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EVIDENCE-BASED COMMUNITY RESILIENCE INTERVENTIONS TO PROMOTE HEALTH OUTCOMES AND HEALTH-SEEKING BEHAVIORS AMONG ADOLESCENTS AND YOUNG ADULTS

A SYSTEMATIC LITERATURE REVIEW

June 9, 2022

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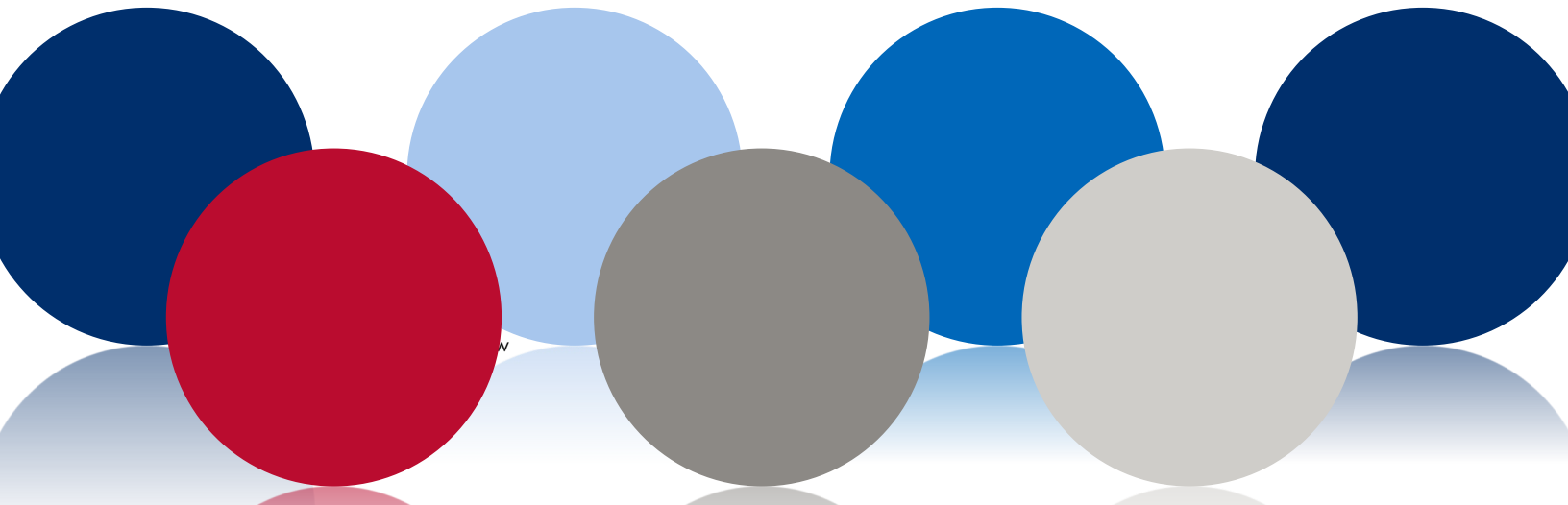

Evidence-Based Community Resilience Interventions to Promote Health Outcomes and Health-Seeking Behaviors among Adolescents and Young Adults

A Systematic Literature Review

June 9, 2022

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Acronyms and Abbreviations

BCW	Behavior Change Wheel
HIV	Human Immunodeficiency Virus
IBM-WASH	Integrated Behavioral Model for Water Sanitation and Hygiene Framework
KIIs	Key Informant Interviews
LMICs	Low- and Middle-Income Countries
MCI	Making Cents International
MHPSS	Mental Health and Psychosocial Support
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
SET	Socio-Ecological Theory
SERT	Social Ecology of Resilience Theory
ToC	Theory of Change
ToR	Tutor of Resilience
USAID	United States Agency for International Development
USAID MBIO	USAID Missions, Bureaus, and Independent Offices (MBIO)
YP2LE	YouthPower2: Learning and Evaluation

Abstract

The role of community resilience in enabling and supporting positive youth health outcomes has recently gained the attention of researchers, policymakers, and donors globally. However, our understanding of community resilience and its linkages to youth health are limited, partly due to the lack of systematic literature reviews available on the topic of community resilience and youth health outcomes. To address this gap, we systematically searched academic and grey literature and conducted key informant interviews (KIIs) to appraise the state of knowledge and evidence on community resilience and youth health in low- and middle-income countries (LMICs). Across three systematic phases, our search yielded 118 publications that met the inclusion criteria. Our review of the literature revealed valuable insight into an area that remains in its early stages. Findings from our review are presented in four phases. Phase 1 describes community resilience within the context of adolescent and youth health, including building blocks. We also described the key theories and models for building community resilience to improve youth health outcomes and the types of stressors and shocks that affect it. We developed a conceptual framework that synthesizes and visualizes our current understanding of community resilience in health among youth in LMICs. Phase 2 assesses youth-focused resilience programming in LMICs by describing how they address shocks and stressors affecting youth health and their effectiveness in mitigating them and improving health outcomes. Phase 3 reviews community resilience measures in the context of youth health outcomes, types of indicators used, and impact evaluation of resilience programming using reliable and validated measures. Phase 4 presents KII findings. Across phases, we identified six themes and four emergent gaps. Policy, practice, and research implications are discussed.

Executive Summary

There is increasing recognition that community resilience plays a significant role in improving and enhancing youth health outcomes. However, there remains no systematic literature review on community resilience and its role in youth health outcomes in LMICs. This systematic review report presents the current landscape of community resilience and its contribution to improving youth health outcomes. The knowledge acquired from this investment can be leveraged to improve the enabling environments that are critical to cultivate healthy behaviors that promote positive outcomes throughout the life-course of young people.

As defined in USAID's Youth in Development Policy (2012), young people include those individuals aged 10-29 years old. Adolescence and young adulthood are characterized by critical changes in young people's development and health trajectories. To navigate through these stages and make healthy transitions to adulthood, adolescents and young adults need supportive relationships and environments both at home and in their communities. Due to the significant and unique life changes during these stages, competing demands and challenges can interfere with young peoples' abilities to successfully manage their health. These challenges are compounded for youth in fragile settings, which are marked by instability and constant change. Access to health services is often markedly reduced in fragile settings, due to conflict, inaccessibility, or other factors. In addition, policies and services that are not inclusive of youth can pose more challenges that influence the extent to which adolescents and young people attain optimal health and well-being effectively. It is essential to understand these interactions between young people and their dynamic personal, community, and cultural contexts.

This systematic review report was motivated by the goal to deepen our understanding of youth's health resilience in the context of low- and middle-income countries (LMICs) through exploring broadly how resilience is defined, best practices, the extent to which shocks and stressors influence resilience and youth health behaviors, and how community resilience is being measured. The methodology in this report adheres strictly to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The team searched 26 bibliographic databases and collections maintained by international development organizations and donors. After screening, appraising, and synthesizing a total of 118 peer-reviewed articles and reports were retrieved and included in the analysis. To address gaps in literature and to further contextualize learnings, key informant interviews (KIIs) were conducted with researchers, practitioners, and representatives from USAID's Center for Resilience and USAID Missions Bureaus, and Independent Offices (MBIOs).

