TITLE PAGE

Practicing community psychology through mixed methods participatory research designs

Dr. Giovanni Aresi*
Department of Psychology, Università Cattolica del Sacro Cuore
Milan (Italy)

Dr. Dawn X. Henderson
Department of Psychology , North Carolina A&T State University
Greensboro, North Carolina (United States of America)

Dr. Niambi Francese Hall-Campbell
College of The Bahamas, School of Social Sciences - Department of Psychology
New Providence (Bahamas)

Dr. Emma Jane Frances, Ogley-Oliver
Marymount California University - Department of Psychology
Rancho Palos Verdes, California (United States of America)

*Corresponding author
        giovanni.aresi@unicatt.it
        +39-348-7997859

Running head: MIXED METHODS PARTICIPATORY RESEARCH

Abstract

Community psychologists address social inequalities and problems by employing ecological principles, multiple methodologies and participatory approaches to empower individuals, organizations, and communities to organize action and systems change. This paper aims to contribute to mixed methods literature by presenting three models of mixed methods participatory research across a variety of geographic and sociocultural contexts. The models outline participatory processes and points of qualitative and quantitative data integration. Challenges related to the interplay between participatory approaches and mixed methods studies as well as implications on social science research are discussed.

Keywords: Mixed Methods, Community Psychology, Participatory research

Introduction

Social research aims to address the unique challenges and problems facing communities across the globe and community psychology can offer practical models to use research for social change. Ecological principles, for example, allow community psychologists to examine the influence social systems has on systems' behavior and how interactions between systems such as organizations and families influence the cycling of resources (Kelly, 1986). Quite broadly, the field of community psychology expands analysis beyond the individual and investigates how systems such as the locality and sociopolitical context affects the access of resources and collective well-being (Boland, Daly, & Staines, 2008; Paris, Añez, Bedregal, Andrés-Hyman, & Davidson, 2005; Westhues et al., 2008). The application of mixed methods in the field of community psychology remains pivotal in conducting research and evaluation to discern resource allocation, antecedents to systems behavior, and integrate stakeholders (Perkins, 1987). While stakeholders become co-researchers and collaborate with community psychologists to address social problems, simultaneously, they build their capacity to develop and sustain socially and culturally responsive action (Trickett, 2009). Through principles that value systems analysis and integration of multiple methodologies, community psychologists, argued by Lorion (2000), are at the forefront in contributing to theory development and addressing a variety of social challenges and problems.

Community psychologists use research and evaluation to inform practices and policies aimed to reduce disparities in mental and physical health, education, and other human rights issues (Julian Rappaport, 2005). The field contributes to a nascent body of

social research by providing practical models of participatory approaches in mixed methods designs, providing a body of work that demonstrates the inclusion and empowerment of stakeholders in mobilizing resources into social action (Arcidiacono, Velleman, & Procentese, 2009; Kloos et al., 2012; Nelson & Prilleltensky, 2005). This paper aims to demonstrate how principles of community psychology guides mixed methods designs and integration of participatory approaches across diverse sociocultural contexts. Specifically, the paper offers three typologies of mixed methods designs to illustrate the integration of stakeholders at multiple levels and phases in research and evaluation and discuss associated challenges.

The paper provides strategies and insights to the field of social research and generates some dialogue on challenges in transitioning research and evaluation findings from dissemination to advocacy.

Guiding Principles in Community Psychology

The field of community psychology origins spans across diverse sociopolitical and cultural geographies, from Latin America and Europe to the United States, with a history of tackling systems that promote social inequality (Kloos et al., 2012; Nelson & Prilleltensky, 2005). Using ecological principles, community psychologists recognize the interdependence of systems, such as the family and locality, and how these processes influence the cycling of resources, adaptation, and succession (Kelly, 1986). Adherence to ecological principles allow community psychologist to frame social problems beyond the individual and examine how systems influence behavior changes and adaptability. Resources from social systems play a significant role in the ability of individuals and

their community to adapt and thrive. Promoting positive youth development, for example, relies on accessing supportive resources (e.g., food, shelter, etc.) and social support (e.g., parents, mentors, etc.) in their locality and within their family. In addition to ecological principles, several other principles guide the field of community psychology to include the value of sociocultural diversity, empowerment, and prevention (Nelson & Prilleltensky, 2005).

Community psychologists have competence in research and evaluation and model this particular work in a variety of organizations, geographic localities, and with varying populations—to include LGBTQ, African Americans, immigrants, etc. Valuing sociocultural diversity suggests community psychologists acknowledge their own prejudices and privileges and recognize stakeholders as experts. Stakeholders, whether members of a community, an organization, or localities, are able to articulate their needs, challenges, and initiate the action to address them. Recognized as collaborators, their cultural traditions, language, and practices become integral in designing research or evaluation. Community psychologists engage stakeholders as experts in communicating challenges and problems and organizing resources to address and prevent them.

While traditional research tends to objectify participants by doing research on them, community psychologists view participants as stakeholders and aim to empower them. Empowerment allows community psychologists to draw linkages between power differentials and resources allocation. For example, understanding how institutional racism prevents ethnic minorities from accessing quality health care can direct analysis towards policies or building the capacity of these communities to mobilize resources.

Stakeholders are able to frame challenges in their community and adopt culturally informed research and evaluation. Consequently, participatory processes fosters agency among stakeholders and control over resources in their community, organization, or locality (Arcidiacono et al., 2009; Kloos et al., 2012; Nelson & Prilleltensky, 2005). As co-researchers, stakeholders reflect and provide feedback throughout the research and evaluation process, in turn wielding power over the dissemination and adaptation of knowledge (Trickett, 2009; Weathers et al., 2011). In consequence, community psychologists are able to work with stakeholders to tackle social challenges and, more broadly, social inequalities (Evans, Hanlin, & Prilleltensky, 2007; Mertens, 2009; White, Suchowierska, & Campbell, 2004).

Community psychologists aim to prevent, reduce, and ameliorate psychological and social stressors encountered in communities, organizations, or localities. A focus on prevention allows community psychologist to understand how the dissemination and access of resources can attenuate or exacerbate stress and wellbeing (Nelson & Prilleltensky, 2005). Valuing the voices of those most affected by these stressors becomes critical in informing prevention design and fidelity. For example, the work of Weathers et al. (2011) demonstrates reliance on local residents in a locality improved health services and increased program fidelity. Outlining pathways for stakeholders to have power over their lives and the power to influence prevention aims to reduce the prevalence of social inequalities, especially those experienced by marginalized communities such as women, youth, ethnic minorities, and the poor (Cargo & Mercer, 2008; Joanne Rappaport, 2008; Stoecker, 2013). Thus, community psychologists believe when stakeholders have access to health, education, and economic resources they will have the capacity to address social

disparities and engage in continuous advocacy.

