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Re-Structuring Evaluation Findings Into Useful Knowledge

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Background: A long research stream has shown that when knowledge is more structured it is more likely to be effective in practical application. Building on that research, the authors applied Integrative Proposition Analysis to visualize, integrate, and assess the quality and usefulness of knowledge gained from the NMAC (formerly National Minority AIDS Council) *Strong Communities* evaluation.

Purpose: Demonstrate an innovative method to rigorously integrate and strengthen knowledge gained from evaluation and to encourage discussion of future directions for developing stronger theories for more effective evaluation and more effective action.

Setting: Birmingham, Alabama

Intervention: A project to identify local strategies for community-based organizations and community health centers that serve African American and Latinx gay and bisexual men and transgender women to collaboratively meet HIV-related community needs.

Research Design: The researchers applied Integrative Propositional Analysis to integrate and map concepts and causal connections emerging from the evaluation findings. The authors then analyzed the resulting map to identify top-mentioned concepts, better understood concepts, reinforcing loops, and knowledge gaps.

Data Collection and Analysis: Integrative Propositional Analysis applied to a literature review and stakeholder interview transcripts collected for the evaluation.

Findings: Integrating literature and interview results helped to identify several actions where providers of HIV-related services could increase their impact on combating the HIV epidemic among the communities they serve. The authors also identified a reinforcing loop; this shows opportunity to improve two desired outcomes by increasing one. In addition, the authors identified blank spots on the map; these show where additional research could strengthen the quality and usefulness of the mapped knowledge.

Keywords: *evaluation syntheses; Integrative Propositional Analysis; complexity; systems thinking; HIV; African American; Latinx; gay men; bisexual men; transgender women*

Introduction

For any social problem, vast amounts of evaluation and research evidence tend to accumulate that could contribute to a solution. A 2013 paper by Moat and colleagues, for example, found 1,736 *systematic reviews of studies* on the topic of strategies and arrangements for health care systems in one literature database.

Many evaluations have helped evaluation commissioners and managers to enhance their programs and benefit the people they serve. However, the sheer volume of studies makes finding relevant information difficult. Each study is added to the storehouse of knowledge, but the findings and theories of those studies are not sufficiently linked with other studies. Therefore, managers and researchers may miss valuable existing research and start from scratch with a new program model to test, or they may use a well-known model that may not be the most effective model or the most relevant model for their situation.

In this paper the authors demonstrate the use of an innovative method to rigorously integrate theories from related literature and new research. The authors discuss the potential for re-structuring and connecting insights gained from evaluations to accelerate the development of better theories for solving policy and program challenges.

This approach builds on insights developed from three converging developments in the fields of evaluation and conceptual systems science.

Innovations in Conceptual Systems

Inclusive Literature Synthesis and Quality Assessment

Several sources have made the complaint that reviews of the research evidence too often look at too narrow a selection of evidence, such as only findings from studies that use experimental or quasi-experimental methods (Dijkers, 2009; Moat et al., 2013; Smyth & Schorr, 2009). As a result, "much useful information that could guide practitioners may be lost" (Dijkers, 2009, p. 6).

To alleviate this issue, researchers have developed several techniques for rigorously synthesizing and assessing evidence from related literature across disciplines and methods.

For example, *realist synthesis* extracts data from existing research to understand "what works, for whom, in what circumstances" (Pawson & Bellamy, 2006). Reviewers examine the successes and failures of programs to identify which contexts and mechanisms have produced successful outcomes and which have led to failure.

In a *narrative synthesis* of the research on the effectiveness of interventions to promote smoke alarms, Rodgers et al. (2009) presented a four-part framework to synthesize study narratives in a systematic and transparent way. This involved developing a theory of how the intervention works, why, and for whom; synthesizing study findings; exploring relationships within and between studies; and assessing the robustness of the resulting synthesis.

In their review of the research on spreading and sustaining innovations in health services, Greenhalgh et al. (2004, 2005) used a six-stage framework for a systematic review of the "*storyline of research*" from a broad set of literature. This involved planning, searching, mapping key elements for each research tradition, evaluating the studies, synthesizing findings for key dimensions the studies addressed, and developing recommendations.

