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Best Practices for Community-Engaged Research with Pacific Islander Communities in the US and USAPI: A Scoping Review

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Abstract

This scoping review identifies the best practices of community-based participatory research with Pacific Islanders in the United States and United States Affiliated Pacific Islands. Eighty-four articles from January 2000 to December 2017 were included in the review. Best practices included the importance of engaging Pacific Islander community leaders as research staff, community co-investigators, and community advisory board members. Best practices also focused on removing barriers to research by using participants' native languages, conducting research within the geographic community, and spending significant time to build trust. Novel best practices included honoring Pacific Islanders' cultural practices such as protocols for engagement, reciprocity, and social and spiritual inclusiveness and honoring Pacific Islanders' collectivist cultural structure. The goal of this scoping review is to aid community-academic partnerships working to improve the health of Pacific Islanders.

Keywords

Pacific Islander; scoping review; community-based participatory research; health disparities

Pacific Islanders are the second fastest growing population in the United States (U.S.), increasing 40% between 2000 and 2010.^{1–3} More than a million Pacific Islanders live in the U.S., and by 2030 the U.S. Census Bureau projects that the Pacific Islander population will reach two million.⁴ Pacific Islanders are indigenous to the Pacific regions of Polynesia (e.g., Hawai'i, Tonga, Samoa), Melanesia (e.g., Fiji and Vanuatu), and Micronesia (e.g., Marshall Islands, Federated States of Micronesia, Guam, and Palau).⁵ The U.S. Office of Management and Budget has aggregated Pacific Islanders under a single racial/ethnic category called, Native Hawaiians and Other Pacific Islanders (referred to collectively as

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Pacific Islanders in this review). While most Pacific Islanders live in the U.S. Affiliated Pacific Islands (USAPI), Hawai'i, and California, the fastest growth is taking place in middle America in states such as Arkansas, Kansas, Nevada, and Oklahoma.¹⁻³

Historically, Pacific Islanders have been aggregated with Asian Americans in many population-based studies in the U.S.; this data aggregation has masked disparities between these two heterogenic populations.⁶⁻¹⁰ However, existing research indicates that Pacific Islanders suffer from profound health disparities compared with the general U.S. population.^{11,12} Pacific Islanders bear a disproportionate burden of diabetes, cardiovascular disease, obesity, and cancer.¹³⁻¹⁷ While national data on life expectancy for Pacific Islanders is not available due to aggregation, state and U.S. territory data document that the life expectancy of Pacific Islanders is 71 years, lower than the national average of 79 years.^{18,19}

Pacific Islanders' health disadvantages can be attributed to many factors, including a history marked by trauma, exploitation, and exclusion.²⁰⁻²³ Historical trauma has caused deep apprehension and distrust of Western medicine and research,^{24,25} which heightens the ethical challenges that must be addressed in order to conduct research with Pacific Islanders.^{24,26} One way to address historical trauma in Pacific Islander communities and their exclusion from health research is through community-based participatory research (CBPR),^{24,26} an approach to research that equitably involves community members/organizations in research (e.g., through sharing of power and resources).^{27,28}

The literature on best practices for engaging racial/ethnic minority participation in CBPR has grown exponentially over the past decade.²⁹⁻⁵⁰ While numerous reviews have reported CBPR best practices,²⁹⁻⁴⁷ these reviews have rarely included research with Pacific Islander communities. This lack of research representation leaves a critical gap in the literature for partners who seek to understand CBPR practices unique to Pacific Islanders for the purpose of addressing the profound health disparities in this rapidly growing population. Thus, this article presents a scoping review of published studies that have implemented CBPR with Pacific Islander communities in the U.S. and USAPI. The USAPI includes three Territories (American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands) and three Freely Associated States (Federated States of Micronesia, Republic of the Marshall Islands, and the Republic of Belau [also known as Palau]).

Methods

We conducted a scoping review in conformance with modified items of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA).^{51,52} The review sought to answer the following question: What are the best practices authors identify for conducting CBPR with Pacific Islanders in the U.S. and USAPI?

Eligibility criteria.

Articles were selected according to criteria detailed in Box 1.