Participatory Mixed Methods in Community Psychology

The field of community psychology offers a history of applying participatory approaches in mixed methods evaluation and research (Perkins, 1987). Comprehending the rich nuances of systems is a core element within the field as community psychologists aim to understand and respect diverse cultural, political, and social histories and realities (Trickett, 2009). As mentioned, community psychologists rely on stakeholders to frame problems and inform research, evaluation, and prevention design. Additionally, employing mixed methods allows community psychologists to understand the complexity of systems by contextualizing stakeholders' experiences and producing generalized findings. A review of participatory mixed methods research in community psychology reveal: (a) an iterative nature, a core process of participatory research; (b) a quantitative approach is central in assessing needs or prevention outcomes, and (c) a qualitative approach play a crucial role in expanding quantitative results.

A number of studies in community psychology use mixed methods in needs assessment studies to investigate unmet health or service needs within a local community or target group (e.g., youth, people with disabilities, etc.). These studies have primarily focused on developing a plan of action through policy change and other social interventions. Recent examples of participatory need assessment studies can be found in Boland et al. (2008) and Weathers et al. (2011). Boland et al. (2008) implemented an explanatory mixed methods design (Creswell & Plano Clark, 2011) to explore unmet needs and health behaviors among individuals with intellectual disabilities. The designed

gathered quantitative data from participants' evaluation of access to services and then shared findings in focus groups. Focus-group topic guides with clients and service/care providers aimed to explicate quantitative findings in order to generate a narrative of barriers and support for the target group. The work of Weathers et al. (2011) used a similar model, employing quantitative methods in identifying health issues among an urban African American community in the United States and then engaging residents in evaluating health issues and informing prevention.

Studies have also used multiple levels of stakeholders in attempts to design prevention and improve program fidelity. For example, Westhues et al. (2008) used a variety of community leaders, residents, and service providers to develop a conceptual framework for a community mental health prevention program. Collecting data at varying levels of stakeholders, through interviews and focus groups, allowed the authors to frame a multilevel analysis. The authors were able to triangulate data and incorporate the experiential knowledge of stakeholders. The mixed methods design allowed results from one method to clarify results from the other, identify similarities and contradictions, and develop a more comprehensive and culturally responsive mental health prevention model.

Many community psychologists receive training in evaluation, using mixed methods designs to assess the effectiveness of preventions in measurable outcomes and support advocacy efforts. Recent demonstrations of evaluation reveal these studies integrate quasi-experimental and participatory designs. Wiggins, Hughes, Rodriguez, Potter, and Rios-Campos (2013), for example, employed a quasi-experimental pre-post design comparing three non-equivalent groups of Latino community health workers in order to understand the impact of training on service delivery. Community members were

involved at every stage of the evaluation design, from conceptualization to implementation to dissemination. The authors used participant observation to contextual the experiences of health workers, while semi-structured interviews aimed to understand how the intervention empowered community health workers. An additional number of studies demonstrate pre-post quasi-experimental design and participatory approaches, to include Andersen et al. (2015), Garney et al. (2015), and Marlow et al. (2015).

Evaluation studies have also incorporated longitudinal mixed method designs (Goodkind, 2005; Goodkind, LaNoue, Lee, Lance Freeland, & Freund, 2012). Goodkind (2005), for example, assessed the impact of a group discussion method called "learning circles" and advocacy on the well-being and social inclusion (e.g., English proficiency, psychological well-being) of Hmong refugees. A combination of questionnaires and in-depth interviews with participants revealed various dimensions of the intervention. In-depth interviews confirmed quantitative findings and elaborated results in order to promote dialogue and reciprocal learning among refugees, researchers, and project staff. The use of participatory approaches in mixed methods designs reveal how community psychologists collaborate and integrate diverse stakeholders in novel ways. This paper expands this body of work by delineating how principles of community psychology yield varying methods of participatory approaches in mixed method designs across unique sociocultural settings.

Three Models of Mixed Methods Participatory Research

We present three models of practice across various geographic and sociocultural contexts. The varied mixed methods designs employ different entry points of

stakeholders from research design to analysis (Onwuegbuzie & Collins, 2007). Each

model articulates participatory processes through varied points of reflection among

stakeholders from data sharing to data analysis and the challenges of translating findings

into systems change. The models aim to weave the value for sociocultural diversity,

empowerment, and prevention into both research and evaluation studies that address

education and health issues.

Model 1. A Multiphase Mixed Methods Need Assessment Model

The first study used a multiphase mixed methods participatory research design in

a local community in the city of Milan (Italy) characterized by intense nightlife activity to

investigate concentration of alcohol outlets and long-lasting conflicts among stakeholders

(Aresi, 2014). The target community is a one-kilometer square neighborhood and one of

the major nightlife areas in the city with about 40 alcohol outlets (mostly on and off-

premise street bars). The high levels of alcohol outlet concentration is linked to alcohol-

related health and safety outcomes, to include violence within the general and college

student population (Mair, Gruenewald, Ponicki, & Remer, 2013; Weitzman, Folkman,

Kerry Lemieux Folkman, & Wechsler, 2003). Furthermore, proximity to alcohol outlets

presents amenity problems (e.g. neighborhood physical deterioration, littering, nighttime

noise, etc.) and has negative effects on residents' quality of life (Wechsler, Lee, Hall,

Wagenaar, & Lee, 2002; Wilkinson & Livingston, 2012).

In this study, the use of mixed methods guided a participatory needs assessment

and engagement of community members as co-interpreters and co-researchers throughout

different phases of the research process. Researchers initiated the project, which involved

collaborating with and mobilizing a diverse group of stakeholders (e.g., representative of community organizations) and community members. Stakeholders were essential in identifying community assets and needs related to nightlife activities, findings guided a participatory planning process around interventions to promote community well-being and reduce alcohol-related health risks. The research design employed a three-step multiphase (i.e., qual → QUAL+QUANT → qual) design to include a preliminary qualitative component, the parallel collection and analysis of qualitative and quantitative data, and a final qualitative phase (Figure 1).

[Insert Figure 1 about here]

The first phase of the project (qual) involved preliminary data collection aimed to gain trust with community members and conceptualize social and cultural characteristics of the nightlife district. Exploratory interviews with five local key informants and twenty sessions of daytime and nighttime field observations were essential in expanding knowledge of the environment, listing drinking establishments, and developing observations of nightlife activities (e.g., identifying where and how long people tended to gather at night). Afterwards, without having access to a valid and reliable assessment instrument to measure perceptions of community amenities, the research team built on the qualitative data to develop a questionnaire to survey community residents.