The Task Force on Systematic Review and Guidelines (Dijkers et al., 2011) provides questions that users of systematic reviews should consider when determining the strengths and weaknesses of a review. The core questions apply to any review, regardless of the types of studies included. Additionally, they cover many aspects of the systematic review process, such as the review question, protocol, searches, abstract and full-paper scanning, and data abstracting.

The University of London's Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre, 2010) recommends that reviewers develop an overall "weight of evidence" for each study, based on three criteria:

- Methodological quality based on accepted norms for the research design used
- Relevance of the study design for addressing the question
- Relevance of the study for the review question

The Department for International Development (DFID) suggests an approach to assessing quality of impact evaluations for any type of evaluation design (Stern et al., 2012).

Other recently developed tools for assessing quality of research for any type study design include the International Development Research Centre (IDRC)'s (Ophir et al. 2016) *Research Quality Plus (RQ+) Assessment Instrument* and Belcher and colleagues' (2016) *transdisciplinary research quality assessment framework*.

A new "evidence appraisal matrix" tool developed by the second and third authors adds a new dimension to systematic evidence appraisal (Wright & Wallis, 2017). Unlike other tools for evaluating the quality of evidence, it systematically evaluates not only the quality and relevance of the data but also the quality of the theory, or explanation. A related "study quality and relevance assessment worksheet" provides a rigorous framework for conducting in-depth evaluation of studies found in the literature (Wright & Lewis, 2016a, 2016b). A more commonly used approach is to simply draw on recent and relevant high quality sources, such as research published in top-tier journals or research published by leading agencies and organizations in the field.

Inter-Connected Maps for Planning and Evaluation

A visual diagram, map, or logic model is often useful for guiding program planning and evaluation. However, a complaint about the usual logic model approach has been that the categories included in the model (e.g. inputs, outputs, intermediate goals) do not always fit how people see themselves and their program, leading to confusion (Duignan, 2008; Keene & Metzner, 2011).

Moreover, because basic logic models are typically designed to show simple, one-way relationships, they do not easily describe everything that needs to happen to accomplish goals. A model may tell you that an after-school program is an activity, that improved reading scores are an outcome, and that attendance at the after-school program is an intermediate outcome (Richard, 2009). However, it might not tell you that "Students need to attend after-school programs at least 3 days per week for a minimum of 60 days, and the curricula must focus on love of reading and literacy, in order for test scores to rise" (p. 4).

To address these issues, evaluators have developed more complete, inter-connected logic models or maps to support effective research and practice.

For example, drawing on complexity theory, Rogers (2008) developed an approach to creating logic models for program evaluation that use complex causal structures and reinforcing loops. These more complex and inter-connected logic models were designed to support dialog within and among organizations. This is an important perspective because one must have some understanding of causality if one is to understand, engage, and enact change in the world.

Duignan's (2008) "easy outcomes" approach uses DoView software to diagram outcomes and all steps leading to the outcomes. It is intended to more easily represent non-linear relationships and complex programs, to support evaluation, strategic planning, and other applications.

Many tools can be useful for visualizing our knowledge maps. These range from low-tech tools like sticky notes to technologies for building interactive maps with detailed information for concepts/connections, such as stakeholder votes and supporting data (Meaningful Evidence, 2016). Examples include KUMU (https://kumu.io/), DoView (http://doview.com/), StormBoard (https://stormboard.com/), and PepperSlice (http://pepperslice.com/).

Conceptual Systems Research and Integrative Propositional Analysis (IPA)

However useful the first two developments have been, new research in the *science of conceptual systems* suggests that social research is realizing only a fraction of its potential. This trans-disciplinary approach to research seeks to better comprehend our frameworks for understanding the world, such as theories, mental models, and mind maps (conceptual systems) so that researchers can create better ones (Wallis, 2015).