Articles published between January of 2000 and December of 2017 in peer-reviewed journals were selected for this review. Articles were limited to research conducted with

participants residing in the U.S. and USAPI. Articles that included Asian Americans aggregated with Pacific Islanders were not included. Articles that discussed the use of CBPR or related engagement approaches were included. For the purposes of establishing article eligibility, CBPR was defined as a partnership approach to research that equitably involves community stakeholders in the research process.^{28,53–55}

Databases.

The main literature search for this scoping review was conducted in November of 2017 with auto alerts subsequently following the literature until March 2018. Biomedical databases were searched for articles meeting the eligibility criteria and focused on English language items with January 2000–December 2017 publication dates. These databases included: MEDLINE (OVID), MEDLINE In Process & Daily Updates (OVID), International Pharmaceutical Abstracts (OVID), Science Citation Index, and Social Sciences Citation Index (both via Web of Science). The Cumulative Index of Nursing and Allied Health Literature, PsycINFO, SocINDEX, and Healthy Policy Reference Center were all searched through the EBSCO platform. The All EBM Reviews collection (OVID) included: American College of Physicians Journal Club, Cochrane Database of Scoping Reviews, Databases of Abstracts of Reviews of Effects, Cochrane Central Register of Controlled Trials, Cochrane Methodology Register, Health Technology Assessment, and the National Health Service Economic Evaluation Database. The World Health Organization's Global Index Medicus database was also searched for international items.

Search strategy.

The search strategy was developed by a medical librarian in consultation with the authors. MEDLINE searches combined Medical Subject Headings with advanced text word search techniques that included truncation, adjacency searching, and extensive strings for Pacific Islander populations. Similar search methodologies were implemented in databases on other platforms. All search strategies were documented. A full discussion of terms is provided in the published protocol.⁵⁶

Data management.

Search results were exported, stored, and shared using RefWorks (version 2.0),²¹ an Internet-based reference management service. Duplicate records were removed from search results by using RefWorks' duplicate-check function with manual oversight prior to duplicate removal. De-duplicated records were exported from RefWorks into a Microsoft Excel 2013 (version 15.0) spreadsheet to facilitate the article selection process.²²

Article selection process.

The title and abstract of each article were reviewed to determine whether the article met all the eligibility criteria. If the title and abstract did not provide enough information to confirm eligibility, the full article was reviewed by two researchers to determine if it met the inclusion criteria. If it was still unclear if the article was eligible, a third researcher reviewed the article and a final decision was made based on consensus. When tabulating quantitative results, care was taken to avoid double-counting single articles.

Data extraction process.

Data extraction from each eligible article was performed by two researchers independently. Researchers compared the results of the extraction process and discrepancies in extracted data were discussed and resolved between the researchers. If there were multiple publications of a single eligible article, data were extracted from multiple publications. Before data extraction began, researchers piloted the extraction spreadsheet on a small sample of 20 eligible articles and adjusted the extraction spreadsheet or extraction procedures as needed.

Data items.

The following data were extracted from each eligible article. (Box 2)

Data synthesis.

Researchers trained in qualitative methods coded the eligible articles using an inductive coding process to generate a list of emerging best practices. Emergent themes were organized into a code book that was used to classify each article. After all articles were coded, the data was synthesized into a summary of emergent themes. This process allowed the researchers to create salient summaries of best practices.^{57,58} Best practices are provided in synthesized summaries of emergent themes. In addition, frequency and percentages were calculated for each emergent theme.

Results

The initial searches across listed databases were run November 21, 2017. Auto alerts for the main strategy were included through March 2018 when data analysis began. In total, 601 articles were retrieved from the literature searches. Total duplicate articles excluded were 241. The remaining 360 articles were reviewed for relevance to the research question and four abstracts were excluded. The remaining 356 full-text articles were reviewed and 273 articles were excluded for not meeting the inclusion criteria (e.g., aggregated data, not CBPR, not in U.S. or USAPI); thus, we included 83 articles in the review as detailed in Figure 1.

The articles presented in this scoping review published best practices for CBPR with Pacific Islander communities in the U.S. and USAPI. Of the 83 articles included in the scoping review, 33% used qualitative methods such as focus groups and/or individual interviews, 33% of the articles used mixed methods or combined methods, 18% of the articles used quantitative methods that statistically analyzed data collected, and 17% of the articles were descriptive articles of the CBPR process (Table 1).

