



Published in final edited form as:

Psychol Rep. 2025 February ; 128(1): 211–239. doi:10.1177/00332941241246467.

Project GRIP: An Illustration of Participatory Action Research with Communities of People who Own and Use Firearms

Phillip N. Smith¹, Christopher Cordell³, Laura Taylor Stevens², Katie West¹, Savannah T. Morgan¹, Jordan Vallas³, Krista R Mehari²

¹Department of Psychology, University of South Alabama

²Department of Psychology and Human Development, Vanderbilt University

³Community Research Partner

Abstract

Firearm-related injury and mortality prevention strategies are often incompatible with and potentially ineffective for the very populations at risk. Such incompatibility is reflective of a cultural disconnect between investigators and prevention specialists and those who own and use firearms. The current paper describes Project GRIP, a research project that was guided by the principles of Participatory Action Research (PAR). We present the project as a case-example and demonstration of how PAR principles inform an approach to partner with, rather than doing research on, firearm owners. Though PAR is a general approach and not a set of techniques, we describe the strategies we used in the hopes that they may be useful for investigators using PAR with firearm owners. We discuss the project and our approach across different stages of the process, including entering into PAR with firearm owners, conceiving of and building their partnerships, developing a shared vision, mutual understanding, and co-learning, building and maintaining positive relationships, and executing the project tasks. The PAR approach and the intentional emphasis on partnership is, in our opinion, vital to ensuring that the perspectives of firearm owners are incorporated into the research literature so that more ecologically valid and potentially effective injury and mortality prevention strategies can be developed and disseminated.

Keywords

Firearm Owners; Participatory Action Research; Firearm-Related Injury Prevention; Violence Prevention; Suicide Prevention

Firearms are used in over half of suicides and about three-quarters of homicides in the US (Centers for Disease Control and Prevention, 2024). Despite increasing attention to the role of firearms in suicide and violence, research on firearm-related injury and mortality has been hampered, in part, by interpretations of legislation that restricted federal funding for such research (Rostron, 2018). In 2018, Congress altered course and created a budget

Correspondence regarding this article should be addressed to Phillip Smith, University of South Alabama, 75 South University Blvd., UCOM 1000, Mobile, AL 36606, United States. psmith@southalabama.edu.

We have no conflicts of interest to disclose.

that included lines for research on firearm-related injury prevention for both the Centers for Disease Control and Prevention and the National Institutes of Health. However, firearm-related research remains challenging owing, in part, to a cultural disconnect between investigators and violence prevention specialists and populations at risk for firearm-related suicide and homicide. The purpose of the present paper is to describe Project GRIP (Gun-Related Injury Prevention), a research study that was guided by the principles of Participatory Action Research (PAR). We describe the activities, strategies, and experiences of the project as a case example that might inform other researchers considering PAR to build partnerships with firearm owners in order to move towards the shared goal of preventing injury and saving lives.

There is a cultural divide between researchers and firearm owners, characterized by differences in values, worldviews, ways of living, and even geography. For example, individuals who are firearm owners are more likely to be Republican, more likely to be religious (and particularly identifying as evangelical Protestants), and more likely to be both politically and theologically conservative (Parker et al., 2017; Yamane, 2016). In contrast, scientists are more likely to be Democrats, less likely to be religious, and more likely to be politically liberal than the general public (Pew Research Center, 2009). Although these may appear to be surface-level, meaningless differences, they actually reflect deep, identity-based, moral, and somewhat intractable divides.

In the U.S., individuals who identify as liberal heavily rely on the moral domains of justice and care to determine priorities and decision-making. In contrast, individuals who identify as conservative consider those domains while also equally weighting loyalty to the in-group, authority, and purity or sanctity (Graham et al., 2009). The result is that the moral foundations that guide perception, priorities, and values may be fundamentally different across public health researchers and people who own firearms. In addition, Federal health research funds are disproportionately granted to universities in the Northeast, East Coast, and urban areas (*NIH RePORT*, n.d.). However, individuals in rural areas are disproportionately more likely to live outside of the Northeast (in the South, Midwest, or West) and to live in rural areas (Parker et al., 2017), suggesting, in its most basic form, a geographic divide between heavy concentrations of health research and heavy concentrations of firearm ownership. On a different, more anecdotal level, even the language that is used across public health and gun culture is different. For example, in public health, when a firearm is “locked” it is in a secure location that is accessible only to people who have the key (i.e., physical key, code, or biometrics). However, in some communities, “locked” is the first part of the phrase, “locked and loaded,” which describes when there is a bullet in the chamber and the firearm is ready to be fired.

This cultural divide causes difficulties in moving towards firearm injury prevention. Firearm owners have reported distrust of researchers’ motivations in studying firearms and firearm-related injury, likely due to awareness of these fundamental differences in ideology (e.g., Betz et al., 2021). Firearm owners have also shown an increasing refusal to participate in research or to answer questions about firearm ownership (Legault, 2013; Urbatsch, 2019; Wallace, 2017). Importantly, many of these studies show that such refusals are not equally distributed. Individuals who identify as Republican, individuals with a lower socioeconomic

status, older adults, and individuals with lower confidence in the government are less likely to respond to questions about firearm ownership (Urbatsch, 2019). Such refusals create biased data with restricted samples, such that many perspectives and experiences are not represented in the research literature. Firearm owners explain that they will not answer these questions due to a general lack of trust, the belief that that firearm ownership is private information, and concern that disclosing such information will result in stigma or, ultimately, efforts to ban or confiscate firearms (Betz et al., 2021; Garverich et al., 2023).

This cultural divide contributes to a larger problem wherein the injury prevention strategies that have been developed are unlikely to benefit the populations at greatest risk. For example, means safety interventions in the context of mental health services reduce the risk for suicidal behavior (Nuij et al., 2021), but the reach is limited because high-risk subpopulations, such as firearm owners and older men, may have lower rates of seeking mental health services (Tang et al., 2022). Similarly, violence prevention strategies have decreased effectiveness in areas of higher concentrated disadvantage (e.g., higher proportions of households living below the poverty line, households that are renting, female-headed households, and households receiving Federal assistance; percent of youth in schools who qualify for Federally subsidized free or reduced-price lunches; Conduct Problems Prevention Research Group, 2010; Gottfredson & Gottfredson, 2002). Together, this suggests that current efforts to prevent intentional firearm-related injuries and deaths are not thoroughly grounded in the social ecology of those at greatest risk. Bridging the cultural disconnect between firearm-related injury prevention strategies and those who own and use firearms requires a deep understanding of social-ecological factors that underlie firearm-related attitudes, behaviors, and practices. These social-ecological factors include culture (e.g., societal trust, rugged individualism, values around property protection and defense; values around reputation and respect; acceptable help-seeking; stigma); history, including sociopolitical events and the role and symbolism of firearms over time and place; macrosystemic factors, including the national, state, and local organizations, law and policy, crime levels, and community-level gun ownership; and microsystemic factors, including family and friend firearm ownership and practices (c.f. Author citation, in press).