The second phase gathered quantitative and qualitative data (QUAL + QUAN) through a residents' survey and interviews. The survey was designed as a self-report questionnaire, which included items to assess participation of residents (e.g. frequency of participation in community grassroots organizations), sense of community (Prezza, Pacilli, Barbaranelli, & Zampatti, 2009), and residents' perception of specific nightlife

activities and consequences (i.e., public nuisance/nighttime noise, incivilities and safety concerns). Additional items included an assessment of problems (Bonaiuto, Fornara, & Bonnes, 2003), and perceived neighborhood disorder (C. E. Ross & Mirowsky, 1999). Surveys were translated into Italian and various local groups (e.g., residents) and organizations (e.g., public and private schools, community facilities, fitness centers, and churches) helped to administer the survey to diverse populations in terms of age and socio-cultural background.

The connections local groups and organizations had to community members was a critical process to the study. Further, the process mobilized community members to collect data and frame the problem within the nightlife district. With support, surveys were administered to a convenience sample of residents in the neighborhood (N=348); the majority were female (66.8%) and age of participants ranged from 18-86 years (mean= 48; *SD*=14.68). Seventeen percent (N=60) of respondents volunteered to participate in the next phase of the project (i.e., data interpretation). A snowballing sampling technique generated a sample of residents to participate in interviews; community leaders/key informants also participated in face-to-face interviews.

The third phase of the study integrated quantitative and qualitative data in a platform shared with community leaders and residents. Integrating data into a single report, accompanied by participants' quotes, allowed the research team to guide knowledge sharing with key stakeholders. A series of community meetings were organized around the most relevant and/or difficult-to-interpret findings, sharing findings with community leaders through follow-up interviews and residents using two focus groups (N=13; 7 female, mean age of 51.6 years and age range of 42-80). At this phase,

participants provided feedback on the preliminary findings and worked to identify areas of priority for prevention. A second round of analysis by stakeholders helped to generate validate findings and support dissemination and recommendations.

Model 2. A Transformative Mixed Methods Evaluation

The second model used the transformative mixed methods design and participatory approaches in an evaluation study of a suspension program provided to youth in the Southeastern region of the United States. The United States annually suspends more than 2 million economically disadvantaged ethnic minority (EDEM) youth from school, placing them back into their community (National Center for Education Statistics, 2006). Without support or engagement in prosocial behavior, many youth remain disconnected and engage in further risk-taking behavior (Annunziata, Hogue, Faw, & Liddle, 2006; Wright & Fitzpatrick, 2004). To some extent, community organizations have developed programs to offset youth engagement in risk-taking behavior and provide academic and social support to suspended youth (Henderson & Green, 2014; Henderson & McClinton, 2016).

The evaluation study aimed to support advocacy efforts of a community organization serving suspended youth in a Southeastern mid-sized metropolitan area located in the United States. Engaged in advocacy against out-of-school suspension, the organization provided academic services to youth and workshops focused on psychosocial behaviors such as conflict resolution. The study reflects a transformative design due to the organization's advocacy efforts in reducing racial disparities in suspension practices and working primarily with economically disadvantaged and ethnic

minority populations(Creswell & Plano Clark, 2011; Mertens, 2007, 2010). The study

aimed to collaborate with the organization's staff in designing the evaluation in order to

support advocacy and build the capacity of the organization to demonstrate effectiveness

in youth outcomes. An explanatory mixed methods design (e.g., qual → QUAN →

QUAL) guided the aims of the study (Figure 2).

Figure 2 about here

Similar to the previous study, building trust between the research and organization

was a major precursor to the evaluation study. The researcher first served as participant

observer, documenting the behaviors of staff and youth, and working as a volunteer in

tutoring and mentoring youth. In the first phase of the project, site observations,

accompanied by interviews with staff, generated a profile of program factors contributing

to youth outcomes. The creation of a visual model from observations and interviews

outlined how program factors such as mentoring and academic support may lead to

changes in youth. The visual model served as a theory of change (Mertens, 2009; Perkins,

1987) and initiated dialogue with program staff on ways to evaluate program outcomes.

The directors, for example, realized they needed to demonstrate how their services

improved youth connectedness and relationships at the family and school level. Ongoing

dialogue became critical in identifying the major outcomes of the evaluation and key

stakeholders.

Staff was engaged in a visioning process of connecting program factors to youth

outcomes (Mertens, 2009). Applying ecological principles to the research design

identified youth, parents, and teachers as key stakeholders in the organization's services.

The researcher worked with directors and staff to identify quantitative measures, to assess

youth outcomes and develop interviews protocols. Collaboration between the researcher and staff became important to identify measures that best reflect the organization's goals. In the second phase of the study, measures focused on youth resilience (see Ungar et al., 2008), their sense of social connectedness (see Lee, Draper, & Lee, 2001), and student-teacher relationship (see Pianta, n.d.). Data collection from teachers occurred through the student-teacher relationship measure and open-ended responses. Staff provided assistance in administering measures and conducting preliminary data analysis. Not only did the process cultivate buy-in among staff, but sharing analysis with staff guided discussion on current services and ways to expand program services to other youth.

The next phase of the study used interviews and focus groups with a select group of youth participants and parents (QUAL). The interview protocol used some of the terminology and language from the quantitative measures as well as gained insight on the organization and services. The interviews targeted youth who had a history of suspension and represented diverse ethnic and socioeconomic backgrounds and their parents. It was important to identify this unique sample within the larger group of participants given their history of suspension in schools. Data generated rich responses from two key stakeholders (e.g., parents and youth) and informed decisions on ways to improve services.

Findings from the quantitative and qualitative phase, in combination revealed the value of "alternative spaces" for suspended youth. Involvement in the program demonstrated promising benefits for youth. At each phase, the researcher shared results with staff and used data to support service reform. By linking quantitative measures to qualitative findings through a data matrix grid (Fielding, 2012), directors were able to

contextualized youth experiences to outcomes on the quantitative measures. Collaborating with the organization's staff and integrating analysis at various stakeholder level (e.g., parents and teachers) is similar to the work of (Westhues et al., 2008); however, the model aimed to evaluate a framework rather than develop one. More importantly, the organization was able to communicate its framework to local school districts and other external agencies in order to improve advocacy against school suspension.

Model 3. A Sequential Mixed Methods Model

This study was designed to examine whether a relationship existed between school climate and culturally relevant pedagogy beliefs in Bahamian secondary schools. As neither of these constructs had been previously explored in this context, employing a mixed methodology was essential to the development of the measures and integrating voices of participants (Hall-Campbell, 2010).

The details of this project are reflected in the sequential multiphase mixed method design that occurred over three phases (i.e., qual → QUAL → QUAN). The first two phases were qualitative and included a psycho-historical narrative of education in The Bahamas (Bethel, 2006; Craton & Saunders, 1998). Data gathered from this psycho-historical narrative were used to help frame the questions for the interviews in the first phase with key stakeholders in Bahamian culture and education (Figure 3).