Thirty-five percent of the studies were conducted with multiple Pacific Islander subgroups, 35% of the articles were exclusively conducted with Native Hawaiians, followed by 16% with Marshallese, 7% with Samoan, 2% with Tongan, 2% with Chuukese, 1% with Chamorro, and 1% with Yapese. (Table 2) The studies were primarily conducted in Hawai'i (41%), followed by the continental U.S. (34%), multiple locations in the U.S. and USAPI (3%), and exclusively in the USAPI (6%) (Table 3).

Many of the studies conducted used both male and female participants (51%), whereas (19%) focused solely on women, and (5%) of studies focused solely on men. Twenty-five percent of studies did not present data by sex. The majority of the studies included adults over the age of 18 (67%), 6% of studies were conducted with children, and 6% were conducted with adults and children (Table 4). Twenty percent of the articles did not specify participants' ages. Cancer studies (19%) dominated the literature, followed by diabetes (18%), non-specific health research (16%), obesity (14%), drug prevention (8%), intimate partner violence (5%), cardiovascular disease (5%), maternal health (4%), sexually transmitted disease (4%), biospecimen research (2%), genetic studies (2%), and depression (1%) (Table 5).

Qualitative results.

Four themes with salient sub-themes emerged from the review: 1) Engaging community leaders, 2) Facilitators and barriers to research, 3) Honoring cultural practices, and 4) Honoring collectivist cultural structure (see Table 6).

Engaging community leaders.

Consistent with the extant CBPR literature,^{59–61} the most commonly articulated best practices were the importance of fully partnering with community leaders in the research process and the research being co-led by the community partners. Most reported multiple ways to engage community leaders. Within the theme *Engaging community leaders*, there were four subthemes: 1) Pacific Islander research staff (81%), 2) Community-based organizations (80%), 3) Community advisory board (54%), and 4) Faith-based leaders/Faith-based organizations or elders (22%).

Pacific Islander research staff.—The majority (81%) of articles in the review discussed the importance of Pacific Islander staff serving in formal research and leadership positions for the study's success.^{62–123} Pacific Islander research staff served as gatekeepers, advocates, and health educators in their communities. The reviewed articles described the presence of Pacific Islander research staff as a way to build trust within the community and ensure that research is in congruence with cultural practices. Pacific Islander research staff were able to make connections within the community, which facilitated the recruitment of participants. Some articles discussed how the presence of Pacific Islander research staff also provided an opportunity for increased candor and reduced participants' fear of being misunderstood.^{85,106} Most importantly, by engaging Pacific Islander research staff, the broader Pacific Islander community gained a sense of empowerment because Pacific Islanders shaped decisions about the conduct of the study, had access to all study information, and provided input in the use of the study results.

Community-based organizations.—The involvement of community leaders through community-based organizations was discussed in 80% of the articles.^{62–67,69,70,72–95,98–112,116,117,120–136} The involvement of community-based organizations was cited as a way to leverage, build, and sustain leadership within the Pacific Islander community.⁸¹ Community-based organizations (e.g., federally qualified community health centers and grassroots non-profit community-based organizations) were described as playing

a direct role in the research design, study conduct, and dissemination of the results back to the community. Community-based organizations were described as particularly important to the recruitment of participants. Furthermore, community-based organizations often served as the locations for study activities. Conducting study activities at the community-based organization was discussed as a way to ensure that research activities were more easily accessible by removing both geographic and cultural barriers.

Community advisory board.—More than half (54%) of the reviewed articles mentioned partnering with a community advisory board.

62,64–67,69,70,72–76,78–84,85–95,98–112,116,117,120–124,125–138 Specifically, community advisory boards were discussed as contributing to the overall success of research projects by engaging multiple members across a broad spectrum of the community rather than from only one community-based organization or segment of the community. Engagement of a community advisory board was cited as a way to ensure the needs and desires of the wider community were included in the research.^{72,109}

Faith-based leaders and community elders.—The engagement of faith-based leaders and community elders as a best practice was identified in 22% of the articles, 62–64,77,84,85,93,95,97,101,102,108,110,118,119,126,128,133,135,137–138 which is consistent with CBPR best practices already identified concerning some populations (e.g., rural African Americans).^{139,140} When discussing the involvement of faith-based leaders, articles cited the role of faith-based leaders as extending beyond religious beliefs and discussed the role of faith-based organizations and faith-based leaders as representing the clan structures, and faith-based leaders as having a role almost similar to that of a governmental leader within the community.^{101,128} Broadly, the engagement of faith-based leaders and community elders was cited as an imperative step in attaining access to the community, and was discussed as an important part of recruitment and retention of participants. Most importantly, the reviewed articles emphasized the importance of engaging faith-based leaders and community elders to ensure practices were culturally appropriate.