The current project was developed to bridge this cultural divide and inform the cultural and socio-ecological understanding of gun-related attitudes, behaviors, and practices in the service of reducing gun-related suicides and homicides/assaults. The project was developed with the intention of embracing the philosophy of and adopting strategies congruent with PAR. We describe the activities, strategies, and experiences of the project as a case-example that might inform other researchers considering PAR to build partnerships with firearm owners in order to move towards the shared goal of preventing injury and saving lives.

Participatory Action Research

Participatory action research (PAR) is an approach in which members of the populations of interest are active collaborators in and drivers of, rather than targets of, the research process (e.g., Baum, 2006). The term is believed to have been coined by Orlando Fals Borda, in Colombia, combining the phrase “action research” (Chein et al., 1948) with “participatory research,” which had emerged from Tanzania (Hall, 2005). The two terms, “participatory

research” and “action research” reflect two different general approaches to this type of work. Participatory research originated in low-income countries among communities experiencing health, education, economic, or power disparities, and it was developed as an approach to harness research to move towards community empowerment, social justice, and systems-level change (Hall, 2005). An empowerment approach prioritizes capacity-building, self-determination, critical consciousness, and knowledge through collective action over meeting benchmarks or following scientific research processes (e.g., traditional scientific approaches demand knowledge creation before action/intervention; Loewenson et al., 2014). Action research arose out of frustration on the part of social scientists that their work was not measurably making the world a better place. They turned to the idea of actively collaborating across groups to work towards a more equitable society, a slightly more utilitarian approach (Lewin, 1946). Utilitarian approaches prioritize efficiency, effectiveness, and tangible results that can be quantified or evaluated according to predefined criteria (Loewenson et al., 2014). In that sense, PAR grew out of both empowerment and utilitarianism values, although more heavily out of empowerment. The investigators actively experienced a tension between empowerment and utilitarianism throughout the current project.

Across these different foundations of PAR, the process is fairly consistent. In PAR, communities and investigators come together through the identification of a shared goal and choose to work collaboratively to move towards a desired change at the structural level (Kidd & Kral, 2005). This is an alternative to traditional investigator-driven research methods, in which investigators identify the purpose of the study, the research questions, and the methodology, and how to interpret and disseminate results. PAR must include participation—with participation defined as the sharing of power—at all stages of the research process, from idea generation to action to evaluation and dissemination. If researchers attempt to conduct PAR but are hesitant to share power, it is likely that the work will become exploitative or culturally imperialistic, simply strengthening existing power structures (Kemmis, 2006; McTaggart, 1991; Ozanne & Saatcioglu, 2008). In addition, the relationships between community members and researchers are meant to be long-lasting in PAR (Tembo et al., 2021), as opposed to traditional investigator-driven work in which researchers leave the community after completing the research goals (Gbadegesin & Wendler, 2006).

PAR is based on several core principals. Knowledge and power are intertwined, and dismantling structures that limit who can generate, interpret, share, and act on knowledge is key to societal change, particularly to address the root causes of inequities (Cornish et al., 2023; Hall, 2005; Kidd & Kral, 2005; Loewenson et al., 2014). The epistemological paradigm of PAR is that reality is socially constructed, and knowledge can be created through sharing experiences and through action (Loewenson et al., 2014). In PAR, collective wisdom, lived experiences, and value systems are valid sources of knowledge; scientific research alone is unlikely to provide an accurate understanding of reality (Baum, 2006; Cornish et al., 2023; Hall, 2005). It stands in contrast to the positivistic paradigm in which there is believed to be an objective truth that is discoverable through the traditional scientific process (e.g., Ozanne & Saatcioglu, 2008). Relationships are at the core of PAR. Successful partnerships empower communities to move toward societal change (Cornish et al., 2023).

In contrast, the ideal of objectivity in a positivistic paradigm motivates investigators to take a subject-object separations approach to research, in which those who do the research are separate from those on whom the research is being conducted, based on the ideal of objectivity (Loewenson et al., 2014).

Given the differences between the principles of PAR and the traditional, investigator-driven research process, PAR involves a major attitudinal shift for investigators. The difficulty in shifting from a positivistic frame to a participatory frame may result in investigators using participatory language and what are perceived to be participatory strategies without any sharing of power. For example, investigators may task youth to use a version of photovoice (an approach that involves participants documenting their experiences and contexts using photography, telling their stories, and working toward action and empowerment; Wang & Burris, 1997) for a project, without involving them in determining what pressing community issues they would like to address, or even asking if photovoice is appropriate for addressing those issues. This is natural, because most investigators have been trained to do research on people, not with people, and the process of growing past those tendencies takes time, feedback, and coaching. Investigators must look at themselves introspectively, allow themselves to be vulnerable, ask regularly for feedback from each other and their communities, and embrace the value of humility in order to receive and respond to feedback (for more strategies for validity checking, see Ozanne & Saatcioglu, 2008). Humility is important, because despite ideals, researchers benefit from the creation of knowledge (i.e., publications are monetized in the form of tenure, promotions, and grants) whether or not that knowledge is used to radically transform systems (Hall, 2005).

There are many relational and practical benefits for investigators who engage in PAR despite the re-orientation that it requires on the part of investigators. Relationally, if a community chooses to let the investigators in, investigators can benefit from feeling part of the community, having a sense of belongingness, and having intimate, trusting relationships where the community members can offer alternative perspectives to the investigators in ways that will help them grow. Additionally, PAR can also build up a powerful, effective network, in which community members leverage their connections and positions to make the project work. This helps to address potential difficulties with participant recruitment, buy-in, and willingness to respond openly (Baum, 2006). Having community members identify the focus of the work and co-design the methodology also increases the ecological validity of the resulting findings; that is, the extent to which the assumptions of any resulting methodology or intervention are congruent with the real-world contexts of the communities, and therefore generalizable outside of research settings (Bronfenbrenner, 1977). This process also makes it more likely that any intervention that is developed is feasible, acceptable, sustainable, and scalable (Mehari et al., 2023).