[Insert Figure 3 about here]

In the first phase of the study (qual), the primary goal of the semi-structured interviews was to develop Bahamian perspectives of what it means to be a culturally

relevant educator and to develop scenarios of culturally relevant pedagogy in which educator's interpersonal interactions with their students as well as their instructional practices were detailed. In total, seven semi-structured interviews (N= 7; 5 female (include age and background?) and 2 male) were conducted. Full transcripts of the interviews were sent back to participants to confirm the accuracy and authenticity of participant's voices. Interviewees were asked to describe their perceptions about culturally relevant pedagogy and identify indicators of culturally relevant pedagogy. Using grounded theory, data were developed into specific Bahamian culturally relevant constructs and scenarios. These scenarios were then incorporated into the second phase of the study.

In the second phase of the study, focus groups of Bahamian secondary educators (N=5) evaluated the scenarios developed from the interviews. These stakeholders' perspectives were used to determine if the scenarios accurately reflected the reality of their classroom experiences. The first scenarios reflected cultural relevance found in a teacher's instruction, e.g. *"Gene is well versed in Bahamian studies… everything from decorating the classroom with various Bahamian images, to using various Junkanoo themes as writing prompts"* (Hall-Campbell, 2010, p. 70) while the other participants used examples of a teacher demonstrating cultural relevance in their interpersonal interaction with students. Selecting participants to review the scenarios supported the instrument design for future use(Creswell & Plano Clark, 2011).

In the third phase the study (QUAN), the Culturally Responsive Bahamian Teaching Scenarios (CRBTS) instrument examined culturally relevant pedagogy beliefs in a Bahamian context. Specifically, participants' beliefs regarding the positive outcomes

of using Bahamian pedagogy as demonstrated in the scenarios were indicated using the culturally adopted teaching outcome expectancy measure (Bahamian Responsive Teaching Outcome Expectancy; BRTSE). In this quantitative phase, Bahamian teachers and administrators (N=226) also completed surveys of American measures of culturally relevant pedagogy (Culturally Relevant Teaching Self-Efficacy (CTRSE) and Culturally Relevant Outcome Expectancy (CRTOE) (Siwatu, 2007) and a self-reported perception of school climate (OCI) (Hoy, Smith, & Sweetland, 2002).

The Bahamian measures could not have been created without using participatory approaches in the mixed methods design. Furthermore, employing a participatory mixed method design allowed the researcher to eliminate the external validity limitations of the American measure. In keeping with participatory approaches, stakeholders/participants became co-researchers in qualitative analysis to define the construct while the quantitative analysis helped to validate it. This work aimed to compel key stakeholders in the Bahamian education system to consider widespread implementation of this instrument to enhance the future of Bahamian education.

Discussion and Implications

Community psychologists use research and evaluation to address numerous social problems across the world relating to community problems and social inequalities. This current paper aimed to present mixed method research with an added complexity such as actively engaging participants in research development and implementation. The three participatory mixed methods designs described in this paper demonstrated the use of ecological principles, focusing on localities, organizations, and culture across varying

geographic settings (Kelly, 1986). Analyzing social challenges and issues from the

perspective of multiple methods and multiple stakeholders was critical to illustrate

alcohol use in an Italian community, advocacy for youth experiencing school suspensions

in the United States, and the colonized nature of education in The Bahamas. Each model

demonstrated multiple units of analysis to conceptualize experiences and adapt research

and evaluation to the needs of the context (Kloos et al., 2012; Nelson & Prilleltensky,

2005).

Across these models, stakeholders played a critical role in generating knowledge

via varying levels of engagement. The research studies described adhered to the principle

of empowerment by engaging stakeholders at multiple points in the research design to

build their capacity, inform data collection, and assist in data analysis. Stakeholders

became collaborators and co-researchers providing assistance in validating findings from

community surveys, identifying measures, and adapting measures to a sociocultural

context. The sharing of knowledge with stakeholders at each phase of the mixed method

design initiated important reflection and created necessary buy-in to sustain these projects

(Cashman et al., 2008; Montero, 2000). Placing stakeholders at the center of mixed

method research design allowed them to feel a sense of ownership and engage in

empowered decision-making (Kelly, 1986; Weathers et al., 2011).

The models provide practical examples of participation and points where

researchers worked with stakeholders to build capacity. The case study of the nightlife

local community (Model 1) described a process in which the researchers entered the local

community, gained the trust of stakeholders, and brought them into the research design

(e.g., questionnaire development) to collect and analyze data. Qualitative methods such

as key informant interviews were crucial in this activation process; participatory processes such as community meetings were influential in creating a sense of community among various stakeholders, to include residents and business owners. Stakeholder input shaped recommendations to improve nightlife and reduce alcohol use within their community. This particular work reflects similar studies conducted by Boland et al. (2008) and Weathers et al. (2011), in which the mixed methods design enhanced participation among stakeholders and community members.

In the second model, collaboration with the organization's staff aimed to build capacity, inform prevention design, and support advocacy against school suspension. Collaboration between the researcher and staff was influential in making adjustments throughout each phase of project. Using directors and staff to drive the goals of the research project, identify, and develop measures positioned them as central to designing the evaluation. Mixed methods served as a way to also assess program outcomes across key stakeholders (e.g., youth, parents, and teachers) in order to inform prevention design.

In the third model, the study focused on research and provided a thoughtful example of using participatory approaches to guide intervention instruments and model best-practices in education. The inclusion of teachers as stakeholders to design scenarios as measures that reflect the Bahamian culture became essential in identifying indigenous models of education. Similar to the other models, the researcher shared findings with key stakeholders to include education leaders and administrators in order to shape training of teachers and develop culturally responsive pedagogy. While these models provide indications on how to implement mixed method research using a participatory approach, they also reveal several challenges.

Challenges to Participatory Mixed Method Research in Community Psychology

There are several challenges in engaging participatory approaches in mixed methods design. For one, building trust in participatory research requires gaining access to communities. Establishing trust is labor and time intensive, yet it is an essential step to create mutually respectful relationships between the researcher and the community or organization (White et al., 2004). Marginalized communities, often exploited in research, see researchers as outsiders or mistrust their investment in communities. All models in this paper discussed trust as an important process in the research and evaluation design— using observations and continuous visits within the settings to cultivate trust. Researchers must create an ability to broker the line between the "research" world and the "lived" world and dismantle the mistrust and alienation stakeholders may experience. In the first model, the community survey initiated small group discussions around the findings. Community members were asked to interpret and connect qualitative and quantitative data, this work demonstrates building trust between stakeholders and researchers. Furthermore, stakeholders were able to experience researchers beyond disseminating results but also collaborating to facilitate knowledge sharing.