Findings

Definition of community resilience: Findings in this report indicate that there is no agreement on the universal definition of community resilience. Community resilience in the health sector assumes a reciprocal relationship between individual (i.e., youth) and community resilience. **Although individual resilience is important, individual resilience is not sufficient to achieve community resilience. A resilient community is not necessarily a community of resilient members.** Community resilience in health is a complex process of converging physical, sociocultural, and economic environments. In turn, these environments create and enable individual, family, and community resources in pursuit of well-being and survival, both in the context of chronic and acute events or adversities (Barrington et al., 2017). In this report, Barrington et al., 2017 definition of community resilience is used. Because community resilience in health has a connotation of the interplay of individual and community, it requires building both personal and collective capacities to address vulnerabilities to build resilient communities as a strategy for health (South et al. 2020). Although resources are central to the concept of resilience, it is not a given that when resources are available in a young person's environment, the young person has access to these resources. Positive youth health outcomes and well-being can only be achieved when the resources in the young person's environment are accessible to them.

Theoretical Foundations for Community Resilience: The socio-ecological theory (SET) by Bronfenbrenner (1977) informs most of the models, approaches, and theories of change that frame the importance of community resilience for positive youth health outcomes. Broadly, Bronfenbrenner's socio-ecological theory purports that an individual is influenced by their environment at the micro, mezzo, and macro levels (Banati et al., 2020, Bronfenbrenner, 1977). Our review identified a dearth of community-resilience-building models and approaches that are specific to LMICs and that have been adapted and implemented with youth in LMICs. A total of seven theories and models were identified. Further emerging as a key to unlocking health outcomes is the interaction between personal strengths and socio-ecological resources.

Although SET provides theoretical underpinnings of community resilience, there needs to be more empirical testing of SET informed community-resilience-building models and approaches for youth health in LMICs. Furthermore, before testing and evaluating effects on youth health outcomes, cultural adaptation of community-resilience-building models for youth health is crucial.

Shocks and Stressors that affect Community Resilience and Youth Health Outcomes: This review identified various shocks and stressors that exist across the micro (i.e., individual and household), mezzo (i.e., community), and macro (i.e., society/structural) levels. The shocks and stressors, which influence one another and operate within and between levels, are linked to community resilience or lack thereof, building blocks, and health outcomes.

In **interpersonal relationships**, shocks and stressors include perverse social capital (i.e., negative dimensions of social capital that may have benefits for individuals, but, in contrast, may result in negative outcomes for the wider community), poverty, and food insecurity (Collishaw et al., 2016), interpersonal violence (Collishaw et al., 2016), acculturation distress, or stressors associated with being an immigrant, an ethnic minority or a refugee (Abu-Kaf et al., 2021; Badri et al., 2020), and family bereavements (Collishaw et al., 2016).

In **communities**, shocks and stressors include lack of positive social institutions (Myers et al., 2016), widespread poverty (Badri et al., 2020; Rosen et al., 2021; Theron and van Breda, 2021), violence (Collishaw et al., 2016), community stigma (Collishaw et al., 2016; Rosen et al., 2021), gender-biased norms (Myers et al., 2016), the invisibility of youth in local policy and decision making, and an unfavorable built environment (Myers et al., 2016).

In **societies**, shocks and stressors include social exclusion, gender inequality, racism, and discrimination (Badri et al., 2020), and conflict and political instability at the regional or national level (Bosqui and Marshoud, 2018; Rangel et al., 2016).

Protective Factors that build Community Resilience and Youth Health Outcomes: This review identified various protective factors that affect community resilience and alleviate the impact of adverse events on health outcomes. Currently, there is more research on individual resilience, compared to studies exploring the link between community resilience and health outcomes. Although individual and community resilience are interrelated, the pathways or mechanisms that link the same shock, stressor, or protective factor to health outcomes likely differ between individual and community resilience. Further research is needed to elucidate pathways and mechanisms that link individual resilience to community resilience and how various shocks, stressors, and protective factors affect those pathways.

In **interpersonal relationships**, protective factors include social capital (Myers et al., 2016; Pfeiffer et al., 2017), social support (Alampay et al., 2017; Denov and Khan, 2019; Hebbani et al., 2018; Rosenbaum, 2017; van Aswegen, 2019; Panter-Brick et al., 2018; Fayyad et al., 2017), and participation in religious rituals and spirituality/religiosity (Hassan et al., 2017; Hebbani et al., 2018).

In **communities,** protective factors include community coherence and connectedness (Abu-Kaf, 2021), community support (Hebbani et al., 2018; Alampay et al., 2017; Rosenbaum, 2017; Ndetei et al., 2019), and the built and natural environment (Theron and van Breda, 2021).

In **societies**, protective factors comprise the inclusion of youth issues in health policy and planning (Myers et al., 2016) and culture (Alampay et al., 2017; Al-Krenawi and Kimberley, 2014). Inclusion of youth issues in health policy and planning may result in responsive systems that are available, accessible, and responsive to their health needs (Myers et al., 2016). Culture which enables a shared identity, and social bonds, has an overarching effect on all levels of resilience—individual, family, community, and society.

Programs that mitigate the impact of shocks and stressors on youth health outcomes: Different forms of behavioral therapy have been integrated into resilience programming for youth in LMICs (Watters and O'Callaghan, 2016). The dominant use of behavioral health therapy is mainly due to the conceptualization of youth resilience as a psychological attribute. Consequently, most programming has adopted a mental health focus. Although these programs have focused on mental health and individual resilience, they are likely to benefit community-level resilience and youth health outcomes. Individual resilience and mental health are substantially influenced by interpersonal relationships, community, and societal-level factors.

Gaps in programming research: Based on the findings of this review activity, a number of gaps within community resilience programming research were identified.

- *Limited number of youth-specific and community resilience-focused programs in health.* Very few youth-specific or youth-inclusive community resilience programs exist within the health sector. The community resilience literature is dominated by disciplines such as disaster management, whereas the health sector is only beginning to develop programs that have a community resilience focus.
- *Program designs and approaches vary in rigor and quality; documented impacts on youth health outcomes are limited.* There is a lack of rigorous evaluations to identify and quantify the impacts of programming on youth health outcomes. Existing evaluations are limited in scope, only assessing individual-level outcomes (i.e., mental health and psychosocial well-being) rather than community-level resilience outcomes (i.e., responsive and inclusive policies and community preparedness).
- *More programs need to actively engage young people.* Although the programs in this review indicate that youth were engaged in delivering services and were active participants in their health interventions, not all programs reviewed included youth engagement as a core feature of service delivery. Youth engagement needs to be contextually and culturally specific, so that youth can serve as active leaders in their health and have a voice in how they would like to engage.
- *Programs are multi-component and target young people and their families, but there were few community-focused programs.* Although programs focused on improving youth mental health and related outcomes, their implementation consisted of multiple intervention components targeted at different levels of the youth's environment (i.e., individual, family, and community). Findings show that there was heavy emphasis on the youth themselves and less emphasis on the environments in which these youth live.
- *Programs are primarily mental health focused.* Majority of the programs in this review are mental health focused. Moving away from narrowly focusing on resilience in the context of mental health might allow for an expansion of interventions that can be offered and implemented.

Measuring community resilience: Measurement of community resilience in the context of youth health outcomes is a critical step in building evidence of the source, presence, and/or strength of resilience (MHPSS 2021). Through this review, we identified tools measuring community resilience at the level of the individual (youth/adolescent), program or organization, and community, though with a wide range of quality of validity and reliability information on each tool.