A Case Example of PAR with Firearm Owners

The project aimed to reduce firearm-related suicides and homicides, particularly among vulnerable groups, by addressing the cultural divide between public health and the social-ecological systems of those who own and use firearms. The project was a two-phase, mixed-methods project that involved hourlong qualitative interviews about individuals'

firearm-related attitudes, beliefs, and practices, experiences of firearm-related violence and suicide, and beliefs about injury prevention (Phase 1) and quantitative examination of a social-ecological model of risk for intentional firearm-related injury (Phase 2) that was borne out of the qualitative data collected in Phase 1. Firearm owners emphasized their values around preventing injuries and death throughout the process of the project and shared their concerns about the state of the national conversation around gun control, provided responses around their experiences of the project, and discussed strategies to build strong partnerships between public health researchers and firearm owners.

The Context of the Participatory Work

Firearm Ownership, Use, and Culture. Although no definitive database on firearm ownership in the US exists, surveys and indices constructed from proxy and related metrics suggest that about one-third of households in the US possess at least one firearm (Cook & Ludwig, 1997; Schell et al., 2020); though polls by news agencies and other organizations (e.g., the Pew Research Center, Gallup) have produced estimates as high as 52% of households as owning firearms (Marquez, 2023). Ownership rates vary significantly across demographic groups, with higher rates among white men (48%) compared to nonwhite men (24%) and women (22%) as well as among those living in rural areas (46%) and those who identify as a Republican (41%)(Cook & Ludwig, 1997; Parker et al., 2017). Those with less educational attainment are also more likely to own firearms, though only among white individuals; 40% of whites with a high school diploma or less and 42% with some college compared to 26% of white college graduates.

Describing and articulating the elements of the culture of those who own and use firearms is elusive as values, beliefs, norms, and practices vary greatly. Despite this variability, some core themes have been observed and labeled as representing two cultures: Gun Culture 1.0 and Gun Culture 2.0 (Yamane, 2022). Gun Culture 1.0 emphasizes hunting, recreation, and collecting whereas Gun Culture 2.0 reflects the prominent the role of firearms in self-protection and defense. Though the major facets of Gun Cultures 1.0 and 2.0 both remain relevant in the US, there has been an increase in the prominence of Gun Culture 2.0 over the past 40 years (Yamane, 2022; Yamane et al., 2020).

The context and drivers of the rise of Gun Culture 2.0 were multiply determined and complex. Though the common narratives and oft-cited factors are relevant (e.g., the NRA, the civil rights movement, the Cold War), they tend to belie a complicated social evolution that is not caused by any one thing. Further, even within what are broadly described as Gun Cultures 1.0 and 2.0, there is a lot of variability in how similar themes are experienced and expressed. For example, the potential threats that inform the need for self-defense vary across different communities and include criminals, white supremacists, police officers, or a tyrannical overreaching government, among others. Some or all of these nuances vary widely cross different communities. What does seem common, though, is that the growth of Gun Culture 2.0 is grounded in social unrest and uncertainty and that self-protection is increasingly one of the most endorsed reasons for owning a firearm (Wertz et al., 2018).

Southern Alabama and the Gulf South. This project was centered in Mobile, Alabama, with participants within about an hour's drive radius (capturing areas between Biloxi, Mississippi, and Pensacola, Florida). These areas comprise multiple populations at high risk for gun injuries and fatalities. In 2018, Alabama ranked second among U.S. states in rates of death by firearms. Of those gun-related deaths, 52% were suicides, and 44% were homicides/assaults (CDC, 2020b). Of all the 50 states, Alabama has the highest rate of adults with loaded and unlocked guns in their homes (about 13%; Okoro et al., 2005). Alabama has the fifth highest rate of income inequality in the country (Semega et al., 2019). Mobile County provides access to both urban and rural areas, with about 79% of the population residing in an urbanized area, and 20% in a rural area. The two bordering counties, Washington and Baldwin, have rural compositions of 100% and 42%, respectively (U.S. Census Bureau, 2023). Violent or property crimes in Mobile is 70% higher than the national average with violent crimes being 151% higher than the national average and property crimes being 54.2% higher than the national average (AreaVibes, 2023). Mobile County has a higher rate of juvenile justice court petitions for violent crimes than the state of Alabama average (Kids Count Data Center, 2020). Mobile's population is about 53% African American and 40% White American (U.S. Census Bureau, 2023). It is highly segregated; based on 2010 U.S. Census data, African Americans in Mobile had a neighborhood exposure index of 30% to White Americans compared to 67% to African Americans. In comparison, White Americans had an exposure index of 84% to White Americans but only 12% to African Americans (CensusScope, n.d.).

Choosing Participatory Action Research

The project was developed through a collaboration between two clinical psychologists (PS and KM) with expertise in suicide and violence prevention, respectively. The impetus for the project and the adoption of a PAR approach was largely driven (1) by KM's existing community-based work in violence prevention, in which the urgent need to address firearm injuries and fatalities was constantly raised by partners; and (2) by the investigators' own lived experiences as members of communities often "studied" but excluded from the planning and action of research: firearm owners and individuals from communities of color disproportionately burdened by violence. The investigators' experiences of initiating the project illustrate the two positions from which researchers can enter into PAR with firearm owners: as an insider or an outsider (Ozanne & Saatcioglu, 2008).

Investigators as insiders are themselves members of those communities. PS entered into the project as a firearm owner. He is a white man who grew up in a rural area and in a firearm-owning household. He was socialized to think about firearms as a tool and part of recreational activities (i.e., target shooting and hunting). He was also exposed to cultural values that centralized firearms as distinctly American and pivotal to ensuring fundamental freedoms (e.g., *The second amendment makes all the other possible*). Additionally, he was informally taught firearm safety as a strong value and critical for responsible ownership and use. PS remains active in multiple communities that revolve around firearms, including hunting and competitive shooting events (e.g., International Defensive Pistol Association). He has also completed courses on the defensive use of firearms and has held an active permit to carry a concealed firearm. Representation of firearm owners on the investigator team is

congruent with sharing power and elevating the perspective of firearm owners. Having a member of the investigator team who is a firearm owner and an active participant in the local communities involved in shooting sports had many benefits. These benefits included reducing distrust due to being a member of the same community, enabling recruitment of advisory board members and partners through personal relationships, and having a shared language and baseline knowledge. Community partners for the project reported that their willingness to partner with us was greatly influenced by knowing that one of the investigators was a firearm owner.