A long conceptual systems-related research stream on integrative complexity, complexity theory, and systems thinking has shown that when knowledge is more structured it is more likely to be effective in application in school (Curseu, Schalk, & Schruijer, 2010), management (Wong et al., 2011), and politics (Suedfield & Rank, 1976). These studies indicate that the researchers can develop mental maps or conceptual systems by making the concepts within them more inter-connected. This reflects the idea that *greater inter-connectedness among the concepts in a person's mind will provide a more complete understanding of reality, because the real world is inter-connected.*

In the field of evaluation, evaluators have used concept mapping and similar approaches to construct maps to use for use in planning and evaluation. Concept mapping involves facilitated group brainstorming, sorting, and rating of statements, then applying statistical techniques to show the relationships between the statements and structure them into maps (Trochim, 1989). Some studies have used concept mapping to generate maps from related literature, interview

records, or other sources, rather than from brainstorming. Computer simulations approaches calculate how changes in one element in a model (i.e. map) lead to changes in something else. However, as John Gargani discussed in a session at the American Evaluation Association 2013 conference, the field has lacked a way to show that these models work and to determine which models work best.

An important contribution of Integrative Propositional Analysis (IPA) is that, unlike other approaches, it provides a way to do just that. It lets us evaluate the quality of maps themselves based on the maps' structure. This enables us to assess which maps are most likely to work as expected before putting them into action. Researchers begin with a text, such as an evaluation report, interview transcript, or strategic plan. Next, they identify concepts and causal connections between the concepts in the text, and rigorously integrate those propositions into a visual diagram or knowledge map. Unlike other methods like concept mapping, IPA provides a way to quantitatively and qualitatively evaluate the resulting map to determine the strengths and weaknesses of its structure. Previous studies have applied IPA to assess theories in wide-ranging fields, such as physics (Wallis, 2010a), alcohol and drug policies (Wallis, 2010b), international policy (Shackelford, 2014), grant applications (Cotae, 2015), sustainability (Wallis & Valentinov, 2016), and theories of entrepreneurship (Wright & Wallis, 2015).

In this paper, the authors demonstrate the use of IPA to integrate insights gained from across secondary research (review of the broad related literature) and primary research (stakeholder interviews), to support the design of strategies that are more effective in the world.

Applying IPA to Build a Strong Knowledge Map for Strong Communities

For this paper, the authors applied IPA to a literature review and stakeholder interviews conducted for the evaluation. This informed the design of the next phase of a project to find ways to encourage engagement in HIV care and HIV prevention among Black and Latinx gay and bisexual men and transgender women in the Southern United States. The first author of this paper developed the project with the purpose of identifying local effective practices for community-based organizations and community health centers in six Southern U.S. cities to promote engagement in HIV care and HIV prevention among the gay and bisexual men of color and transgender women of color they serve.

The authors' approach began with a conventional literature review. To identify relevant studies, they searched key websites (e.g. Centers for Disease Control and Prevention (CDC), Health Resources & Services Administration (HRSA), conducted general internet (Google) and literature database (Google Scholar) searches, and obtained studies known to the project team. A review of initial search results led to additional sources that those studies cited. After screening of the studies, a total of 24 relevant publications were selected to include in the literature review for the project.

Using a commonly accepted approach to selecting studies, only the latest available studies from leading authoritative sources were selected. The authors included a broad range of types of materials (e.g. journal articles, webinars, research reports) and study design types. Following recommended practices for literature reviews, studies were not restricted based on their quality (Wright, 2013). A widespread myth about literature reviews is that, "A systematic review can only be of high quality if the primary evidence is of high quality" (Moat et al., 2013). If that level of evidence is lacking, then reviews may recommend "more research" and make no practical recommendations (Dijkers, 2009). The authors took the view that, "Systematic reviewers should consider all available research and not disregard investigations of a quality level below an artificially drawn line" (Dijkers, 2009). As one set of guidelines for reviews in health care (CRD, 2009, p. 10) noted, "Although quality assessment can sometimes be used to exclude studies that do not meet certain criteria, this is not standard practice." Reviewers can take into account any variations that they find in the quality or relevance of previous research when they examine the results and draw conclusions (Gough et al., 2012).

The authors included any source that provided information to help answer the study questions. The reviewed publications included academic journal articles, reports from stakeholder forums, and research reports. The studies used varied designs and methods, including in-depth interviews, surveys, field experiments, and statistical analyses of medical records data.