Second, researchers should collaborate with stakeholders to build a system of accountability into every phase of the mixed methods design. Accountability requires researchers to capture an accurate depiction of the lived experiences of stakeholders and their context while inviting critique from stakeholders. Accountability also suggests stakeholders will use knowledge in their communities and organizations to work towards action. Again, this process involves time and a commitment to follow the stages of findings from dissemination to action. Trained researchers are able to use participatory

approaches to involve stakeholders in reflective processes that are active, tackle problems and advocate policy (Montero, 2000). All models illustrate some benefits for policy recommendations and practice reform; however, the extent to which this translated into reduced health and education disparities is untested.

Last, the participatory process in mixed methods research designs rest on the ability of social researchers to listen to stakeholders and use their feedback to adjust the research and evaluation design. To some extent, pressures to publish or funding expectations may create a sense of urgency and reduce opportunities to make adjustments and value feedback from stakeholders. The second model outlines how involving stakeholders in identifying and developing measures was important in recognizing their expertise and support the evaluation aims. At multiple junctures throughout the project quantitative and qualitative data inspired directors to brainstorm on challenges in program delivery and use of data to make decisions on new programming ideas. The third model also engaged stakeholders in a reflective process, guiding the development of new constructs and helping to modify existing ones.

Conclusion

The pervasive social challenges of education and health around the globe require innovative approaches in integrating stakeholders in research and evaluation design and translating work beyond individual to systems change. When social research aims to address the social challenges and problems facing society, the field of community psychology offers practical models (Cashman et al., 2008; Ejiogu et al., 2011; L. F. Ross et al., 2010; Weathers et al., 2011). The models presented in this paper reflect ecological

principles and model the value for sociocultural diversity and prevention across

geographic localities through varied participatory processes with stakeholders.

Collectively, they provide multiple ways to integrate participatory approaches in mixed

methods designs from designing evaluation to analysis and instrument development.

These models are not pardoned of limitations and challenges but provide insight in ways

to implement participatory processes in mixed methods designs and support systems level

change (Wandersman et al., 2008).

References

Andersen, H. B., Pawlowski, C. S., Scheller, H. B., Troelsen, J., Toftager, M., &
Schipperijn, J. (2015). Activating schoolyards: study design of a quasi-experimental schoolyard intervention study. *BMC Public Health, 15*, 523.
doi:10.1186/s12889-015-1828-9

Annunziata, D., Hogue, A., Faw, L., & Liddle, H. A. (2006). Family Functioning and
School Success in At-Risk, Inner-City Adolescents. *Journal of Youth and
Adolescence, 35*(1), 100-108. doi:10.1007/s10964-005-9016-3

Arcidiacono, C., Velleman, R., & Procentese, F. (2009). A synergy between action-research and a mixed methods design for improving services and treatment for
family members of heavy alcohol and drug users. *Journal of Community &
Applied Social Psychology*, n/a-n/a. doi:10.1002/casp.1015

Aresi, G. (2014). *Young people, alcohol and nightlife. From studying the issue to a
participatory research in an area with a high concentration of drinking venues.*
(Doctoral dissertation), Università Cattolica del Sacro Cuore, Milan, Italy.

Bethel, N. (2006). *Navigations: The Fluidity of National Identity in the Post-colonial.* (Unpublished Dissertation), Bahamas.

Boland, M., Daly, L., & Staines, A. (2008). Methodological Issues in Inclusive Intellectual Disability Research: A Health Promotion Needs Assessment of People Attending Irish Disability Services. *Journal of Applied Research in Intellectual Disabilities, 21*(3), 199-209. doi:10.1111/j.1468-3148.2007.00404.x

Bonaiuto, M., Fornara, F., & Bonnes, M. (2003). Indexes of perceived residential environment quality and neighbourhood attachment in urban environments: a confirmation study on the city of Rome. *Landscape and Urban Planning, 65*(1-2), 41-52. doi:10.1016/s0169-2046(02)00236-0

Cargo, M., & Mercer, S. L. (2008). The value and challenges of participatory research: strengthening its practice. *Annual Review of Public Health, 29*, 325-350. doi:10.1146/annurev.publhealth.29.091307.083824

Cashman, S. B., Adeky, S., Allen, A. J., 3rd, Corburn, J., Israel, B. A., Montano, J., . . . Eng, E. (2008). The power and the promise: working with communities to analyze data, interpret findings, and get to outcomes. *American Journal of Public Health, 98*(8), 1407-1417. doi:10.2105/AJPH.2007.113571

Craton, M., & Saunders, G. (1998). Islanders In The Stream: A History of the Bahamian People Volume Two: From the Ending of Slavery to the Ending of Slavery to the Twenty-First Century. Athens, GA: University of Georgia Press.

Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and Conducting Mixed Methods Research* (Second ed.). Thousand Oaks: SAGE.

Ejiogu, N., Norbeck, J. H., Mason, M. A., Cromwell, B. C., Zonderman, A. B., & Evans, M. K. (2011). Recruitment and retention strategies for minority or poor clinical research participants: lessons from the Healthy Aging in Neighborhoods of Diversity across the Life Span study. *Gerontologist, 51 Suppl 1*, S33-45. doi:10.1093/geront/gnr027

Evans, S. D., Hanlin, C. E., & Prilleltensky, I. (2007). Blending ameliorative and transformative approaches in human service organizations: A case study. *Journal of Community Psychology, 35*(3), 329-346. doi:10.1002/jcop.20151

Fielding, N. G. (2012). Triangulation and Mixed Methods Designs: Data IntegrationWith New Research Technologies. *Journal of Mixed Methods Research*. doi:10.1177/1558689812437101

Garney, W. R., Beaudoin, C. E., Clark, H. R., Drake, K. N., Wendel, M. L., McLeroy, K. R., . . . Shaw, R. L. (2015). Using Community-Based Participatory Research to Disseminate a Mass Media Campaign Into Rural Communities. *Journal of Health Communication*, 1-8. doi:10.1080/10810730.2015.1018588

Goodkind, J. R. (2005). Effectiveness of a community-based advocacy and learning program for hmong refugees. *American Journal of Community Psychology, 36*(3-4), 387-408. doi:10.1007/s10464-005-8633-z

Goodkind, J. R., LaNoue, M., Lee, Lance Freeland, C., & Freund, R. (2012). Feasibility, Acceptability, and Initial Findings from a Community-Based Cultural Mental Health Intervention for American Indian Youth and Their Families. *Journal of Community Psychology, 40*(4), 381-405. doi:10.1002/jcop.20517

Hall-Campbell, N. F. (2010). *Culture in Context: A Mixed Methods Exploration of School Climate and Culturally Relevant Pedagogy Beliefs in Bahamian Secondary Education.* (Doctoral dissertation), North Carolina State University, Raleigh, NC.

Henderson, D. X., & Green, J. (2014). Using mixed methods to explore resilience, social connectedness, and re-suspension among youth in a community-based alternative-to-suspension program. *International Journal of Child, Youth and Family Studies, 5*(3), 423-446.