Facilitators and barriers to research.

The reviewed articles focused on best practices for overcoming common barriers to stakeholders engaging in research and identified facilitators. The best practices identified were consistent with other CBPR studies in other populations and included conducting research in the primary or native language of participants, holding meetings in a convenient community location rather than at the university or research institute, and giving appropriate time to develop relationships within the community. The subthemes identified were: 1) Community location (42%), 2) In-language (36%), and 3) Time to develop relationships (23%).

Community location.—Almost half (42%) of the reviewed articles described the need to hold research meetings in an easily accessible community location.

62,68,75,76,78,84,86,87,90,92,93,95,97,99–102,105,107–109,112,113,118,119,120,124,125,128,141–142

Transportation was consistently discussed as a barrier to conducting research with Pacific Islander communities. For example, Tanjasiri et al. described that among Marshallese

communities, transportation is a common barrier and that community staff typically need to take them to and from the assessment site.¹⁰² The location was important in overcoming transportation barriers, and was also important in creating a comfortable environment for stakeholders and participants. Common locations included community-based organization and faith-based organization buildings.

In-language.—More than one-third (36%) of the articles reviewed discussed the necessity of having research studies conducted in the native language of the Pacific Islander community.^{62,63,66,71,72,75–79,84,86–89,91–95,98,100,101,103,104,108,110,111,115,119} Best practices included providing both written and verbal communication in native language. One notable exception to language translation was research with Native Hawaiian community members because most Native Hawaiians are fluent in English, and many Native Hawaiians do not speak Hawaiian.¹⁴³ However, some articles demonstrated the inclusion of the Hawaiian language alongside Native Hawaiian imagery in an attempt to revive cultural traditions among the participants and increase salience.^{66,75,87} Overcoming language barriers included more than simply translating information into the native language of participants; best practices focused on ensuring the appropriate literacy level and ensuring culturally-appropriate language was taken into consideration. Articles documented that it is important to consider the formality of the information being provided and to ensure culturally appropriate examples in verbal and written communication.^{71,72,63}

Time to develop relationships.—The reviewed articles described Pacific Islanders' priority for relationships and described how time spent in relationships was foundational for the conduct of research. Twenty-three percent of the articles explicitly discussed the need to invest significant amounts of time into building and nurturing meaningful relationships between community members and researchers,^{76,78,81,85,86,101,106–108,111,112,115,125,128,129,131,132,138} and many other articles that did not cite this concept directly alluded to the importance of building relationships. Furthermore, the time spent building relationships was described as important because research could not take place until researchers increased their knowledge of the community's culture and established trust within the community. For example, in the Native Hawaiian culture there is a preference for the process of building a social connection or linkage referred to as *pilina* (to engage in a relationship).¹¹² This process can require substantial time; Chung-Do et al. discussed that communities prefer working with researchers who are vested in a long-term relationship that extends beyond the research study timetable as this is more conducive to true collaborative partnerships.¹⁰⁷ Articles described the importance of taking the time to approach multiple community groups to gain a more comprehensive understanding of health needs and possible solutions.¹⁰⁶ Although this approach required more time and resources, it was important because it allowed community members to be more invested in the research, time to develop trust, and the opportunity to assess the intentions of the researchers.

Honoring cultural practices.

Honoring the practices of Pacific Islander cultures was discussed as a critical component of research with this community. Almost half (44%) of the articles discussed adapting existing evidence-based interventions to ensure they were appropriate to the specific Pacific Islander

culture of the research study. The sub-themes for honoring cultural practices includes: 1) Incorporating faith beliefs (23%), 2) Engaging in *talk story* (19%), 3) Sharing meals during the conduct of research (17%), and 4) Separating activities by sex (7%).

Incorporating faith beliefs.—Incorporating faith, which primarily include Christian and traditional beliefs, was described in 23% of the articles.