Outsiders, in contrast, are not members of the communities with whom they are partnering. Although KM entered into the project having grown up in an area affected by firearm-related violence, she was an outsider to the firearm-owning community. Having grown up in a high-violence neighborhood, KM had strongly aversive feelings about firearms. She was also ignorant about firearms: when KM started the work, she had no concept of calibers, different kinds of safeties, plinking, or variability in magazine capacities. Our community partners told her that it is important to make efforts to become knowledgeable about firearms, because ignorance could raise questions about her motives and commitment. Fortunately, the participating firearm owners were very willing to educate and socialize all members of the team (e.g., KM, student research assistants) about firearms. KM asked community members what she needed to learn, do, or experience to be a good partner. Based on their feedback, KM completed the NRA Basics of Pistol Shooting training course and joined firearm owners she knew at shooting ranges or in other firearm-centered activities. Those efforts to become knowledgeable created legitimacy and built trust; for example, our advisory board members commented that knowing that KM went shooting decreased their concerns that the project had hidden motives, such as that it would be used to further a liberal agenda.

Formulating the Partnership

Each investigator had existing relationships and community-based work; the urgent need to address firearm injuries was identified through KM's partnerships with communities experiencing high violence exposure, but not through PS's relationships with firearm owners. After CDC funding was released, PS and KM agreed to pursue the funding by collaborating to explore cross-cutting risk and prevention for all intentional firearm injuries, both suicide and violence. KM brought the notice of funding opportunity to her partners, who were enthusiastic about the opportunity to collect local information that could help to inform action, and they worked with her and PS to refine the ideas for this project. However, many of the relationships with the firearm-owning community were established for the purpose of this project. This process of developing the purpose, aims, and methodology among the two investigators represents one of the critical tensions, in a way, reflected by the utilitarian and empowerment approaches of PAR.

Upon receiving funding for the project, the investigators worked to build a team that was part of the firearm-owning community, consulting heavily with KM's community partners. Building the team included decisions about how, where, and whom to recruit to join as key members of the team. As all decisions and activities aimed to flow out of the collaborative process among the team, these decisions were vital. Additionally, the

investigators needed to decide how the team would be organized, define the roles, and generate a strategy for how power would be shared. The investigators identified two roles that would, in combination with the representation of firearm owners on the investigator team, reflect the partnership of firearm owners. These positions were Community Research Assistants (CRA) and a Firearm Owner Community Advisory Board (CAB). All CRAs and members of the CAB were members of the communities of focus.¹ The investigators team maintained responsibility to ensure that the work was conducted in accordance with ethical standards, Federal policy, the limitations of the budget, and best practices in quality data collection and documentation. Outside of those caveats, decision-making was shared across the whole research team, with CRAs in particularly fundamentally shaping the work. For an example related to the budget, in response to the CRAs' input, the investigators doubled the incentives for interview participation, fought with human resources to raise the CRAs' hourly rates, and paid to set up recruitment tables at sporting events. In best-practice PAR, ideally the community has full decision-making power. Researchers are responsible to share their knowledge about the existing state of research on the topic of interest, human research ethics, best-practice research methods, et cetera, but only have the final decision-making power for their own behavior. Our situation illustrates that external funds may exacerbate the utilitarian-empowerment tension.

The role of CRA was a half-time, paid position that was designed to ensure that the voices of firearm owners were integrated into the day-to-day functioning of the project. CRAs were firearm owners who attended weekly team meetings and were empowered to direct discussion, question investigators' decisions, and lead components of the project. CRAs were also responsible for recruiting participants, collecting interview data, and engaging in analysis, interpretation, and dissemination. The Firearm Owner CAB was designed to be more consultative. CAB meetings took place monthly in the six months of the project, and then about quarterly after that. CAB meetings addressed specific issues relevant to the project at the time. For example, early CAB meetings were dedicated to identifying shared goals and developing the research questions and the methods for answering those questions, whereas later meetings were dedicated to ensuring representative participation, interpreting the qualitative data, and designing survey measures based on the qualitative data.

The investigators considered several logistic factors when partnering with our firearm owners around location and meeting schedules. The investigators aimed to identify spaces that were comfortable and convenient for our community partners. On the one hand, CRAs were formally hired and provided office space on campus with all meetings including CRAs and investigators taking place on campus. However, holding CAB meetings on the university campus would alienate people who may have concerns about universities' agendas and ethics. Rather, the investigators partnered with the owner of a local shooting range, a former police officer who was recommended by one of KM's community partners. The investigators went to his range to shoot and build a relationship with him as they were developing the grant proposal, and he agreed to be a partner; after the grant was funded, he

¹The project also partnered with communities experiencing a high burden of violence, and half the CRAs and two advisory boards comprised representatives of those communities. Many of those individuals were also firearm owners, but that was not a criterion for participation for those community partners.

opened his range to allow the CAB to meet there. Incidentally, the investigators gained two more members as people who came to shoot decided to stay and join the conversation, and then became permanent members of the board. CAB members told us later that the shooting range was much preferred over going to a university campus, as it reflected of our values of partnering with community members. The investigators also sought to identify a day, time, and meeting schedule that was acceptable to partners. The majority of our CAB members worked 9–5pm, and they preferred a 6:30 meeting time during the week. The investigators also provided meals and ate together to help build a sense of community, promote group cohesion, and develop social networks (e.g., Delormier et al., 2009); as an additional benefit, sharing meals predicts perceived well-being among older adults (Middleton et al., 2022).

Building the Team

Once the structure of the team and the roles were decided, the investigators next turned to the critical task of recruiting members into the team. The investigators aimed to construct the team intentionally and strategically to promote representation of the firearm owning community. Although one stereotypical image of a firearm owner is that of a conservative White man, firearm owners do not have a monolithic culture and are increasingly represented among various racial, ethnic, gender, social, and economic backgrounds. Having diversity while also sharing power in a manner that encourages conversation and promotes understanding different points of view is a vital part of PAR. The investigators attempted to honor and incorporate the range of perspectives, inclusive of White men but also of women and Black men, to promote exchange between individuals with varying experience and expertise, introduce novel perspectives, and encourage collaboration and respect for individual contributions (Chandanabhumma et al., 2023). A foundational value of PAR is to move beyond any single dominating group's voice and to incorporate the voices of underrepresented groups in understanding the problem and acting. Failure to amplify the voices of people from marginalized groups hinders the exposure to new ideas and insights and limits what is possible. When recruiting members to join the team, the investigators constantly asked themselves and the community partners, "Who is missing from this table?"