Relevant information was extracted from each study into an Excel chart, with columns for study information (bibliographic information, study population, geographic location, methods) and study findings for each research question (findings related to strengths and barriers associated with

engagement in care, findings regarding stakeholder recommendations to overcome barriers, results of interventions to increase engagement in care). A first draft literature review report was developed by synthesizing the study findings by research question and theme (e.g. housing, combating stigma, social media outreach).

While this approach produced much information to help answer the research questions, it did not show a lot of causal connections between the concepts (variables) relevant to the specific project. The authors wanted to see if more useful insights could be gained using IPA. IPA was applied to create knowledge maps to show insights gained from the draft literature review report of findings from 24 studies, plus five newly found studies that were added to the review. A potential step for future research would be to conduct a systematic assessment of each included study, using an evidence assessment tool such as the ones mentioned above (Wright & Lewis, 2016a, 2016b).

At the time of writing this paper, the authors are in the process of transcribing interviews that the first author conducted with community members and providers in the six Strong Communities cities. Thus, the analysis for this paper includes findings from interviews from one of the cities, Birmingham, Alabama.

Identifying Concepts and Causal Connections within Texts

The first step in applying IPA was to identify concepts and causal connections within the propositions found in each text (the draft literature review report and five new studies). The authors accept that some readers may have some skepticism where claims of causation are made. This is understandable given the difficulty of inferring causal relationships (Sprites, Glymour, & Scheines, 1993) and the lack of agreement in the field of evaluation about what constitutes acceptable evidence of causation (Cook et al., 2010). Like many researchers, the authors take the view that both quantitative methods and qualitative methods such as case studies can effectively establish causality, test hypotheses, and build theories in many situations (EES, 2007; Flyvbjerg, 2006; Patton, 2013; Stern et al., 2012; Woolcock, 2013; Yin, 1994). Yet, causation is still a core assumption of science for qualitative, quantitative, modernist, and postmodern perspectives (Maxwell, 2004). Understanding both the reluctance and the importance, it should be noted than a key feature of IPA is to advance maps from "simple" causality (which is prone to errors in understanding and application) toward "complex" causality; which is more likely to represent deeper understanding and lead to more successful decisions to reach intended goals (Goltz, 2017; Wallis, 2013, 2014b, 2016a 2016b).

For the present study, the authors relied on the assumptions of causality presented by the publication authors and by the participants in the interviews.

For example, in the excerpt below, analysts identified four concepts (highlighted in italics): 1) combating the HIV epidemic, 2) program for working with minority churches, 3) collaboration between organizations and providers, and 4) training about caring for people living with HIV.

"In the Jackson, Mississippi study (Reif et al., 2015), participants identified the following additional strengths that could help efforts to *combat the HIV epidemic* in the area:

- An innovative *program for working in minority churches*
- Strong *collaborations between some organizations and HIV care providers*
- An active AIDS Training Network, providing classroom and field *training to medical professionals about caring for people living with HIV*"

A connection shows where participants have inferred a causal relationship; where something contributes to more or less of something else. Among these concepts, the authors identified three causal connections between the concepts:

- Program for working in minority churches *causes more/strengthens* combating the HIV epidemic
- Collaboration between organizations and providers *causes more/strengthens* combating the HIV epidemic
- Training about caring for people living with HIV *causes more/strengthens* combating the HIV epidemic

Through an iterative process, the authors created and refined codes, or labels, for each concept that was identified, such as "improved health" for "positive effects on participants' health." Similar to any qualitative analysis of text for an evaluation, text from two or more studies was coded as the same concept when the studies appeared to be talking about a common theme, such as "feeling better/improved health" for improved health outcomes, higher number of

patients with suppressed viral loads, and feeling better (less sick from HIV).

The authors identified and coded concepts and connections from the five Birmingham, Alabama interview transcripts in the same manner as for the literature review. The authors added new codes for new concepts developed in interviews.

In identifying causal relationships, the authors were careful to diagram only those that were explicitly stated in the writings. The authors avoided making assumptions about what they thought the interview participants or authors of included studies "meant to say."