^{62–64,67,75,78,84,85,95,101,102,104,108,110,119,128,131,134} Many of the reviewed articles discussed the importance of incorporating faith into research studies, either by ensuring that the research protocol reflected specific faith-based practices or conducting studies within a church setting. Faith was discussed as a particularly important component in many Pacific Islander subgroups. For example, Leslie et al. described the importance of beginning all focus groups with a *pule* (prayer) for Native Hawaiian gatherings not only to bless the food but to solicit spiritual guidance for a productive and positive discussion.⁸⁵ Panapasa et al. described the importance of incorporating faith into CBPR research with Pacific Islanders because coupling faith with health provided a vehicle for a collective healthy focus within the community.¹²⁸

Oral traditions and talk story.—Engaging oral traditions and *talk story* was another cultural practice that emerged as important across multiple Pacific Islander communities (19%).^{66,67,72,74,75,77,94,95,99,104,108,112,126,131} The term *talk story* was used to describe a relaxed conversation involving a reciprocal, symbiotic exchange of thoughts, beliefs, and feelings often told in a story format.⁷² The use of *talk story* or other relational oral communication was described as an important component of CBPR among Pacific Islander communities because it represented a shift in the power from the researchers asking for information from the community to a more fluid exchange where multiple parties shared equally and time was spent to build trust.⁹⁹ Some articles discussed the use of focus group methods as leveraging Pacific Islander oral traditions and being similar to *talk story* and therefore increasing the effectiveness of focus groups within Pacific Islander communities.^{107,111} Other studies used *talk story* to build rapport because it demonstrated respect for Pacific culture and customs for dialogue with Pacific Islander communities.⁹⁹

Sharing a meal.—Another cultural practice described in 17% of the articles was the sharing of a meal.^{64,67,70,73,75,77,80,85,97,104,112,118,131,135,138} For many Pacific Islander communities, food is the center of social interaction and is described as a vital part of gatherings. Communal meals facilitated the opportunity for researchers and participants to engage with one another as equals and potentially as extensions of family and community. Sharing meals was also described as an opportunity to share cultural practices and promote healthy foods.

Separation of participants by sex.—Lastly, while true of only 7% of the overall articles reviewed, some articles discussed the importance of separating participants based on sex for research activities including biometric measurements and/or the discussion of sensitive topics.^{62,64,72,75,101,108} Furthermore, articles often described the importance of the research staff member collecting the biometric or sensitive survey data to be the same sex as the participant.

Honoring collectivist cultural structure.

Pacific Islander culture is highly collectivist and values the needs of the group (family and/or community) over the individual. This theme detailed CBPR best practices unique to Pacific Islanders and included three subthemes: 1) Group engagement (55%), 2) Family engagement (39%), and 3) Community consent (24%).

Group engagement.—Over half (55%) of the articles discussed the importance of implementing research in group settings citing using focus group discussions and collecting data via surveys in groups as examples.

62–64,66,67,70–72,74,76–81,85–88,90,92,93,95–97,99,100,102,104,106,108,109,112,113,116,119,121,124,125,127,134,144,145

Group engagement in study activities supported increased community and participant comfort with research activities and was described as reflective of Pacific Islander cultural values, yielding enhanced involvement from Pacific Islander participants. For example, Kagawa-Singer et al. documented that Pacific Islander participants may be more comfortable providing information if friends from their community were allowed to participate as well.⁷⁸

Family engagement.—More than a third (39%) of the articles reviewed discussed the importance of focusing on the family unit when conducting research and/or incorporating family into the intervention design.

62,63,66,68,70–72,75–79,88,90,96–101,104,109,110,112,113,118,119,121,125,127,134,145 The definition of family cited in some articles went beyond parents, children, and siblings to include extended family members such as aunts, uncles, and cousins. The definitions of family also extended beyond biology and included close friends or people from the same clan or island. Some Pacific Islander communities, such as the Marshallese, were cited as articulating that individual health changes do not occur independent of the family.⁹⁰

Community consent.—In addition to group and family engagement, 24% of the articles discussed the importance of obtaining community consent for research studies.