In recruiting members of the team, the investigators hoped to recruit individuals with an eye to representation of diverse points of view (e.g., hunting culture, military/law enforcement, Second Amendment advocates, predominantly leisure/hobby use, predominantly protection use) as well as diverse identities (representation across race and gender). In addition to the goal of being able to construct social realities from diverse points of view, the investigators also wanted team members who could, and would be willing to, provide access to their communities for recruitment. Individuals who of their own social capital are well-networked, or who have influence in well-networked institutions, can, if they choose, provide points of entry into a community. When the number of points of entries increase to a critical mass, we believe that a community, in essence, has chosen to let the investigators in, which was one of our hopes for the project.

To do this, the investigators used multiple recruitment strategies; spending a lot of time together brainstorming messaging that would be accurate and appealing to individuals who had a sense of identity in firearm ownership. The final message had three main ideas:

the investigators were looking for people to whom gun ownership was important; who thought that firearm-related injuries and deaths could be prevented; and who wanted to help figure out ways that firearm-related injuries could be prevented without violating the Second Amendment. Broad recruitment included formal and institutional means (e.g., television segments on local news describing the project; announcements through our university community communication system for both the CRA and CAB team members; job ads posting through general sites such as LinkedIn for the CRA positions). The investigators also used focused approaches, which tended to be informal and leveraged existing relationships with individuals or organizations; for example, talking to police partners; talking to and posting ads for both CRAs and CAB members at shooting ranges and community centers; using personal networks and friendships).

For CAB membership, there were about 15–20 regularly attending members; they included several people who learned about it on local news; several people who started attending after they saw the first meeting at the shooting range; two people who were friends of the investigators; two people who were connected to the police or military; several people who were connected to one of the partnering shooting ranges; and several people who were connected to the university. The group was racially diverse, including Black and White men, but White women were significantly underrepresented, and no Black women attended. Across the five firearm-owner CRA team members, two were connected to the military and four grew up in hunting culture; notably, two of our five community violence CRA members were also firearm owners, although they had not originally been recruited for that role. The CRAs were representative across race and gender. The majority of our CRAs came from existing partnerships and relationships; the investigators existing community partners knew how and where to find potential team members and offered introductions with an endorsement that conveyed legitimacy.

the investigators also aimed to onboard CRAs in a “cohort” of individuals. Though this was not always feasible, when a cohort of team members were brought in it made it possible to build community through a shared experience of joining and becoming socialized into the team. The investigators also sought to explore each person’s motivations and goals for being part of the project and to express a commitment to help them move towards their goals—that is, to show that they see and respect potential team members as complex human beings rather than simply people to help get the work done.

When working with firearm owners, it is important to appreciate the strong likelihood that potential partners will greatly value privacy and confidentiality and may have particular concerns about how information will be used. Members of the team reported that they perceived the funding agency (i.e., the CDC) to be problematic and not trustworthy. Members of the team expressed concerns that Federal agencies have a history of promoting policies that reduce individual liberty, and they were concerned that Federal funding agencies such as the CDC might use the information generated in the project in a way that could threaten Second Amendment rights. Investigators should be transparent about their motives, the sources of their funding, and how the data will be used and protected. Interestingly, the investigators had a federal certificate of confidentiality, which offers a high level of assurance that participants’ and partners’ information could not be disclosed

to others; yet community partners reported that this certificate was not important in their decision to join the team. Rather, they discussed that it was the transparency and respect showed by the investigators and that there was representation of firearm owners on the investigator team that made them feel comfortable participating.

Developing a Shared Vision, Intersubjectivity, and Co-Learning

Sharing power and co-constructing a team vision requires awareness of team members' perspectives and development of intersubjectivity (i.e., sharing experiences, knowledge, and meanings from multiple perspectives in pursuit of mutual understanding). Such awareness raising and perspective sharing can be accomplished through several strategies. The investigators determined at the outset of the project that they would be open about their motivations and perspectives about firearms, firearm-related injury prevention, and the goals of the project, including our positionality and how that informed the project. This transparency typically involved the sharing our personal stories, background, and perspective with potential partners. The investigators regularly shared their experiences and relationship with firearms when interviewing CRAs, during CAB meetings, when doing interviews with journalists, and when presenting the project in professional and academic contexts. Owning their unique perspectives became a large part of the project. Such discussions aimed to foster transparency, investment, and partnership and a shared mission among the community partners.

Sharing power and recognizing the importance of each team member's knowledge and experience is central to PAR. Although it was important that training was provided to community partners, the investigators approached orienting towards and developing the shared mission as one of cross-training: making explicit that knowledge and skill development is occurring in multiple directions. For example, it was necessary for the investigators to train CRAs about the research literature on suicide and violence prevention, human subjects research (including required certifications), PAR principles, and interviewing skills. It was equally important that CRAs educate the research team about their knowledge, skills, previous experiences, and their unique perspectives as members of the firearm owning community. We used several co-learning strategies that included structured experiences to direct sharing. Think-pair-share, for example, asked members to think on their own in response to a prompt, then turn and discuss with a partner. Pairs are then invited to share with the larger group. Given that the project included a qualitative interview component, having team members interview each other about their views and experiences with the aim of listening to understand promoted both skills development and increased understanding.

Investigators should also consider other educational and perspective-building strategies, including focus groups, conversations with key informants, and place-based engagement, among others. One strategy that was described by our team members as particularly valuable was the development and sharing of culturagrams (Congress, 1994). This approach, which arises out of family therapy, is a perspective-building strategy in which members of the team create a visual map of the culture of a group, including time in community; language spoken; health beliefs; trauma and crisis events; oppression and discrimination; religion and

faith; holidays; food; clothing; value systems; history and contact with institutions such as legal, educational, and medical; and family structures. In the current project, members included additional topics covered in the culturagram should be something like relationships with firearms; conceptions of violence; conceptions of suicide. This moved towards multiple goals: we built team cohesion based on our willingness to be vulnerable with each other; our empathy for each other's perspectives and values grew significantly; and we were able to have a window into worlds with which we had previously had no contact.