- **Very few quantitative tools exist.** We identified ten quantitative tools for community resilience measurement, one of which was made-for-purpose and nine had been developed and used in at least one other context and re-implemented in the identified study.
- **Individual indicators are dominant.** Indicators at the individual level were clearly defined, rigorously measured, and there were more studies measuring individual level indicators. In contrast, fewer studies measured indicators at the program/organization or community level, and those measured were of lessor rigor or quality.
- **Moderately reliable tools**. Measurement of community resilience, individual resilience, and youth health in LMICs has been conducted using tools that perform moderately reliably and for the most part included metrics of validity.
- **Tools are mostly qualitative not quantitative.** Measurement tools are mostly qualitative rather than quantitative. Exploratory qualitative work, particularly using participatory methods, provided an efficient mechanism for understanding community resilience holistically, but comparisons between communities in terms of impact using these methods is difficult.

Overall Key Takeaways

This systematic review aimed to understand community resilience programming and its impacts on youth health outcomes. The studies included in this report are a subset of the available literature that might have a broader focus other than that defined by the inclusion criteria used in this review. Therefore, takeaways here are narrowly focused on the intersections of the inclusion criteria for this systematic review.

Key Themes

Definition of community resilience in youth health outcomes is in its infancy. Through this review, although community resilience emerged as an important concept that has significant implications for youth health outcomes, the literature indicates that, as it applies to youth health outcomes, it is still in its infancy and much work still needs to be done. For example, definitions of community resilience and its genesis are from disciplines outside health, and more work needs to be done to define it as it pertains to youth health.

There is a bi-directional relationship between individual and community resilience. Individual resilience is often not mentioned when community resilience is discussed. This lack of mention is a gap in the literature because a young person takes advantage of community resilience building blocks when they are resilient themselves. Building individual resilience should be a focus of community resilience, and efforts to leverage community resilience should be built to ensure enhanced youth capacity.

The socio-ecological model is critical to understanding community resilience programming for positive youth health outcomes. The socio-ecological model (SEM) was predominant and informed the other models and approaches identified in the literature. The prominence of the SEM is a key finding and demonstrates the foundational role that the socio-ecological model's tenets play in a young person's development. The supporting and enabling environments of a young person provide a buffer against health shocks and stressors and alleviate the impacts of crisis when it occurs. The principles of the SEM align with the Positive Youth Development (PYD) goal of creating healthy, productive, and engaged youth by improving their assets, agency, contribution, and enabling environment.

Programs build individual resilience through positive mental health. Building youth or individual-level resilience is a common characteristic of the programs included in this review. Programs that build individual resilience do so by providing youth with skills or strategies to manage shocks and stressors and improve mental health. These skills and strategies (e.g., problem solving) are delivered through structured counseling or training sessions. Although mental health is a key focus, programs use multilevel strategies to build youth resilience, including participation of parents or caregivers in the intervention and implementation of programs within community institutions (e.g., schools).

Programs that build individual skills and focus on the overall health of youth, while work with parents or caregivers, present the ideal approach for improving youth health outcomes, but it is worthwhile to note that programming including all these aspects are not typically described in the current literature. ***Program evaluation focuses on mental health and related outcomes.*** Our review indicates assessment of mental health as the most common study outcome. Mental health has been primarily operationalized as either anxiety or depression. The overwhelming emphasis on mental health illustrates the dominant conceptualization of resilience as an individual or personal attribute that allows youth to "bounce back" from a challenging experience or adapt well in the face of shocks and stressors. Thus, health outcomes expected to correlate with resiliency, albeit individual resilience, are mental health focused. There is a gap in literature regarding prevention-focused programming that preempts poor mental health outcomes by preparing youth with tools to cope, mitigate health risks, and adapt in the face of sub-optimal situations that they may face.

Evidence supports positive effect on health outcomes. Evaluation studies reported positive impacts of resilience programming on a range of youth health outcomes. Although the evidence is promising, it is premature to suggest conclusive positive impacts of resilience programming on youth health outcomes. There remain few programs focused on youth resilience and health. Even fewer are youth-oriented resilience programs with published and accessible evaluation studies. Nonetheless, current studies assessed program efficacy and effectiveness using experimental designs, which strengthen causation. However, generalizability of evidence remains a challenge as most programs are context or country specific.

Emergent Gaps

Context-specific community resilience models: Western-based theories and models dominated the community resilience theoretical models identified in this review. Some theoretical and practice models were adapted to align with the context to which they applied. Interventions heavily relied on western models, and some were adapted to the local context. Further research that develops locally grown models that address youth health issues in local contexts is necessary. These specific community resilience models would include building indigenous problem-solving mechanisms that address local issues.

Target groups: Most of the programming in this review targeted adolescents and young women in school, indicating a gap in research and programming that targets out-of-school young people, and those in tertiary education or work. Studies with a focus beyond in- school target groups would highlight other community resilience building blocks specific to young people in work environments and college campuses. In addition, a more inclusive approach to community resilience in target groups can address other issues including gender-biased social norms that celebrate male success and not female success, and community stigma against the Lesbian, Gay, Bisexual, Transexual, Queer, and Intersex (LGBTQI) community.

Detrimental cultural practices: None of the studies identified discussed detrimental cultural practices and religious rituals detrimental to young people. In some LMIC contexts, some practices can reduce young people, particularly girls' self-confidence, self-esteem, and sense of control. Although some studies mentioned traditional and religious leaders as an asset, the caveat is that these leaders in certain settings can also negatively influence young people's positive health outcomes. Patriarchy can be a source of oppression for young women in some cultures where women are considered less than and a property of male relatives. These cultural practices render women voiceless and sometimes victims of patriarchal abuse.

Youth participation: Community resilience is fundamentally communal. The studies in the review did not discuss youth participation. The participation of youth in building community resilience is critical as their engagement and agency contribute to an alignment between the solutions and the challenges faced by youth. When youth are isolated and lack access to community resources (defined broadly), youth cannot thrive in such an environment. This participation will have to take place at micro, mezzo, and macro levels,

not only for youth to have a sense of belonging but to also respond to what their environment offers and change it for good. The centrality of meaningful youth participation is well-aligned with the PYD model, which was also a gap in the literature.

Recommendations

Develop a Theory of Change (ToC) that will lay the foundation to address gaps in the community resilience for youth health outcomes literature. This ToC will integrate findings from this systematic review, youth contributions, and knowledge from a more representative sample of experts and key stakeholders who are deeply immersed in community resilience work and youth health outcomes in LMICs. Given the lack of clarity between individual (youth) resilience and community resilience, the ToC might also define differences between these two concepts and help identify opportunities for program interventions that address both youth and community needs that can be implemented and evaluated.

Conduct research to develop a clear pathway of how stressors, shocks, and protective factors influence youth health outcomes. In this review, it is clear that the research investigates the association of stressors, shocks, and protective factors on youth resilience but does not go further to establish how youth resilience translates to positive health outcomes. Research that would test these pathways might also identify preventative measures to promote youth well-being and avoid negative health impacts for youth before they occur.

Establish inter-sectoral work that will connect community resilience and youth health outcomes work with positive youth development (PYD). There is a dearth in literature on this connection. However, given findings from this systematic review, a case can be made on how community resilience for positive youth health outcomes is well aligned with PYD. PYD can provide a comprehensive foundation that will provide plausible explanations to questions and gaps that still exist in the community resilience work for youth health outcomes.

Develop measurement tools for community resilience with particular attention to community-level indicators, without diminishing the importance of the reciprocal relationship between individual resilience and community resilience for positive youth health outcomes. These measurement tools should be developed with an eye for incorporating context-specific aspects that will allow for tools to respond to the needs of different environments across LMICs. The participation of youth in creating these measures is key, coupled with participatory methods that will leverage stakeholders' knowledge across relevant sectors. This research will aid in understanding the constructs for measurement of resilience that are cross-cultural, and cross-sectoral.