62,66,67,72,74,78,82,83,85,89–93,100,101,107,108,128 When seeking broader community consent, Pacific Islander community elders and faith-based leaders were often pointed to as those needing to provide approval or endorsement to conduct research within Pacific Islander communities. Further, in many Pacific Islander communities, such as Native Hawaiian, articles mentioned the importance of presenting a proposed research project orally to the community and obtaining approval from the community in general prior to starting the study.¹⁰⁰

Discussion

The review of the literature between January 2000 and December 2017 revealed several best practices for conducting CBPR in Pacific Islander communities in the U.S. and USAPI. One of the primary best practices was the importance of engaging community leaders through multiple strategies (e.g., as research staff, as community co-investigators, and/or as community advisory board members), which is consistent with the CPBR literature in other populations.^{28,49,146} Prior reviews in other populations have demonstrated the importance of

engaging research staff that reflect the community being engaged in research on their racial/ethnic and socioeconomic characteristics. Furthermore, the findings are consistent with other studies that have documented the importance of community-based organizations, community advisory boards, faith-based leaders/faith-based organizations, and community elders in ensuring a successful CBPR project.⁴⁸ The meaningful inclusion of community members in the decision-making process and in the implementation of a study helps to build community capacity to engage in health promotion activities, to provide cultural relevance and context, and to increase the likelihood that the findings or products of the research will be used and sustained beyond the life of the research project.¹⁴⁷

Also consistent with prior CBPR literature is the best practice of removing barriers to research by using the participants' native language and cultural perspectives, holding meetings in an easily accessible location for community partners, and spending significant time in the community to build trust and to understand their concerns, values, customs, and preferred ways of addressing issues. This finding is consistent with CBPR literature that has included other Indigenous populations.^{148–154} This study extends the current literature because Pacific Islander communities have not been included in prior CBPR reviews.⁴⁸ In addition to confirming what other CBPR reviews have documented, this study revealed several best practices unique to Pacific Islanders to consider when conducting CBPR with this population. These novel findings focused on best practices for honoring cultural practices and collectivist cultural structure.

Honoring the cultural practices, such as protocols for engagement, reciprocity, and social and spiritual inclusiveness was found to be important in many of the reviewed articles. Specifically, sharing meals, use of faith-based approaches, and research methods that respected oral traditions and preference for *talk story* style of communication, and separate research engagement based upon the sex of the participants emerged as important factors for CBPR work with Pacific Islanders. These cultural practices were consistently reported across Pacific Islander subgroups and have significant implications for the conduct of CBPR. The use of relational oral communication and *talk story* in the Pacific Islander community may make qualitative methods, including focus groups, particularly effective methods of research with Pacific Islanders. Some of the CBPR practices may be difficult to implement. For example, federal grant funding and universities' policies often restrict the expenditures for food,¹⁴⁸ thus additional funding or additional flexibility in funding may be needed to engage Pacific Islanders. Separating engagement of participants by sex and matching the sex of the data collector to the sex of the participant is also important, but may be difficult for some studies with limited budgets. Most of the practices are not as common in the broader CBPR literature, but some of the best practices have been documented when engaging in CBPR with Native American communities.^{149–154}

Honoring the collectivistic cultural structure of Pacific Islanders also emerged as a CBPR best practice. Honoring the collectivist culture entailed conducting research within the collective group or family, which increased participation while conveying respect for cultural practices. Reviewed studies reported that working within Pacific Islanders' collectivistic cultural structure is often counter to more individualistic cultures (e.g., Western) and thus may require a greater degree of flexibility on the part of the investigators with an

individualistic cultural framework. For example, informed consent is typically elicited individually, and most Western institutional review boards may not favor group consent, which may influence the individual participant consent. Future work should explore how to translate research practices from an individualistic framework to a collectivist one. Furthermore, when considering how to engage families in health behavior change or research, researchers would benefit from considering the Pacific Islander definition of family, which often focuses on the extended (e.g., cousins and aunts) and non-biological relations. Many of these CBPR best practices are not as common in the broader CBPR literature; however, they are similar to best practices for CBPR with Native American communities.^{155–157}

Cancer, diabetes, and obesity were the dominant health disparities addressed in the reviewed articles. This is not surprising given that these medical conditions are highly prevalent in and disproportionately burdensome (e.g., more likely to be diagnosed at latter stages of cancer) for Pacific Islander communities.^{13,152} However, the limited research in other health areas, including mental and sexual health, may signify areas that should be explored within the Pacific Islander community. Specifically, mental and behavioral health concerns that include substance use and abuse, have been identified as high-priority areas for Pacific Islander communities.¹⁵³

Limitations.