The authors created "tags" (for use in Kumu) for multiple concepts that had a common theme, such as the tag "Medicaid expansion/improvement" for "Medicaid expansion," "Medicaid improvement," "increase Medicaid provider reimbursement rates," and "adequate Medicaid coverage for people with HIV."

The authors entered the concepts, connections, and study information for each concept and connection into an Excel spreadsheet.

Diagramming the Concepts and Propositions

The next IPA step was to diagram the concepts and causal relationships between them (propositions) that the authors found in Step 1. This involved drawing one circle for each concept and arrows to show causal relationships between the circles. The authors used solid arrows to denote "causes more" and dashed arrows for "causes less."

The authors used KUMU to facilitate creating a diagram, using techniques that the authors had developed for a previous IPA analysis examining economic platforms of candidates for President of the United States in 2016 (Wallis, Wright, & Nash, 2016). The authors designed an Excel spreadsheet for recording information about the concepts and propositions that were identified to be compatible with uploading to KUMU to automatically create a map from the concepts. This Excel file included one sheet listing the concepts (called "elements" in KUMU) and one sheet listing the connections between concepts. The authors used additional columns to store "tags" and fields for various information that they wanted to be shown when a map user clicked on an element or connection to see details about the item. The fields included descriptions of the study findings for each study that mentioned the concept or proposition, the number of studies that mentioned the concept/proposition, and whether the concept was specific to a particular intersection with health that was the focus of Strong Communities (sexual orientation, gender identity, race/ethnicity, and geography).

The resulting map was a synthesis of all concepts and connections that the authors identified in the literature review and the interviews. The authors created separate "views" of the map (a KUMU tool) to show the map containing concepts and connections from the literature review and the map containing concepts/connections from the interviews.

Key Themes and Intersections

The authors identified key themes in terms of the evaluation study question of what are the effective practices and opportunities for increasing engagement in HIV care and prevention of HIV among gay and bisexual men of color and transgender women of color in the Strong Communities cities. These were the concepts (or tags for groups of related concepts) for strengths and opportunities that the studies most frequently mentioned. The following key themes emerged from the literature review:

- Less stigma/shame (8 studies)
- Housing support (5 studies)
- Resolving financial issues, such as higher income, funds to pay for services (5 studies)
- Multi-component initiatives, such as a HRSA (2011) intervention that comprised social outreach, motivation interviewing, internet-based interventions, in-reach though local health care and service systems to identify HIV-positive patients who had fallen out of care, and other components (5 studies)
- Transportation (5 studies)

Below are the top-mentioned themes from the Birmingham, Alabama interviews:

- Less stigma (all 5 Birmingham interviews)
- Less homelessness/more housing (4 interviews)
- Youth programs/positive youth development/comprehensive sex education (3 interviews)
- More competent/good quality doctors/providers (3 interviews)
- Resilience/personal strength (3 interviews)
- Medicaid expansion/improvement (3 interviews)

To show the top-mentioned themes, the authors used the "decorate" tool in Kumu to adjust

the size of the arrows and circles based on the number of studies (for the literature review map) or number of interviews (for the interviews map) that mentioned the concept (Figure 1).

Next, for each map, the authors identified concepts related to the intersections of interest to the Strong Communities project, namely intersections between HIV-related health outcomes and race/ethnicity, sexual orientation, gender identity, and geography. For example, from the literature

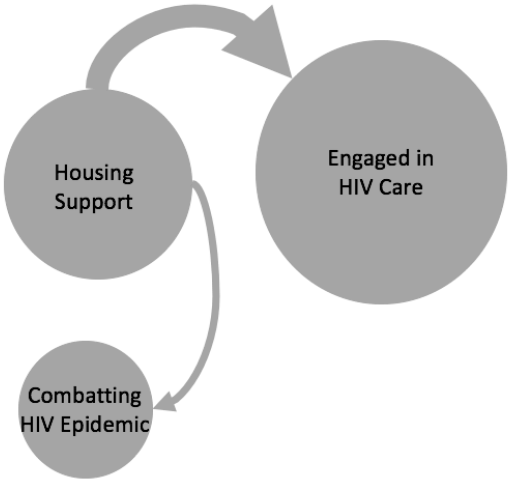

Figure 1. Larger circle, wider arrows = more studies

review and interviews emerged 18 concepts about intersections with race/ethnicity, such as bilingual staff/interpreters at clinics for Spanish-speaking patients, conversations and work on racial justice in the South, and more Black doctors.

