[Read more.](#)

Popular Arts and Education in Community-Based Participatory Research (CBPR): on the subtle craft of developing and enhancing channels for clear conversations among CBPR partners.

Sullivan J, Siqueira CE.

[New Solut 2009;19\(4\):399-406](#)

Abstract

Community-Based Participatory Research (CBPR) is a methodology hinged on flexible power relationships and unobstructed flow of expert and local knowledge among project partners. Success in CBPR depends on authentic dialogue, free flow of information, and trust. But accurate, unmediated, and timely channels of communication, while key to successful CBPR, are difficult to create and maintain. As participatory methodologies evolve, popular arts and education techniques have increasingly taken center stage as culturally fluent, bidirectional modalities for conveying information, building responsive channels for communication, promoting policy, and enhancing the effectiveness of grassroots organizing.