Building and Maintaining Positive Relationships

The relationships among the members of the team, both individually and collectively, were key to the success of the project. Many of the aforementioned strategies served, in part, the function of building positive relationships founded in mutual respect and trust. The investigators considered and discussed regularly how the conduct of all project activities could be carried out in a manner that also served to promote positive relationships and each team members personal and professional goals. We also used strategies uniquely aimed at building and maintaining positive relationships. Such strategies included sharing meals during and outside of meetings, activities related to firearms (e.g., going to the shooting range together), team social events, and broadly pursuing friendships and personal relationships. Admittedly, some members of the team were limited in their ability to devote additional to such events and activities due to life circumstances (e.g., being married with children, needing to hold multiple jobs). Such activities and events also often required financial resources, which required decisions about the best way to allocate available resources.

Investigators and team members were mindful to follow up on invitations issued by community partners as much as possible, including invitations to community members' homes to see their firearm collections, attending and/or presenting at community events, and supporting partners' organizations. The investigators also conducted formal quarterly individual check-in meetings that offered community team members time and space to discuss their experience on the project, offer feedback about the investigators' leadership, and discuss their needs and how the investigators might help to address those needs. The continued solicitation of feedback from team members to the investigator team was essential to maintaining shared power.

The investigators also found that they needed to consider how team members could be supported given that they would be discussing and learning about highly difficult topics. Such support was part of the ethical considerations of the project and ensuring that there were distress protocols in place. Multiple instances of violence occurred throughout our project, both nationally and locally. Giving space for team members to discuss their reactions to these events, provide support to each other, and consider whether and how the work we were doing would be useful in reducing such incidents was essential to ensuring that team members were mutually supported and that our relationships positive. Relatedly, the interviews that CRAs conducted often involved learning about traumatic stories of violence and suicide. The investigators used grant funds to cover costs of psychotherapy at

the psychology department training clinic for any team member who was interested due to concerns of vicarious trauma exposure and with the consent of the funding agency.

Completing the Goals and Tasks of the Research

There were a variety of goals and associated tasks for the project due to the mixed-methods, multi-phase nature of the project. The necessity of such tasks and the timeline for completion, with one overarching objective being the successful conduct of the research, again reflects the tensions between utilitarian and empowerment approaches. Despite this potential discrepancy with the empowerment approach to PAR, the investigators attempted to perform these tasks in a manner that was consistent with PAR. For example, it was important to use generative strategies for brainstorming and throughout the stages and objectives of the project. Such strategies were used to develop ideas, solicit feedback, and review plans, practices, and procedures from multiple perspectives. Generative strategies included solo brainstorming and sharing with all individuals generating as many ideas as possible in a timed period. Ideas were then compiled into a group-level list and discussed. Group-level analysis asks members anonymously respond to prompts and then work in small or large groups to examine the resulting ideas, generate themes across them, and provide comments in an effort towards collective understanding and consensus (cf., Vaughn & Lohmueller, 2014). We used a particular form of these strategies often: the gallery walk, which developed out of educational research (Bowman, 2005). In gallery walks, individuals wrote their ideas on sticky notes and then placed them on the walls (i.e., on jumbo sticky post-it notes). After that, small groups walked around the room reviewing the responses and making notes on the items (e.g., making check marks for agreement, starring to emphasize, discussing themes across items) and then came together to discuss reactions and reflections.

One of the important early tasks for the project was to collaboratively develop a theory or logic model that guided the research questions, the specific methodology, and the data analysis plan. Our theory or logic model was informed by scientific knowledge and by the collective wisdom and lived experiences of our team members (Mehari et al., 2023). The research team and community partners worked to define the problem and goals and created a shared understanding of how that problem is developed, maintained, and how the processes of participatory action could create movement towards the goal. Though the investigators had largely determined the purpose of the project prior to bringing in additional members of the firearm-owning community, many of the specific details and decisions about how the project was carried out were constructed over time through conversations and generative activities and the initial logic model that continually revised as new information was received. This theory or model also informed the selection of the specific methods. For example, the advisory board members strongly indicated that interviews would be more appropriate than focus groups, due to the sensitivity of the topic and to reduce the likelihood that firearm owners would be unwilling to share their personal experiences and practices in a group setting.

The team also created new survey measures to assess constructs that emerged through our advisory board meetings and qualitative interviews in collaboration. To do this, we used generative strategies to create an item pool that reflected both the qualitative data

and our team's input. After generating items collaboratively, we used additional strategies to revise and refine the item pool. Sorting tasks, for example, involved printing out the items generated onto individual slips of paper and asking members to organize the slips by domains. Partners offered their view of how items did and did not go together. This was useful for identifying domains that may have been under-sampled (in which case, more items were developed) or oversampled (in which case, items were cut). This approach also revealed differential meanings of items across team members, which was useful for refining language. We also employed ranking and summing, which is useful for reducing item pools. This strategy involved team members ranking the importance of each item. Rank scores were then averaged, with the highest scoring items included in the final instrument. Team members were allowed to "rescue" items for discussion and propose revisions to items if they felt eliminating items would result in loss of important information. After item pools were generated and refined, we used a more participatory version of cognitive testing to continue to revise items. In cognitive testing, partners respond to the items as if they were a respondent. For our project, partners then came back together to discuss how they felt about the items more broadly, identify gaps (areas in the domain that were not assessed), and discuss concerns about bias or wording. A team member facilitated a conversation about the wording and meaning of the items one-by-one at the group level. Taken together, this process informed the revision of our items, scale organization and structure, and response options.

Once we collected our quantitative data, we co-analyzed data with partners to continue sharing knowledge and power, and to more usefully inform interpretation of the data. Co-analyzing data will look different based on the type of data to be analyzed. We used a grounded theory development and thematic analysis of qualitative interview data; employing sorting tasks and gallery walks, among others. We also shared our quantitative data, following de-identification, and emerging results presented continuously as part of the participatory process, often through data visualization such as bar graphs and pie charts. Such co-analysis of data aimed towards member checking, aims to improve the accuracy and credibility of research findings. Investigators shared emerging themes of qualitative data and the results of quantitative statistical testing and ask community partners for their critical feedback. Community members checked biases, suggested alternative thematic structures or analytic approaches, clarified meanings, and helped interpret the data.

Once data were collected, analyzed, and interpreted, the tasks turned to disseminating findings. The researchers and community partners collaboratively developed a dissemination plan that included scientific, public, and local dissemination, striving to meet the needs and values of the researchers and community partners. This dissemination looked different across types of partnerships. For example, part of the data we collected were from local school systems. Accordingly, we were sensitive to the reality that our school partners would have major concerns about disseminating information regarding firearm-related violence among their students. Data were presented to school administrators and it was discussed how we would use data collected in their school. We provided school administrators with the only copies of school-identifiable data summaries. Investigators should not disseminate information unless the community partners agree, and, ideally, at least one representative review all the dissemination materials beforehand.