The authors created separate views of the integrated map to show concepts relevant to each intersection.

Map Analysis

Qualitative analysis of the map structure involved examining the map to find better-understood concepts (Wallis, 2016b), reinforcing loops (Wallis, 2016a), and knowledge gaps, to support effective program planning and future research (Rostami & Wright, 2016).

Better-understood concepts. In IPA, concepts that have two or more causal explanations within the map (more than one arrow pointing towards them) are considered better-understood (or transformational) concepts. This is based on literature in philosophy and logic showing that having two or more explanations for something results in emergent knowledge, that is, new understanding that could not be understood with any one explanation alone (Wallis & Wright, 2014). Simply put, a transformational concept is one with two or more causal arrows pointing toward it from other concepts. In more traditional terms, one might think of the transformational concept as the dependent variable and the two other concepts as the independent variables. Generally speaking, it is better to have more independent variables than dependent variables.

Our map from the literature review contained 15 transformational concepts (concepts with at least two arrows leading to them), the stakeholder interviews map contained 12 transformational concepts, and the integrated map contained 27 transformational concepts. These represent where people are more likely to be successful in action, because they have a better understanding of how to make those things happen. This is similar to how, on a road trip using a paper map, one is more able to effectively plan the best route to reach a destination when the map shows multiple roads leading there.

Of the 27 transformational concepts in the integrated map, 24 were transformational in the literature review map only (9), the interviews map only (12), or both the interviews map and the literature map (3). Three of the concepts were not transformative in either of the individual maps, but became transformative on the integrated map. For example, the literature review revealed one thing that could help people get more social support: a social media campaign in which participants connected online. The interviews showed one other way to access social support: volunteering or working in HIV-related services. As shown in Figure 2 (representing a small part of the integrated map), one can see both paths to getting more social support, making this concept better-explained (transformational). This is important because it provides objective evidence that the integrated map provides a measurably higher level of understanding, a better explanation for the situation, than could either map alone. That in turn provides a deeper, more useful understanding so that program leaders may make more reliable decisions to create more effective programs.

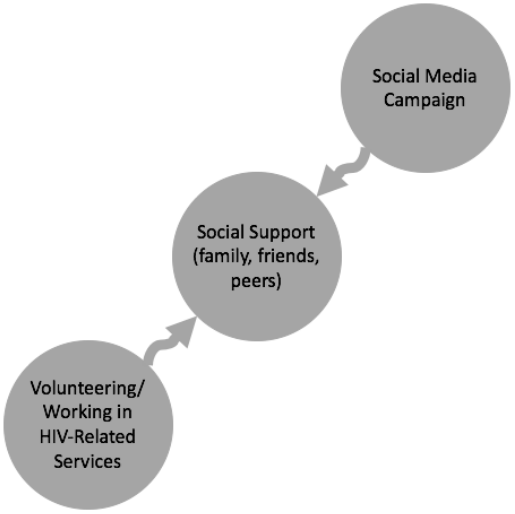

Figure 2. Social support is a transformational (well-supported concept)

Reinforcing loops. Along with Senge's work on the "Fifth Discipline" of organizational learning and leadership (Senge, 1990), much of the science of cybernetics is predicated on feedback as found in reinforcing loops (Dent & Umpleby, 1998). Loops are useful for showing us how small actions may reinforce themselves over time to produce significant results – far out of proportion to the original effort. One reinforcing loop that the authors found on the map is shown in Figure 3. In this loop, being engaged in HIV care was a source of resilience/personal strength, and resilience/personal strength facilitated engagement in care. This shows how both may be improved by increasing one—a more efficient approach.