Develop a blueprint for adapting practice models to local contexts. This blueprint can be developed as a framework for practitioners who want to adopt models from other contexts and/or develop a local community resilience model to address youth health outcomes. This will assist in building capacity within communities to deliver resiliency programming more efficiently and successfully.

Section I: Introduction

Community resilience has recently emerged as an essential contribution to positive youth health outcomes (Barrington et al., 2017). In the health sector, and particularly in LMICs, community resilience is still in its infancy; research and practice in community resilience are still developing. As a result, the conceptualization, operationalization, measurement, and implementation of community resilience to improve youth health outcomes in LMICs requires more work. This report presents the current landscape of community resilience and its contribution to improving youth health outcomes. The knowledge acquired from this investment can be leveraged to improve the enabling environments that are critical to cultivate healthy behaviors that promote positive outcomes throughout the life-course of young people. These enabling environments, created through community resilience, will be a step towards ensuring that youth contribute towards their well-being and that the systems, relationships, and institutions youth interact with are supportive of their development.

Community Resilience and Youth Health Outcomes

The role of community resilience in enabling and supporting youth health and well-being has recently gained the attention of researchers, policymakers, and donors globally. There is increasing recognition that community resilience plays a significant role in improving and enhancing youth health outcomes. However, there remains no systematic literature review on community resilience and its role in youth health outcomes in LMICs.

As defined in USAID's Youth in Development Policy (2012), young people include those individuals aged 10-29 years old. Adolescence and young adulthood are characterized by critical changes in young people's development and health trajectories. To navigate through these stages and make healthy transitions to adulthood, adolescents and young adults need supportive relationships and environments both at home and in their communities. Due to the significant and unique life changes taking place during this life stage, competing demands and challenges can interfere with young peoples' abilities to successfully manage their health. In addition, policies and services that are not inclusive of youth can pose more challenges, influencing the extent to which adolescents and young people effectively attain optimal health and well-being. Understanding these interactions between young people and their dynamic personal, community, and cultural contexts is essential. An approach that considers adolescents' healthy functioning based on how contextual resources and youth's capabilities interact might promote systemic changes and inform intervention designs that improve physical, mental, and social health outcomes for youth.

The United States Agency for International Development (USAID) defines resilience as "the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth (USAID Resilience Policy, 2012, p.9)." The USAID Building Resilience to Recurrent Crisis Policy (the Resilience Policy) recognizes that shocks and stressors cannot be prevented but the level of their impacts on individuals and communities can be mitigated through building resilience (USAID Resilience Policy, 2012).

This report was motivated by the goal to deepen our understanding of youth's health resilience in the context of LMICs through exploring broadly how resilience is defined, best practices, the extent to which shocks and stressors influence resilience and youth health behaviors, and how community resilience is being measured. Consequently, USAID commissioned YouthPower2: Learning and Evaluation (YP2LE) to systematically review academic and grey literature to better understand how to build community resilience to support youth in adopting positive health behaviors and accessing health services. By collecting and reviewing the extant literature, as well as conducting key informant interviews to contextualize initial findings, this report identifies core knowledge gaps. It also makes recommendations to guide future community health resilience research and implementation to improve youth outcomes in youth programming in LMICs.

This report begins by presenting this systematic review activity's purpose, objectives, methodology, and limitations. We then discuss the findings of our review, and the associated research questions. To contribute and advance knowledge in the field of addressing youth's health well-being in the context of their communities, we present a framework that depicts the key facets of community resilience, including its building blocks, stressors and shocks, protective factors, and the bi-directional relationship between individual and community resilience. We conclude this report by presenting implications and recommendations for future research and programming.

Section II: Purpose and Objectives of the Systematic Review

Through examination of available literature, current trends, and future directions, this systematic review activity seeks to better understand how to build community resilience to support youth. This includes developing an understanding of how researchers and practitioners are working to build youth's health and well-being through community resilience health programs and examining existing resources and tools to measure community resilience. The research team completed the systematic review across three distinct literature review phases; each phase included a set of guiding research questions. Table 1 outlines those research questions that were able to be either effectively addressed (i.e., substantial amount of literature reviewed), moderately addressed (i.e., would benefit from review of additional literature), or require more evidence (i.e., requires additional literature review) throughout this report.

Table 1. Summary of Review Activity Phases and Guiding Questions

Guiding Research Questions	Effectively Addressed	Moderately Addressed	More Evidence Required
Phase 1: Identify what goes into "optimal" community resilience and its connection to youth health outcomes			
1. How is community resilience defined in relation to youth health?	X		
2. What are the specific "building blocks" or best practices shown to lead to improved community-level resilience capacities?	X		
3. What are the key models, theories of change, approaches (e.g., PYD), and conceptual frameworks for building community resilience to improve youth health outcomes and health-seeking behaviors?	X		
4. Which community resilience models improve youth health outcomes and health-seeking behaviors?	X		
5. What types of stressors or shocks affect community resilience and affect youth health outcomes?	X		
6. To what extent do the practices differ by target population? (i.e., VM, gender, age segments)	X		
Phase 2: Identify specific programs and their connection to individual health outcomes			
1. What specific programs and program approaches (e.g., cross-sectoral, or sector-specific focus) have been successful at mitigating the impact of shocks and stressors on youth health outcomes?		X	
2. Who is targeted by community health resilience programming?		X	
3. How do community resilience-focused programs address or deal with shocks?			X
4. What, if any, community-level resilience capacities, across/grouped by absorptive, adaptive, and transformative capacities, are associated with improved health and health-			X

Guiding Research Questions	Effectively Addressed	Moderately Addressed	More Evidence Required
seeking behaviors of youth during/immediately following a crisis?			
5. What are the gaps in community resilience research and programming?		X	
Phase 3: Identify measurement of community resilience			
1. How are programs measuring community resilience?	X		
2. What indicators are being used to measure community resilience?		X	
3. To what extent have programs focused on promoting community resilience and related youth health outcomes been evaluated? (e.g., measurement indicators and evaluation activities)		X	

The literature review activities were further complemented by a fourth phase, which included qualitative key informant interviews with researchers and practitioners who are working to improve youth health outcomes using community resilience approaches.

Section III. Methodology and Limitations

The research questions for each phase were developed collaboratively with a team of experts from YP2LE and USAID. Representatives from these groups provided guidance and recommendations to the main authors as the report was developed.

Search Concepts and Strategy

The research team adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to conduct the search activities within this literature review. For phases 1-3, the team searched 26 bibliographic databases and collections maintained by international development organizations and donors. Given the unique nature of each phase, search terms and concepts were distinct across phases 1-3 and are depicted in Appendix A.