Henderson, D. X., & McClinton, J. (2016). A qualitative exploration of suspended youth social connectedness in a community-based intervention program. *Child & Youth Services, 37*(3), 253-270. doi:10.1080/0145935X.2015.1083402

Hoy, W. K., Smith, P. A., & Sweetland, S. R. (2002). The Development of the Organizational Climate Index for High Schools: Its Measure and Relationship to Faculty Trust. *The High School Journal, 86*(2), 38-49. Retrieved from http://www.jstor.org/stable/40364336

Kelly, J. G. (1986). Context and process: An ecological view of the interdependence of practice and research. *American Journal of Community Psychology, 14*(6), 581-589. doi:10.1007/BF00931335

Kloos, B., Hill, J., Thomas, E., Wandersman, A., Elias, M. J., & Dalton, J. H. (2012). *Community Psychology: Linking individuals and communities*. Belmont, CA: Wadsworth.

Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. *Journal of Counseling Psychology, 48*(3), 310.

Lorion, R. P. (2000). In support of qualitative approaches to the study of community phenomena. *Journal of Community Psychology, 28*(1), 1-2. doi:10.1002/(SICI)1520-6629(200001)28:1<1::AID-JCOP1>3.0.CO;2-R

Mair, C., Gruenewald, P. J., Ponicki, W. R., & Remer, L. (2013). Varying impacts of alcohol outlet densities on violent assaults: explaining differences across neighborhoods. *J Stud Alcohol Drugs, 74*(1), 50-58.

Marlow, E., Grajeda, W., Lee, Y., Young, E., Williams, M., & Hill, K. (2015). Peer Mentoring for Male Parolees: A CBPR Pilot Study. *Progress in Community Health Partnerships, 9*(1), 91-100. doi:10.1353/cpr.2015.0013

Mertens, D. M. (2007). Transformative Paradigm: Mixed Methods and Social Justice. *Journal of Mixed Methods Research, 1*(3), 212-225. doi:10.1177/1558689807302811

Mertens, D. M. (2009). *Transformative research and evaluation*. New York, NY: Guilford Press.

Mertens, D. M. (2010). Transformative Mixed Methods Research. *Qualitative Inquiry, 16*(6), 469-474. doi:10.1177/1077800410364612

Montero, M. (2000). Participation in participatory action research. *Annual Review of Critical Psychology, 2*, 131-143.

National Center for Education Statistics. (2006). *Status and trends in the education of racial and ethnic minorities: Indicator 17. Retention, Suspension, and Expulsion Rates*. Retrieved from http://www.nces.ed.gov

Nelson, G., & Prilleltensky, I. (2005). *Community Psychology: In pursuit of liberation and well-being*. New York, NY: Palgrave MacMillan.

Onwuegbuzie, A. J., & Collins, K. M. (2007). A typology of mixed methods sampling designs in social science research. *The qualitative report, 12*(2), 281-316.

Paris, M., Añez, L. M., Bedregal, L. E., Andrés-Hyman, R. C., & Davidson, L. (2005). Help seeking and satisfaction among Latinas: The roles of setting, ethnic identity, and therapeutic alliance. *Journal of Community Psychology, 33*(3), 299-312. doi:10.1002/jcop.20049

Perkins, D. V. (1987). Bayesian inference from qualitative and quantitative data in program evaluation. *Journal of Community Psychology, 15*(2), 187-204. doi:10.1002/1520-6629(198704)15:2<187::AID-JCOP2290150209>3.0.CO;2-7

Pianta, R. C. (n.d.). STRS, Student Teacher Relationship Scale professional manual: Psychological Assessment Resources, Inc.

Prezza, M., Pacilli, M. G., Barbaranelli, C., & Zampatti, E. (2009). The MTSOCS: A multidimensional sense of community scale for local communities. *Journal of Community Psychology, 37*(3), 305-326. doi:10.1002/jcop.20297

Rappaport, J. (2005). Community psychology is (thank God) more than science. *American Journal of Community Psychology, 35*(3-4), 231-238.

Rappaport, J. (2008). Beyond Participant Observation: Collaborative Ethnography as Theoretical Innovation. *Collaborative Anthropologies, 1*(1), 1-31. doi:10.1353/cla.0.0014

Ross, C. E., & Mirowsky, J. (1999). Disorder and decay the concept and measurement of perceived neighborhood disorder. *Urban Affairs Review, 34*(3), 412–432. doi:10.1177/107808749903400304

Ross, L. F., Loup, A., Nelson, R. M., Botkin, J. R., Kost, R., Smith, G. R., & Gehlert, S. (2010). The challenges of collaboration for academic and community partners in a research partnership: points to consider. *Journal of Empirical Research on Human Research Ethics, 5*(1), 19-31. doi:10.1525/jer.2010.5.1.19

Siwatu, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs. *Teaching and Teacher Education, 23*(7), 1086-1101. doi:http://dx.doi.org/10.1016/j.tate.2006.07.011

Stoecker, R. (2013). *Research methods for community change*. Thousand Oaks, CA: Sage Publishing.

Trickett, E. J. (2009). Community psychology: individuals and interventions in community context. *Annual Review of Psychology, 60*, 395-419. doi:10.1146/annurev.psych.60.110707.163517

Ungar, M., Liebenberg, L., Boothroyd, R., Kwong, W. M., Lee, T. Y., Leblanc, J., . . . Makhnach, A. (2008). The Study of Youth Resilience Across Cultures: Lessons from a Pilot Study of Measurement Development. *Research in Human Development, 5*(3), 166-180. doi:10.1080/15427600802274019

Wandersman, A., Duffy, J., Flaspohler, P., Noonan, R., Lubell, K., Stillman, L., . . . Saul, J. (2008). Bridging the gap between prevention research and practice: the interactive systems framework for dissemination and implementation. *American Journal of Community Psychology, 41*(3-4), 171-181. doi:10.1007/s10464-008-9174-z

Weathers, B., Barg, F. K., Bowman, M., Briggs, V., Delmoor, E., Kumanyika, S., . . . Halbert, C. H. (2011). Using a mixed-methods approach to identify health

concerns in an African American community. *American Journal of Public Health, 101*(11), 2087-2092. doi:10.2105/ajph.2010.191775

Wechsler, H., Lee, J. E., Hall, J., Wagenaar, A. C., & Lee, H. (2002). Secondhand effects of student alcohol use reported by neighbors of colleges: the role of alcohol outlets. *Social Science and Medicine, 55*(3), 425-435. doi:10.1016/S0277-9536(01)00259-3

Weitzman, E. R., Folkman, A., Kerry Lemieux Folkman, M. P. H., & Wechsler, H. (2003). The relationship of alcohol outlet density to heavy and frequent drinking and drinking-related problems among college students at eight universities. *Health & Place, 9*(1), 1-6. doi:10.1016/s1353-8292(02)00014-x

Westhues, A., Ochocka, J., Jacobson, N., Simich, L., Maiter, S., Janzen, R., & Fleras, A. (2008). Developing theory from complexity: reflections on a collaborative mixed method participatory action research study. *Qualitative Health Research, 18*(5), 701-717. doi:10.1177/1049732308316531

White, G. W., Suchowierska, M., & Campbell, M. (2004). Developing and systematically implementing participatory action research. *Archives of Physical Medicine and Rehabilitation, 85*(4 Suppl 2), S3-12.