It is important to note that this review did not attempt to evaluate the quality of the community engagement or the research methods. Although Pacific Islanders are similar in some regards, they are not a homogeneous group; thus, this review was limited in the ability to assess best practices that may be distinct to specific subgroups of Pacific Islanders. A third of the articles did not disaggregate Pacific Islanders subgroups, thus complicating assessment of best practices by subgroup. Despite these limitations, this scoping review provided new information about CBPR best practices unique to Pacific Islanders that can be considered in future participatory work. Future studies should explore shared and distinct practices among various Pacific Islander subgroups.

Conclusion.

Using a CBPR approach in collaborating with Pacific Islanders offers the promise of mitigating the effects of historical trauma, ensuring cultural safety and relevance, and achieving health equity in these communities. Such approaches have already succeeded in recruiting and retaining participants from underserved populations and in attaining significant intervention effects.^{48,49} Some researchers may find it difficult to implement the best practices identified through this literature review. As is common in CBPR, a great investment of time, energy, and patience is needed to build equitable partnerships for the purpose of eliminating health disparities. Yet the investment is not without its rewards, which can include research engagement, building community and academic capacity, sustainability, and health equity. Each community has its own set of unique practices that both academic and community researchers should identify and implement. The hope of this scoping review is to expedite this often long-term process for other community-academic partnerships working to improve the health of Pacific Islanders.

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Box 1.

ELIGIBILITY CRITERIA

Participant population:	CBPR studies conducted with Pacific Islanders in the US or USAPI. Studies that aggregate Pacific Islander and Asian American data were excluded. Studies conducted with Pacific Islanders outside the US or USAPI were not included.
Study type:	All types of studies focused on physical health and/or mental health.
Outcomes:	Specific CBPR best practices in research conducted with Pacific Islanders.
Context:	Articles that self-identify as using a CBPR approach (or other engaged research term such as action research or patient-centered research).
Study methods:	All types of studies (e.g., randomized controlled trials, mixed methods, cross sectional, descriptive, qualitative, case studies, etc.).

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Box 2

DATA ITEMS

Participant population	<ul style="list-style-type: none">• Race/ethnicity including subgroup of Pacific Islander• Geographic location• Sex• Age group• Health issue of focus
Study method(s)	<ul style="list-style-type: none">• Qualitative• Quantitative• Mixed methods• Descriptive
Best Practices Publication details	<ul style="list-style-type: none">• Best practices related to CBPR• Authors• Article citation• Funding source