Eligibility Criteria

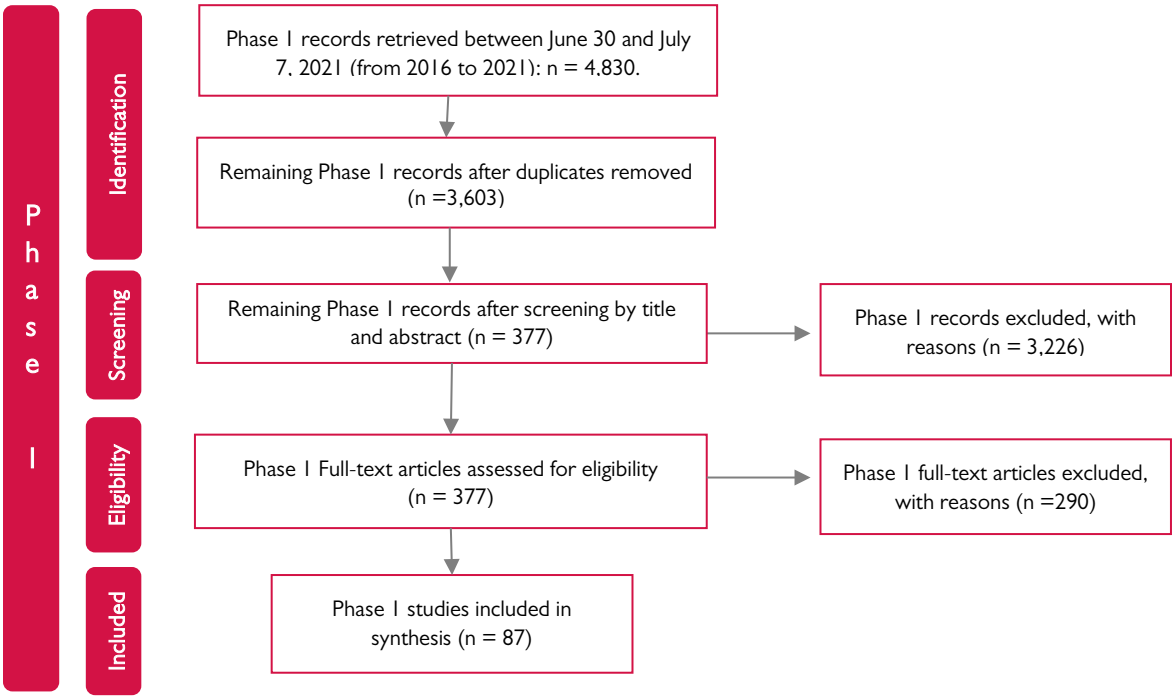
Search activities included review of grey and peer-reviewed literature. Due to the distinctive nature of each phase, eligibility criteria varied slightly within each phase. A posteriori exclusion criteria specific to each phase is documented in Appendix A. Across phases, a priori exclusion criteria determined that documents were excluded if they:

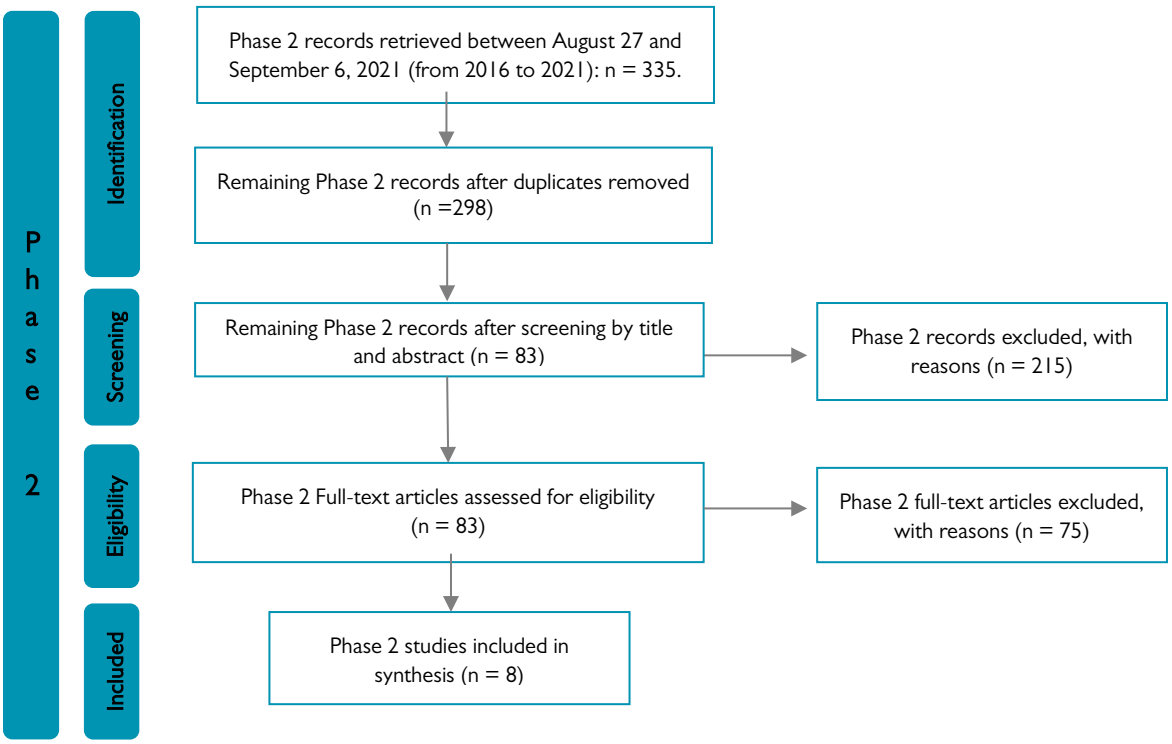
- provided insufficient information (e.g., abstracts only or conference papers);
- were published before or included data collected before 2016;
- were not specific to LMICs;
- were published in a language other than English;
- did not refer to the concepts of community resilience and health; and/or
- did not focus on youth populations between the ages of 10-29 (i.e., USAID's definition of youth).

Retrieval, Appraisal, and Synthesis

The number of citations references retrieved, appraised, and synthesized across each phase varied due to the amount of available literature. Figure 1 describes the number of references retrieved across each

phase. Phases 1 – 3 search activities were conducted between June 30, 2021 and September 6, 2021. Across Phases 1 and 2, citations were retrieved from their respective database and uploaded into Covidence, a web-based software to streamline the process of screening, appraising, and synthesizing available records. References reviewed across Phases 1-2 were primarily excluded because the resource did not refer to the concepts of community resilience and health, did not reference youth as the focus, did not reference a particular program or program approach, or were not specific to an LMIC. For Phase 3, citations were retrieved and compiled into an Excel document where screening, appraising, and synthesis activities were completed. References reviewed during this phase were excluded primarily because the resource did not refer to community health programming or measurement or did not reference youth as the focus.




Phase 2
Identification
Screening
Eligibility
Included
Phase 2 records retrieved between August 27 and September 6, 2021 (from 2016 to 2021): n = 335.
Remaining Phase 2 records after duplicates removed (n =298)
Remaining Phase 2 records after screening by title and abstract (n = 83)
Phase 2 records excluded, with reasons (n = 215)
Phase 2 Full-text articles assessed for eligibility (n = 83)
Phase 2 full-text articles excluded, with reasons (n = 75)
Phase 2 studies included in synthesis (n = 8)