Wiggins, N., Hughes, A., Rodriguez, A., Potter, C., & Rios-Campos, T. (2013). La Palabra es Salud (The Word Is Health): Combining Mixed Methods and CBPR to Understand the Comparative Effectiveness of Popular and Conventional Education. *Journal of Mixed Methods Research, 8*(3), 278-298. doi:10.1177/1558689813510785

Wilkinson, C., & Livingston, M. (2012). Distances to on- and off-premise alcohol outlets and experiences of alcohol-related amenity problems. *Drug Alcohol Rev, 31*(4), 394-401. doi:10.1111/j.1465-3362.2011.00346.x

Wright, D. R., & Fitzpatrick, K. M. (2004). Psychosocial correlates of substance use behaviors among African American youth. *Adolescence, 39*(156), 653-667.
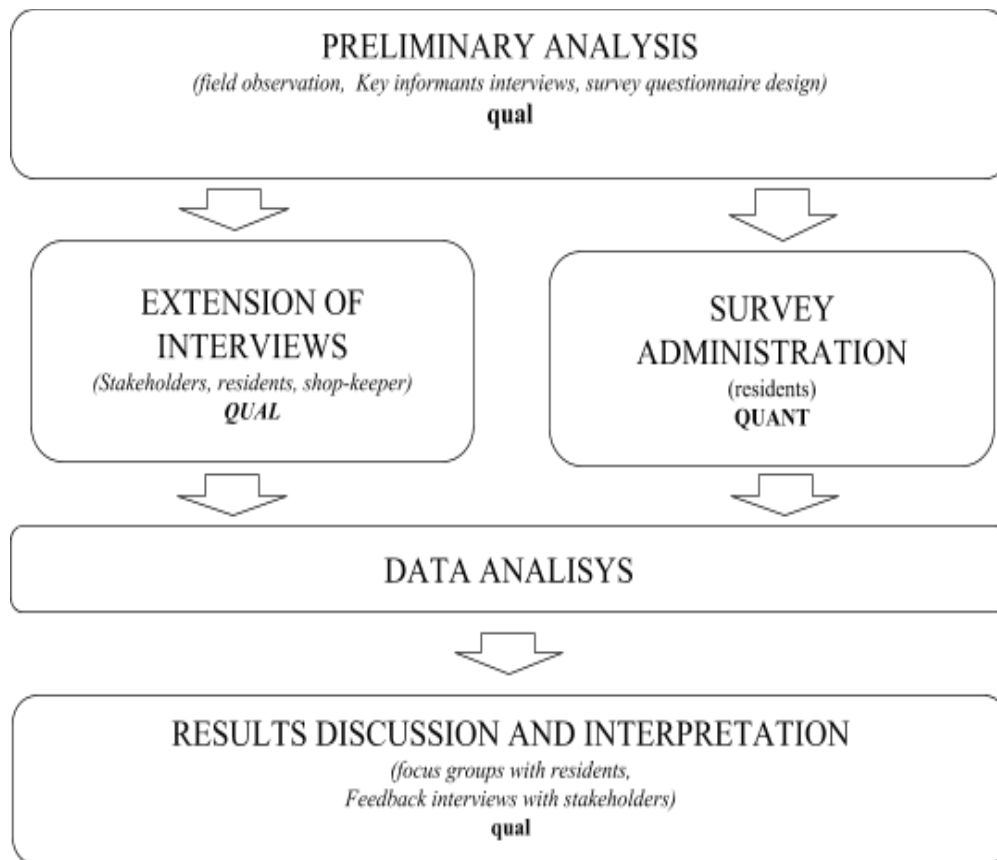
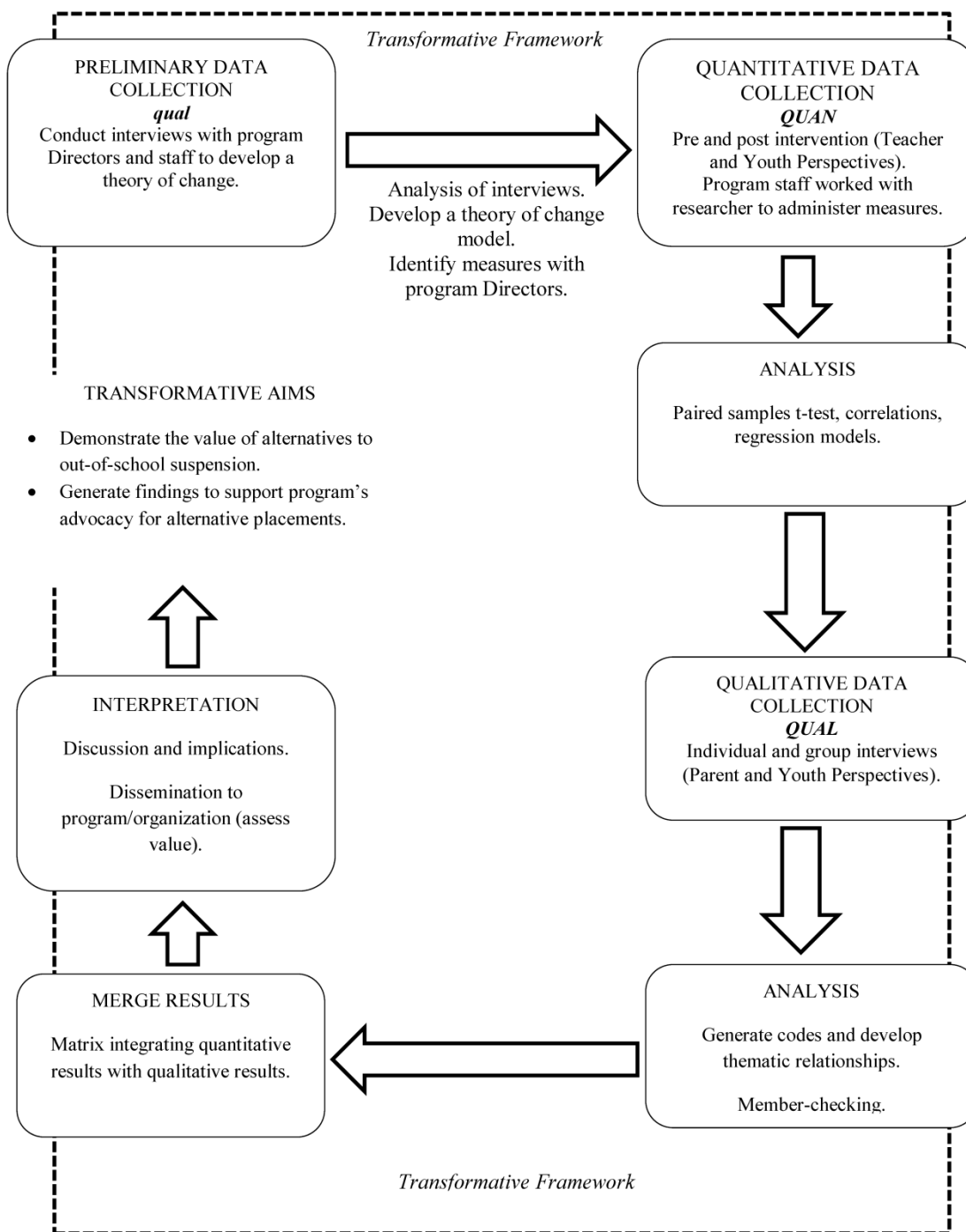*Figure 1*. Diagram for the multiphase participatory research process.