Best Practices for Community-Engaged Research

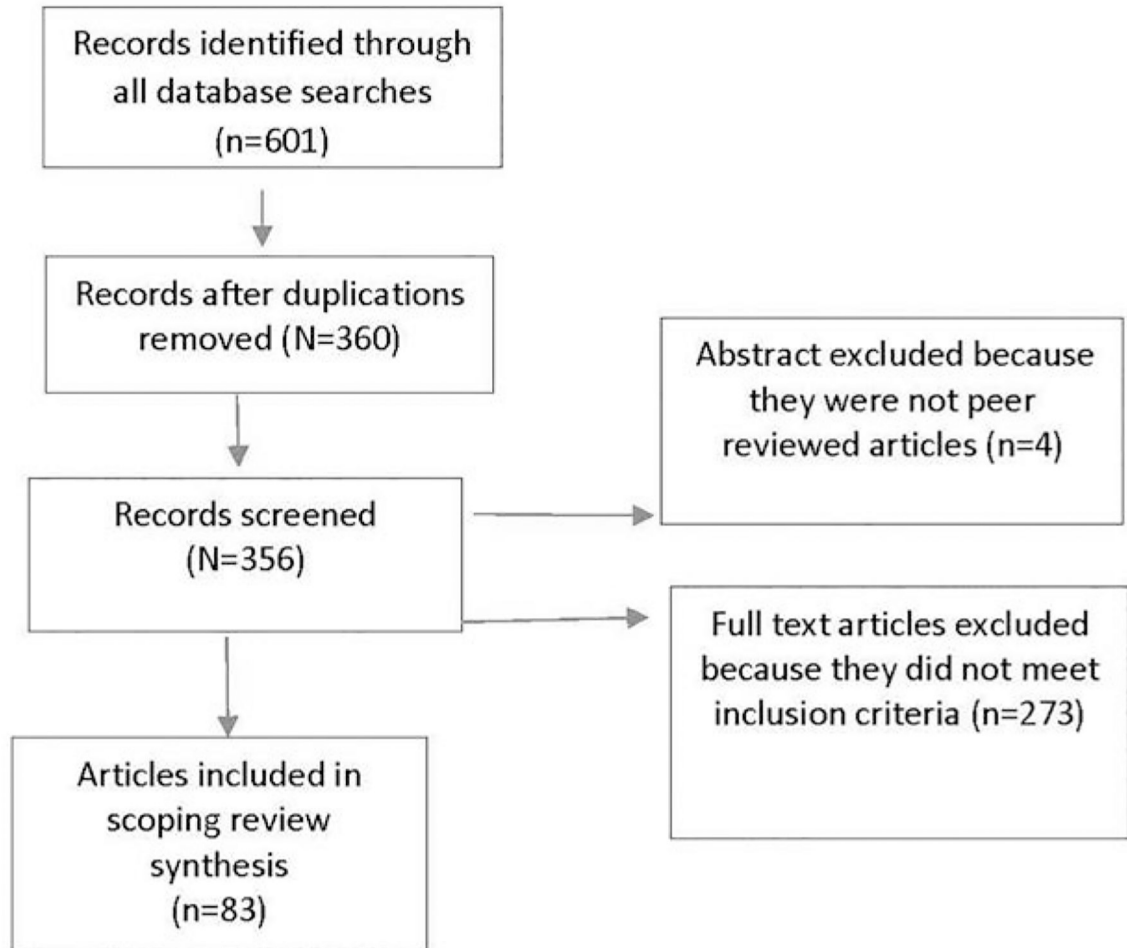


Figure 1.
PRISMA flow diagram of selected articles.

Table 1.**METHODS**

Methods	N	Percent^a
Qualitative only	27	33%
Mixed Methods	27	33%
Quantitative only	15	18%
Descriptive	14	17%

Note:

^aPercentages may not total 100 due to rounding

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Table 2.**SUBGROUP**

Subgroup	N	Percent^a
Multiple Subgroups	29	35%
Native Hawaiian	29	35%
Marshallese	13	16%
Samoan	6	7%
Tongan	2	2%
Chuukese	2	2%
Chamorro	1	1%
Yapese	1	1%

Note:

^aPercentages may not total 100 due to rounding.

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Table 3.

GEOGRAPHIC LOCATION

Geographic Location	N	Percent^a
Hawaii only	41	49%
US	34	41%
Multiple Locations in US and USAPI	3	3%
USAPI	5	6%

Note:

^aPercentages may not total 100 due to rounding.

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Table 4.**GENDER AND AGE**

Gender and Age	N	Percent^a
Men and Women	42	51%
Women	16	19%
Men	4	5%
Non Specified	21	25%
Adults Only	56	67%
Children Only	5	6%
Adults and Children	5	6%
Non Specified	17	20%

Note:

^aPercentages may not total 100 due to rounding.

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Table 5.**HEALTH DISPARITIES**

Health Disparities	N	Percent^a
Cancer	16	19%
Diabetes	15	18%
Non-specific Health Research	14	16%
Obesity	12	14%
Drug Prevention	7	8%
Intimate Partner Violence	4	5%
Cardiovascular Disease	4	5%
Maternal Health	3	4%
Sexually Transmitted Disease	3	4%
Biospecimen Research	2	2%
Genetic Studies	2	2%
Depression	1	1%

Note:

^aPercentages may not total 100 due to rounding.

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Table 6.**BEST PRACTICES THEMES AND SUB-THEMES**

Best Practices Themes	Sub-Themes	Percent	N
Engaging Community Leaders	Pacific Islander Research Staff	81%	67
	Community-Based Organizations	80%	66
	Community Advisory Board	54%	45
	Faith-Based Leader/Elders	22%	18
Facilitators and Barriers to Research	Location	42%	35
	Language	36%	30
	Time for Relationships	23%	19
Honoring Cultural Practices	Faith/God	23%	19
	Oral Traditions and <i>Talk Story</i>	19%	16
	Sharing a Meal	17%	14
	Separate Engagement Based Upon Sex	7%	6
Honoring Collectivist Cultural Structure	Group Engagement	55%	46
	Family Engagement	39%	32
	Collect Consent	24%	20