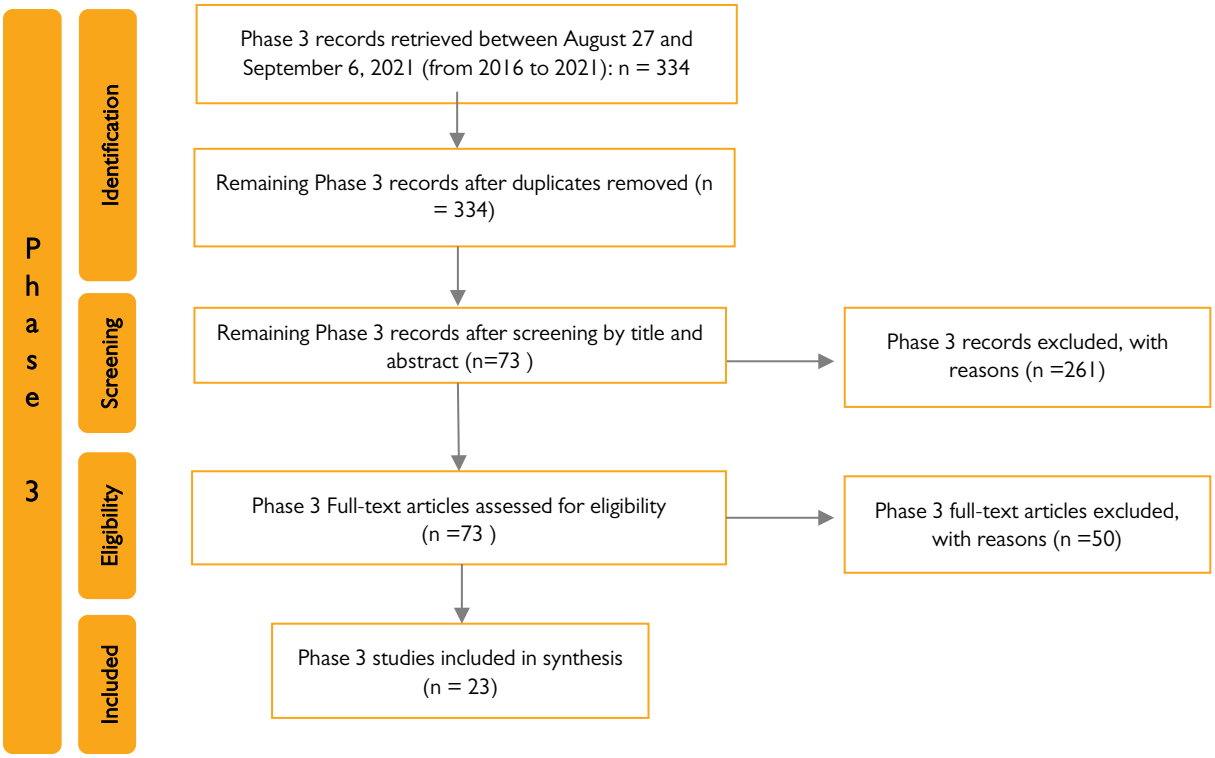


Figure 1. PRISMA Diagrams for Phase 1-3 Literature Review Activities

Key Informant Interviews

To supplement our team's understanding of emerging gaps and to further contextualize our learnings, the research team conducted key informant interviews (KIIs) with researchers, practitioners, and representatives from USAID's Center for Resilience and USAID Missions Bureaus, and Independent Offices (MBIOs). KII participants were identified in collaboration with the YP2LE internal team and recommendations received from contacted individuals with substantive knowledge in the areas of community resilience and health. KIIs were conducted virtually by the research team from November 30, 2021, to December 9, 2021, with 16 individuals (five researchers, 11 program implementers). To protect the anonymity and confidentiality of KII participants, specific demographic information (i.e., age, gender identity) was not collected. The final approved key informant interview protocol used to guide virtual interviews is included in Appendix B.

Limitations

The multi-faceted focus of the systematic review activity limited the ability to present findings in a manner that explicitly answers each of the guiding research questions. Typically, systematic review or meta-analysis activities involve identification of a narrow but well-defined research question. Most literature review activities utilize the Population, Intervention, Comparison, and Outcome (PICO) framework to develop the guiding research question. The multi-faceted focus of this systematic review included numerous guiding research questions each relating to a specific content area (i.e., models, theories, and approaches, impactful programs, and measurement tools). Although the research team did their best to formulate a process specific to each phase, the multiple questions and corresponding results could not be presented in a manner consistent with typical systematic review and meta-analysis activities.

The key informant interviews included as part of this systematic review did not explicitly seek input from youth representatives. For example, each of the 16 KII participants were identified as being experts

possessing knowledge and understanding of community resilience research and programming. While these perspectives are valued, they are not necessarily reflective of young people's unique perspectives and experiences. Additionally, although it is possible that some KII participants may have fit within USAID's definition of youth, it is impossible to confirm. Regardless, the inclusion of even a few of these perspectives is still considered a core limitation because the research team did not purposefully seek input from youth representatives as part of this activity. Therefore, the KII findings presented in this report may not accurately reflect the unique needs of youth and should be interpreted with caution.

Section IV. Phase I Findings

Definition of Community Resilience in Adolescent and Youth Health

Given the multiple definitions of community, youth resilience, and community resilience in the literature, this section clarifies our working definitions of these key concepts as we reviewed their associations with adolescent and youth health.

Based on the literature reviewed, *community* is predominantly defined as a place-based setting. The emphasis on community as a place is consistent with the notion that geographical location is an important determinant of health outcomes. Therefore, for the purpose of this review a community is defined as a 'group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings (Alonge et al., 2019; MacQueen et al., 2001). The community as a place-based setting is also considered the cornerstone of all ongoing processes of planning, preparing, coping, and recovering from adversity (Shapira et al., 2020), and as such is assumed to have a crucial impact on people's abilities to adapt to adversity.

The definition of resilience continues to be debated. Broadly, literature has defined resilience as the ability of an individual, organization or system to continue functioning (i.e., adaptive) while withstanding impacts of a stressor (i.e., absorptive) and bouncing back to normalcy after a shock or stressor (i.e., restorative) (Alonge et al., 2019). In their scoping review, Christmas and Khanlou (2019) noted that definitions of youth resilience remain deficit-based, deterministic, and reductionist, focused on individual behaviors and motivations, and outcomes of behavioral problems and pathologies. They added that youth resilience is defined based on dominant social values and concepts of normativity, at the individual, family, school, and societal levels. This definition of youth resilience ignores the role of positive developmental outcomes and resources in improving youth health outcomes. Youth resilience is part personal or individual (e.g., changing personal perspectives about health and life; modifying personal behaviors to promote health) and part relational (e.g., reaching out to supportive health care providers and organizations; reaching out to family, friends, and partners; and helping other youth). Thus, the person-place connection may allow youth to build relationships that contribute to their resilience and the communities' resilience. Nonetheless, **there has been a shift towards a holistic understanding of youth resilience as a process requiring personal and social-ecological assets needed for positive development and healthy functioning when faced with stressors** (Theron et al., 2020). This shift is consistent with the notion that resilience is context-specific (i.e., resources associated with youth resilience in one context may be less meaningful in another context) (Theron et al, 2020). For example, a young person living in a context that emphasizes deferential honor for elders and discourages questioning what elders say, will successfully navigate this culture if they have the knowledge and capacity to adapt and negotiate within the prevalent social norms to have their voices heard. On the other hand, in communities that value equality of all community members regardless of age, this same knowledge and capacity of revered elders might be rendered irrelevant because it has limited consequences in this context. Furthermore, Ungar considers resilience as a function of youth's relationships with their environment (Ungar, 2011). Thus, the availability and accessibility to opportunities and resources for development is shaped by the young person's ecological and cultural context and the young person's social structure (Amini-Tehrani, 2020). **Therefore, resilience, as it applies to youth, is a young person's personal capabilities as they are actualized by the environment in which they**

reside. For example, a young person who grew up in a supportive emotional and social environment will have higher self-confidence and self-esteem. If this young person resides in an environment that values youth voice, the young person's self-confidence and self-esteem will be further actualized thus improving the capabilities of the young person.