Figure 2. Diagram for the transformative mixed methods design.

PHASE

```
┌──────────────────────────────────────────────────────────────┐
│                          PHASE 1                             │
│                           qual                               │
│                                                              │
│         Psycho-historical narrative of Bahamian education    │
│                            &                                 │
│      Interviews with key Bahamian and education stakeholders (N=7) │
└──────────────────────────────────────────────────────────────┘
                              ↓
┌──────────────────────────────────────────────────────────────┐
│                      DATA ANALYSIS                           │
│         (Create Bahamian Culturally Relevant Scenarios)      │
└──────────────────────────────────────────────────────────────┘
                              ↓
┌──────────────────────────────────────────────────────────────┐
│                          PHASE 2                             │
│                           qual                               │
│                                                              │
│           Focus Group with Bahamian secondary educators      │
│        (Validate Bahamian Culturally Relevant Scenarios)     │
└──────────────────────────────────────────────────────────────┘
                              ↓
┌──────────────────────────────────────────────────────────────┐
│                      DATA ANALYSIS                           │
│         (Create Bahamian Culturally Relevant Indicators)     │
└──────────────────────────────────────────────────────────────┘
                              ↓
┌──────────────────────────────────────────────────────────────┐
│                          PHASE 3                             │
│                           QUAN                               │
│                                                              │
│  Quantitatively examine the relationship between school climate and American and Bahamian │
│             measures of culturally relevant pedagogy beliefs │
│    (N=226 Bahamian secondary school teachers and administrators) │
└──────────────────────────────────────────────────────────────┘
                              ↓
┌──────────────────────────────────────────────────────────────┐
│                  DATA ANALYSIS & INTERPRATION                │
└──────────────────────────────────────────────────────────────┘
```
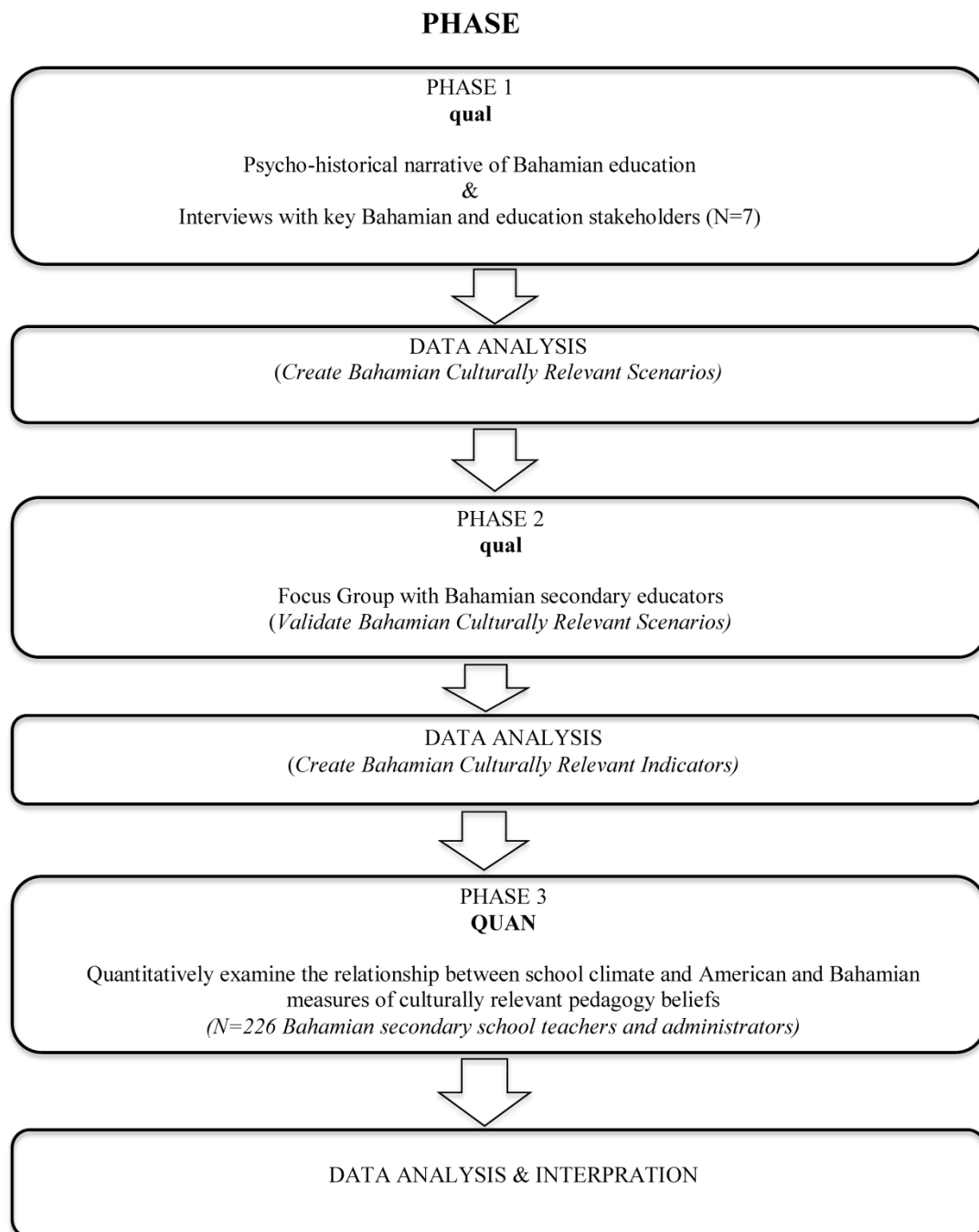
Figure 3. Diagram of the cross-cultural multiphase mixed methods design.