Figure 3. A reinforcing loop shows how two outcomes can be improved by improving one

Knowledge gaps. The map also shows knowledge gaps, or what is unknown. This approach is similar to Mendeleev's experience in developing a periodic table of elements known at the time. The blank spots on that original periodic table showed where scientists could look to find new elements.

Concepts with one or fewer arrows pointing to them can be thought of as "orphan concepts" (Rostami & Wright, 2016). These are concepts that are less well understood. These indicate places where more information is needed to identify new connections and/or new concepts to explain what might make those concepts happen. The authors' integrated map contains several orphan concepts; Figure 4 shows a few examples. As these concepts become connected, the knowledge gaps will be filled and the map will become still more useful for program managers and policy makers.

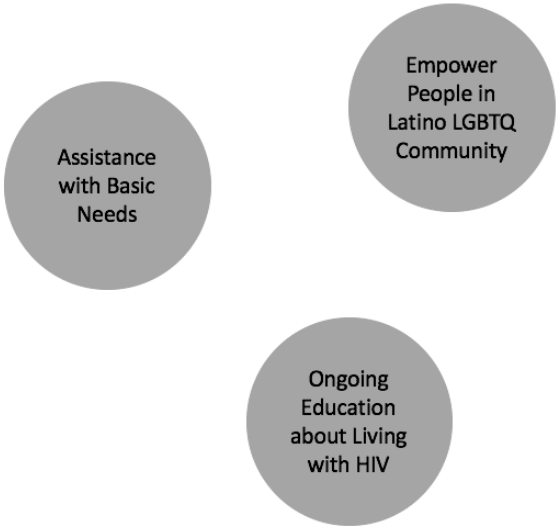

Figure 4. "Orphan" concepts show knowledge gaps where no arrows connect them

Conclusions

This analysis showed several benefits to creating a visual knowledge map and analyzing the strengths and weaknesses of the map using a conceptual systems analysis technique, such as IPA. Several opportunities exist to strengthen this research and to expand the method to more usefully structure how evaluation and related research findings are stored.

Limitations and Ideas for Further Research

As with any qualitative literature review or interview study, one limitation is that researchers may not always accurately identify what the studies and interview participants said. One technique to increase confidence in the accuracy of the results would be for more than one researcher to independently review and code each study/interview transcript and resolve differences in their results. Although the authors' literature review uncovered much useful information, it was not exhaustive. A more comprehensive review could add more findings to the map and strengthen the map. Further research could incorporate literature that might better explain concepts on the map that show no concepts or only one concept leading to them.

The map developed for this study provided a rough measure of the evidence for each concept/connection in terms of the number of supporting studies or interviews. A more rigorous assessment of the evidence would involve scrutinizing the quality of evidence for each study, based on factors such as the appropriateness of the research methods for the questions, the proper application of the methods used, and the relevance of the study to the situation at hand.

Ideas for Developing Stronger Theories for More Effective Action

A useful next step for the next phase of the Strong Communities project would be to make the complete maps the authors developed for this paper (currently unpublished) available to community organizations and health centers to help plan effective practices and policy advocacy.

Additional views of the map could be created as needed to show the parts of the map that are relevant to partnering organizations such as medical clinics, health care systems, housing, and transportation. This would support collaboration and communication between community organizations, clinics, and partnering organizations.

Using IPA to create and evaluate a strategic knowledge map would support evaluators to create a more structured understanding of the literature. It would also be useful for dissertations and similar research projects for reviewing related research and showing how the study improves understanding and serves as a science accelerator. An advantage of this approach is that it clearly shows how each study fills gaps in the body of knowledge and advances knowledge in a field, not merely adding to the dusty storehouse of knowledge. Further, this approach would be very useful for conducting collaborative and interdisciplinary research because the IPA method is amenable to integrating theoretical models within and between disciplines (Wallis, 2014a). In short, IPA would be a useful addition to researchers' methodological toolbox.

An idea for theory authors is to provide diagrams (strategic knowledge maps) or concise statements of their theories, to make them more amenable to rigorous meta-theoretical analysis (Wright & Wallis, 2015). Each study would be a structured component creating a structured bridge to a better future in which the social/behavioral sciences are more respected by the general public because those sciences provide more benefits to society.

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