Community resilience spans various fields, including ecology, disaster management, and health. Although there exist common themes across discipline-based definitions, there is no agreement on the universal meaning of community resilience. Similarly, community resilience has been studied as both a process and an outcome (Shapira et al., 2020). Notwithstanding, there exists a commonality in terms used to describe the general characteristics of a resilient community (i.e., the ability to be adaptive, absorptive, and restorative), which entails bouncing back after a shock, disaster, or stressor. In LMICs, scholarship surrounding community resilience is most prominent in disaster and emergency management fields of study. Researchers in LMICs with expertise in these fields, have offered definitions of community resilience. South et al. (2020) in a global report for the World Health Organization (WHO) defined community resilience, "as the ability of communities and groups to adapt and thrive in response to external stressors, including economic and social pressures and environmental threats." A definition of community resilience has been cited and used by many scholars across the articles reviewed in this study: "the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, and unpredictability"(Magis, 2010, p. 402). Wessels and Kostelny (2018) emphasized the collective attribute of community resilience, noting that the community must cope with adversity constructively; the community has to plan and collaborate to address local risks or problems. In emphasizing the role of the community as an active participant and not a passive recipient, Wessels and Kostelny (2018) also identified the potential role of outsiders as facilitators of action and planning processes. However, it is important to recognize that as facilitators, outsiders ought to consider power dynamics and enable communities to lead through self-empowerment and resource mobilization to address the identified challenges. Regardless of discipline, community resilience is understood as a mitigator of the impact of crises, natural or man-made, on the affected community (Castleden et al., 2011).

Community resilience in health assumes a bi-directional relationship between individual (i.e., youth) and community resilience. **Although individual resilience is important, individual resilience is not sufficient to achieve community resilience. A resilient community is not necessarily a community of resilient members.** Community resilience in health is a complex process of converging physical, sociocultural, and economic environments. In turn, these environments create and enable individual, family, and community resources in pursuit of well-being and survival, both in the context of chronic and acute events or adversities (Barrington et al., 2017) **Because community resilience in health has a connotation of the interplay of individual and community, it requires building both personal and collective capacities to address vulnerabilities to build resilient communities as a strategy for health** (South et al. 2020). Although resources are central to the concept of resilience, it is not a given that when resources are available in a young person's environment, the young person has access to these resources. Positive youth health outcomes and well-being can only be achieved when the resources in the young person's environment are made available to them.

Research Question: What are the key models, theories of change, approaches, and conceptual frameworks for building community resilience to improve youth health outcomes and health-seeking behaviors?

The socio-ecological theory (SET) by Bronfenbrenner (1977) informs most of the models, approaches, and theories of change that frame the importance of community resilience for positive youth health outcomes (Figure 2). Broadly, Bronfenbrenner's socio-ecological theory purports that an individual is influenced by their environment at the micro, mezzo, and macro levels (Banati et al., 2020, Bronfenbrenner, 1977). At the macro level, structural and cultural factors including politics, history, the economy, social norms, values, and beliefs influence an individual's functioning. At the mezzo level, institutional and policy processes, both

private and public, contribute to whether individuals have access to the services they need. At the micro-level, the interpersonal and family environment plays important roles. Bronfenbrenner (1977) posits that a child's development is generally enhanced if two or more of the microsystems within which they are actively involved are strongly linked. When these links dissolve, the child's social ecology resilience is impacted (Thomas et al., 2016).

Drawing from the SET, the social ecology of resilience theory (SERT) applies the tenets of SET to resilience, viewing resilience through four principles: decentrality, complexity, atypicality, and cultural relativity (Ungar, 2011, 2020). Diakow and Gorforth, 2021 further illustrate the four principles. **Decentrality** presents the notion that resilience is a bidirectional interaction between individuals and their social and physical ecologies, not only dependent on the individual's traits (i.e., youth's individual resilience must be looked at within the context of their environment). **Complexity** speaks to the diversity of individuals' developmental paths that predict health outcomes (i.e., not every youth experiences the same number and severity of adverse events across the life course). **Atypicality** speaks to the supportive function of coping strategies that are sometimes perceived as negative (i.e., youth who engage in transactional sex to provide for their families). Lastly, **cultural relativity** is the notion that resilience is culturally specific (i.e., what is considered resilience in one setting may not necessarily be recognized as resilience in another due to social/cultural norms).

In addition to SET, Bourdieu's theory of capital may inform models and approaches in building community resilience to improve youth health outcomes and health-seeking behaviors. The theory of capital postulates four major forms of capital: **economic capital** (command over resources), **cultural capital** (acquired educational knowledge or skills, cultural codes, manners of being and speaking), **social capital** (power accrued through one's position regarding networks of valued relationships with significant others such as family, friends, acquaintances, and colleagues), and **symbolic capital** (reputation status and prestige). Ruzibiza (2021) drew on these four capitals to illustrate how teen mothers in Rwanda navigated their experiences of motherhood and its associated stigma. Ruzibiza, 2021 reported how teenage girls use cultural capital in the form of temporary self-inflicted solitude as a source of resilience to build self-esteem. These capitals are a wealth of resources that can enable community resilience and improve health outcomes. SET, and the theory of capital to some extent, have informed various approaches to building community resilience, albeit mostly in the public health domain. In our review, we identified the following approaches and models: The Integrated Behavioral Model for Water Sanitation and Hygiene framework (IBM-WASH), social contextual approach, Tutor of Resilience (ToR), and the Behavior Change Wheel (BCW).

For instance, IBM-WASH, a health promotion model, is a conceptual and practical tool for improving our understanding and evaluation of the multi-level multi-dimensional factors that influence water, sanitation, and hygiene practices in infrastructure-constrained settings. IBM-WASH considers the multiple factors that affect health behaviors, including contextual, psychosocial, and technological factors that operate on five levels (i.e., structural, community, household, individual, and habitual). For example, in their study in Tanzania, Hetherington et al., 2017 used the IBM-WASH framework and concluded that schools are essential for cost-effective WASH interventions because school attendance and access to schools have increased globally, thus providing a critical space where these interventions can become more effective, including helping to sustain adoption of WASH practices at the individual and household levels.

Another example is the social contextual approach, conceptualized by Campbell and Cornish (2010) that was developed to improve community mobilization as it relates to effective HIV/AIDS management. The social contextual approach highlights the importance of a receptive social environment and its role in increasing people's agency in health and well-being. These supportive and health enabling contexts include equitable social relationships. Campbell and Cornish (2010) identified three contexts that are important for health and well-being: social context refer to resources such as money, food, housing, and other economic opportunities; relational context refer to resources such as social capital and relationships including with

friends, families and external actors; and symbolic contexts, which refers to dominant cultural worldviews and ideologies, including gender equity and recognition of one's worth, value, dignity, and rights. Logie et al., 2020 in their study with refugee youth and adolescents in Uganda used the social contextual approach and found that contextual factors, such as food insecurity and violence increased depression risks among youth in their study sample.

The ToR model is an exceptional example of a SET-informed approach that recognizes children, families, communities, and service providers as mutually dependent parts of the child protection system (Giordano et al. 2021). The ToR model guides professionals to create culturally and contextually sensitive programs that mitigate risk and enable access to resilience-promoting resources for children, youth, or families experiencing adversity. Using this model, tutors help individuals navigate and negotiate for personal and collective resources through interpersonal relationships that increase access to psychosocial and physical support (Giordano et al. 2021).