There also needs to be have transparent conversations about what the investigators need as part of their jobs (e.g., scientific publication for tenure or promotion) and what the community partners need or want related to dissemination. Community partners may want to take the lead on media dissemination (e.g., news, podcasts), may want to serve as authors or presenters on scientific dissemination (manuscripts, chapters, conference presentations), or may be interested in ensuring that the data is shared locally with invested or relevant individuals, agencies, or institutions. Community partners can provide information about how the data could be used locally and with whom and how the data should be shared. Non-identifiable, aggregated data could be shared with institutional partners to answer their questions or provide information about the strengths, needs, and functioning of their institution or constituents/consumers/clients.

Bias, Diversity of Opinion, and Disagreement

Investigators and other team members may possess biases that make a PAR approach challenging—many people want there to be a right and wrong, but a fundamental principle of PAR is that there are many truths, not just one. “Check your bias” is a common refrain for engaging in both participatory and qualitative research, but how to actually do that always seems to sink into vagueness, covered with words like “reflexivity.” We attempted to check our biases by creating a team full of people who had different perspectives and were willing to disagree with each other, including and perhaps especially the investigators, in a group setting. The investigators were mindful both about having racial, ethnic, and gender diversity on the team as well as diversity of opinion. It was critical to our success that the team members were able to accept and hold the tension that resulted from that diversity. Indeed, a lack of tension or disagreement on a team is a sign that it may have never been adequately diverse to start out with, or that it moved into groupthink (e.g., Kidd & Kral, 2005).

Disagreement is useful but difficult to navigate, especially when the invested parties have a strong need for their opinion to be agreed upon as the “correct” one. Disagreement can include ideologically opposed issues such as violence as a useful tool or means to an end versus an evil to be avoided; justifications of police use of deadly force; the extent to which homicides can be justified, if it all; attributions of violence and dangerousness to specific racial groups; stigmatization of people with mental health difficulties; rationales behind violence against women; and many other sensitive, highly opposed ideals. During intense disagreements among team members, the investigators reminded the group immediate goals of the meeting as well as the broader mission of the work. Specifically, the investigators reiterated that part of the work is to understand different perspectives deeply; the purpose of this messaging was to shift partners from trying to persuade each other to examining how we could craft questions or survey items to understand differences of opinion, regardless of the accuracy of those opinions. Emphasizing the shared goals of reducing injury and death, across political ideology, also helped to refocus conversations. Other de-escalation strategies that we periodically needed to employ included investigators talking one-on-one with CAB members to understand their perspective and express appreciation for their participation and breaking into groups strategically (i.e., separating people who tended to be most likely to enter into strong disagreements with each other or pairing them with advisory board members with whom they had good relationships). Such approaches were largely successful

in maintaining or returning to civil discourse. We do not advocate for expelling members or cancelling meetings. Embarking on PAR with firearm owners is to accept that difficult conversations will be had, and the whole team must be committed to having them.

In addition to the disagreements within the CAB, the investigators and CRAs were also at times exposed to strong and fundamentally opposed beliefs that caused serious distress; for example, during interviews or in community meetings. The team found it useful to engage in two strategies: developing safe spaces where we could share our visceral reactions to ideas that could cause harm to some of our communities, and focusing on shared goals. The investigators decided that in the CAB meetings, they would be authentic but not fully transparent. One reason was so that the investigators would not be taking up disproportionate space; another was that our deepest emotional truths should be reserved for our most intimate relationships. So, for example, KM disclosed that she grew up with an aversion to and fear of guns due to neighborhood violence, but she was not transparent about her fury and grief around police-involved shootings. However, in the research team meetings that included the investigators and CRAs, the team agreed to be transparent with each other about their emotional experiences, which allowed us to provide support and processing for each other when we encountered ideas that were difficult to hear. In addition, as a team and partnership, we consistently reminded ourselves what our goals are: to prevent injuries and save lives. Every single person on the project was highly motivated to move towards those goals, even though we sometimes disagreed about the best way to do so. Reminding ourselves that everyone wanted to make their communities safer made it possible to let go of some of the immediate and strong distress reactions.

Conclusions and Future Directions

PAR represents one way to address the cultural divide between firearm owners and public health, and it provide alternatives to both the traditional investigator-driven research approach (which, we argue, is not working) and the extreme national polarization that is illustrated every time a mass shooting occurs. Although PAR provides significant benefits, including the opportunity to practice research in a way that is congruent with the values of power redistribution, equity, and inclusiveness, it represents difficulties in multiple ways. Not only is it difficult to practice because it is a new way of thinking and acting compared to traditional research, it also takes years of building relationships and joining a community to do it well, and it represents a long-term commitment that lasts beyond the duration of a funded project period. Current research expectations (e.g., tenure and promotion) and infrastructure (e.g., funding opportunities, institutional review board [IRB] policies) are not designed for participatory methodologies. Investigators who choose to engage in PAR face a doubly difficult task in which they are expected to publish as fast as their colleagues, who may be able to complete survey data collection in a matter of months rather than years. They also may find it more difficult to obtain funding and IRB approval, given that the goals and research design are established collaboratively, rather than fully determined prior to the start of any work. The strategies contained in this manuscript represent decision made in the development and implementation of one research project and will certainly not reflect all possible approaches and experiences of attempting to utilize a PAR with firearm owners. Rather, we offer the project as a case-example that may inform and support those who are

considering or currently using PAR with firearm owners; but PAR is a marathon—it takes a great deal of conscious effort and energy exerted over a long period of time. However, it also reaps great rewards—in the immediate term, it provides relationships, community, and a sense of shared purpose; in the long-term, it empowers communities and provides information that is rich, nuanced, highly relevant, and directly applicable.

Acknowledgments

Funding for this study was provided by a grant from the Centers for Disease Control and Prevention awarded to University of South Alabama (R01CE003298; PIs: Mehari & Smith). The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by CDC or the U.S. Government. The CDC had no role in the study design, data collection procedures, data analysis or interpretation, or in the writing of the report.

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Table 1
Practical Strategies to Use in Participatory Action Research with Firearm Owners

Entering into PAR	
Learning about PAR	Read about, complete training, and consult with experts in PAR Reflect on and discuss with colleagues their perspectives on logical positivism and constructivism, and willingness to embrace sharing of power
Developing a Shared Vision, Intersubjectivity, & Co-Learning	
Transparency	Disclose motives for engaging in PAR with firearm owners, beliefs and perspectives on firearms, and the goals of the project
Cross-Training	Training community partners in basics of research and the scientific knowledge related to the shared goal of the project, PAR principles, human subjects research, interviewing skills, and others Having community partners present to investigators and the other members of the team on their experiences, perspectives, knowledge and skills, while constantly reinforcing expectations that community partners are experts and that part of their role is to check the bias or limited scope of the investigators Practicing aspects of the research within the group, (e.g., practice interviewing with each other to create deeper and more trusting relationships within the team)
Think-Pair-Share	Members think on their own in response to a prompt, turn and discuss with a partner, and then are invited to share with the larger group
Place-based engagement	Perspective-building strategy in which members of the team who are unfamiliar with the place spend time in physical locations that hold importance in the community's identity
Focus Groups	Research team members who do not share this identity with the community should do this in caution and only based on a shared invitation from community partners so it does not move into poverty tourism or something else that causes harm to the community This could include being invited to religious services, partners' agencies or homes, parks or community centers, local food places, and barbershops.
Conversation with a key informant	Small groups provide responses to and discuss predetermined topics led by a facilitator
Culturagrams	Educational strategy in which the research team invites a community leader, holder of history, or politically savvy person to come talk with the research team to explain things that the team should know
Building & Maintaining Positive Relationships	
Education about Firearms	Perspective-building strategy in which members of the team create a culturagram based on one of their communities of origin or one of their current communities and then shares it with the group; additional topics covered in the culturagram should include relationships with guns; conceptions of violence; conceptions of suicide
Community or Cultural Immersion	Read and access information about firearms (e.g., internet, YouTube, online firearm safety courses) Complete basic firearms training (e.g., hunter's safety education, NRA Basics of Pistol Shooting) Purchase a firearm and/or ask firearm owners to take you shooting
Eating Together	Relationship-building strategy that is absolutely vital to real relationships There should be food at every meeting, and the research team members must eat with the community partners and should also take food that is offered to them
Team Social Events	Team-building strategy in which members of the team organize social events specifically for the people involved in the work of the project, including cookouts or potlucks, meals in someone's home, or activities like bowling, roller skating, and axe throwing
Pursue Friendships and Personal Relationships	Relationship-building strategy in which individual research team members and community partners spend leisure time together for mutual enjoyment and emotional support, including meeting up for drinks, going to each other's houses, seeking out life advice and mentorship, and celebrating holidays together
Range Day (or other physical, competitive, or game activities)	Relationship-building activity where team members and community partners bring their guns to a range, talk about their guns, shoot their guns, and educate members less familiar with particular kinds of firearms and shooting
Be Present at Community Events	Team members attend community events hosted by community partners, recommended by community partners, or at all related to the goal of the project or the underlying root causes (e.g., health fairs, poverty campaigns, voter registration drives) It may be useful if the research team can host a table to provide information or access to resources

Support Partners' Organizations	Team members work with partners to identify how they can leverage their knowledge, skills, abilities, and resources to support the work of the community partners
Regular check-ins	Examples include conducting program evaluations for partners, providing trainings and workshops, giving access to space for events, and drawing media attention to the work of the organizations
Provide Informal and Formal Support	Relationship-building strategy in which investigators routinely meet with team members to elicit feedback on team functioning, project progress, individual well-being, and any other concerns members of the team may have Consider how team members will be supported, particularly if their role and efforts have the potential to expose them to potentially difficult information about trauma, violence, and suicide Support can be informal, occurring both between individuals and amongst the team, and formal, including access to psychotherapy or other resources
Generative Strategies	
Solo Brainstorming & Sharing	Generative strategy in which people are invited to generate as many possible ideas as they can in a timed period and then all responses are compiled into a group-level list and discussed
Group-Level Analysis	Generative strategy in which individuals provide anonymous responses to prompts; indicate agreement with others' responses; and work in small groups to identify themes across prompts
Gallery Walk	Participatory strategy in which people individually provide anonymous responses to prompts in stations across a shared space (e.g., large white stickies; jamboard on video conferencing) and move with a small group from station to station to discuss the generated responses; responses are then discussed at a large group level

Measure Development Strategies

Creation of an Item Pool	Creating an initial item pool using generative strategies
Sorting Task	Strategy to identify possible subdomains of a construct by printing out items from an item pool onto individual slips of paper and asking team members or community partners to sort the items into categories
Ranking & Summing	Strategy to reduce an item pool by asking team members and community partners to rank the importance of including each item and averaging scores to identify the highest scoring-items to be included Participants can "rescue" an item for further discussion and items may be revised during this process
Cognitive Testing in Groups	Strategy to refine items in which community partners respond to items from a scale as if they were a respondent and identify concerns about wording or need for clarification individually followed by team member facilitated conversations about the wording and meaning of the item one-by-one at the group level

Data Analysis and Interpretation Strategies

Theory Development and Hypothesis Testing	Strategies in which investigators work with community partners to develop theories and create hypotheses (see Generative Strategies), from which the methodologies and analytic plans are developed
Co-Analyzing Data	Strategy used to ensure the accuracy and validity of data by co-analyzing data with community partners
Member Checking	Strategy to help improve the accuracy and credibility of qualitative and quantitative data through sharing emerging themes or the results of statistical testing and ask community partners for their critical feedback Community members can check biases, suggest alternative thematic structures or analytic approaches, clarify meanings, and help interpret the data

Dissemination Strategies

Data Sharing with Advisory Boards	Strategy in which de-identified data and emerging results are shared continuously as part of the participatory process, often through data visualization such as bar graphs and pie charts, interpretations and next steps established collaboratively, and discussions about whether the community partners want to be part of the data sharing process in other capacities (e.g., conference presentations, publications)
Data Sharing with Institutional Partners	Strategy in which non-identifiable, aggregated data is shared with institutional partners to answer their questions or provide information about the strengths, needs, and functioning of their institution or constituents/consumers/clients

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Reports with data visualization are most useful; partners may ask researchers to conduct follow-up analyses to test differences across groups or answer other pressing questions; researchers should be responsive to these requests as possible and ethical

Strategy to engage in collaborative dissemination in which “take-home messages” are identified collaborative with community partners (see Generative Strategies for ideas for brainstorming) based on the data that have been collected. These take-home messages should be developed based on researchers’ and community partners’ shared goals or ideal outcomes of messaging. They should have active discussions around possible risks and benefits of different messaging (e.g., potential adverse outcomes that might follow specific messages)

Message Development