The BCW framework is also heavily influenced by SET. Central to this framework is a behavior system with three essential conditions: capability, opportunity, and motivation (Michie et al., 2011). This behavior system forms the hub of BCW around which a range of intervention types, policies, and behavior change models are placed, recognizing that youth operate within a broader external environment. In our review, BCW was mentioned as a behavior change model to address the environmental, social, and structural constraints for healthy behaviors, particularly healthy food choices and dietary patterns among young women in South Africa (Ware et al., 2019). Resilience is influenced by the physical opportunity in one's environment (e.g., easy access to high-fat, energy-dense cheap foods) and social opportunity (e.g., social norms and peer pressure) within the groups, communities, and cultures in which the young women live (Ware et al., 2019). However, there has been no implementation of the BCW framework to assess its impact on food consumption and nutrition of young South African women.

Table 2. Overview of Key Theories, Models, Approaches, and Frameworks

Name	Core Tenets
Theories	
Bronfenbrenner's Socio-ecological Theory (SET) Bronfenbrenner (1977); *Banati et al., 2020; Thomas et al., 2016*	Factors across micro (i.e., interpersonal and family environment), mezzo (i.e., institutional and policy processes) and macro (i.e., structural and cultural) levels influence an individual's development.
Social Ecology of Resilience Theory (SERT) *Ungar, 2011; Ungar, 2020; Diakow and Goforth, 2021*	Utilizes the core tenets of SET and views resilience through four principles: 1) decentrality (i.e., resilience is bi-directional), 2) complexity (i.e., individual's paths to resilience are diverse), 3) atypicality (i.e., coping strategies may sometimes be view negatively), and 4) cultural relativity (i.e., resilience is culturally specific).
Bourdieu's Theory of Capital *Ruzibiza, 2021*	Identifies four types of capital that promote resilience among youth: 1) economic capital (i.e., command over resources), 2) cultural capital (i.e., acquired educational knowledge or skills, cultural codes, manners of being, and speaking), 3) social capital (i.e., power accrued through one's position regarding networks of valued relationships with significant others such as family, friends, acquaintances, and colleagues), and 4) symbolic capital (i.e., reputation status and prestige).
Models, Approaches, and Frameworks	
Integrated Behavioral Model for Water Sanitation and Hygiene framework (IBM-WASH)	Regarding health promotion, this model considers contextual, psychosocial, and technological factors that affect health behaviors and map pathways to desired health outcomes.

Hetherington et al., 2017	
Social Contextual Approach *Campbell and Cornish, 2010*	Describes three contexts important for health and well-being: 1) social contexts (i.e., resources such as money, food, housing, and other economic opportunities), 2) relational contexts (i.e., social capital and relationships including with friends, families, and external actors), and 3) symbolic contexts (i.e., cultural worldviews and ideologies, including gender equity and recognition of one's worth, value, dignity, and rights).
Tutor of Resilience Model (ToR) *Giordano et al., 2021*	SET-informed model which guides professionals to create culturally and contextually sensitive programs to mitigate risk and enable access to resilience-promoting resources for children, youth, or families experiencing adversity through emphasis of personal advocacy and interpersonal relationships.
Behavior Change Wheel (BCW) *Michie et al., 2011; Ware et al., 2019*	SET-informed framework that describes three essential conditions for addressing environmental, social, and structural constraints to healthy behaviors: 1) capability, 2) opportunity, and 3) motivation.

Synthesis of Findings Related to Community Resilience Theories, Approaches, and Models

Our review identified a dearth of community-resilience-building models and approaches that are specific to LMICs and that have been adapted and implemented with youth in LMICs. Although SET and the theory of capital may provide theoretical underpinnings of community resilience, there needs to be more empirical testing of these models and approaches for youth health in LMICs. Furthermore, before testing and evaluating effects on youth health outcomes, cultural adaptation of community-resilience-building models for youth health is crucial. For example, Otake (2018) described the process for adapting the Mental Health and Psychosocial Support (MHPSS) model, which applies bio-psychological aspects of talking about trauma to local community approaches in Rwanda, where aspects of social support are prominent. The adaptation resulted in a culturally congruent talk therapy for processing trauma, in which people talk to each other to connect to the community and seek mutual support for communal healing. Thoughtful adaptation and integration of evidence-informed and community-based models are likely to have more meaningful and sustainable impact than off-the-shelf models and approaches implemented without cultural adaptation and recognition of local community assets or resources (Otake, 2018).

Research Question: What are the specific "building blocks" or best-practices shown to lead to improved community-level resilience capacities?

Our review of the various theories, conceptual frameworks, models, and approaches for building community resilience identifies multiple "building blocks" that enhance the capacity of community-level resilience. Thus far, the literature has evidenced that the socio-ecological perspective informs most of the conceptualization of community resilience in LMICs. Therefore, we use the same approach to discuss community resilience building blocks that are evident across micro, mezzo, and macro levels. Further emerging as a key to unlocking health outcomes is the interaction between personal strengths and socio-ecological resources. Figure 2 provides a high-level overview to graphically represent the findings of this section. The figure specifically annotates the bidirectional relationship between individual and community resilience, how socio-ecological resources contribute to community resilience, how socio-ecological protective factors enhance

resilience and promote a pathway to achieving positive health outcomes for youth, and how socio-ecological shocks and stressors may decrease a person's resilience leading to negative health outcomes.

Community Resilience Building Blocks as Defined in the Literature

Our review identified a few foundational articles that utilized components of the socio-ecological theory to identify building blocks of community resilience. First, Patel et al. (2017) conducted a systematic study in South Africa that identified nine broad elements of community resilience: local knowledge; community networks and relationships; communication; health and health services; governance and leadership; resources; economic investment; preparedness; and mental outlook. Additionally, in a study in Uganda, Logie et al. (2020) used the social contextual approach to identify community characteristics and capacities that contribute to building resilience and found that material contexts (i.e., access to resources such as money, food, housing, and other economic opportunities), relational contexts (i.e., social capital and relationships including with friends, families, and external actors) and symbolic contexts (i.e., cultural worldviews and ideologies including gender, gender equity and recognition of one's worth, value, dignity, and rights) impacted refugee youths' mental health and were important to enhancing resilience. Third, Van Breda and Theron (2018) conducted a systematic review in South Africa to understand the contextually sensitive process of resilience. Using a social-ecological perspective of resilience they reported four resilience-enablers:

- Personal resilience-enablers (i.e., agency, adaptive meaning-making, adaptive dispositional qualities, commitment to education, self-regulation, self-esteem, physical advantages).
- Relational resilience-enablers (i.e., affective support, opportunities for growth/development, instrumental support).
- Structural resilience-enablers (i.e., financial supports, community facilities/services, community safety, school systems).
- Spiritual/cultural resilience-enablers (i.e., religious/spiritual beliefs; enabling cultural values; enabling cultural practices).

Van Breda and Theron (2018) further illustrated that youth have enablers or skills that can be adequately activated in an enabling environment.

Micro-level Building Blocks

At the micro-level, youth's capabilities are the foundation for realizing positive youth health outcomes, but support in the environment is needed to actualize these capabilities. Families are also important at this level. Adolescents and young people benefit from family coping mechanisms (Fernandes and Allchin, 2018), families that are present, protective, caring, and involved to socialize and support their children (Ai and Hu, 2016). In addition, peer influence is essential because peers encourage or discourage risky actions as youth are more likely to mimic each other's behaviors. Otake (2018) emphasizes that psychosocial support, faith-based group connections, mutual savings group membership, kinship and neighborhood groups that involve things like local healing practices, talking for reconnection, and living together (e.g., social parties, helping each other, sharing, community work) activates personal capabilities of youth in Rwanda towards better mental health outcomes. Although, peers and mentors are generally positive influences on youth, there are times when these important people in their lives have negative influences on them.

Youth capabilities are strengthened through supportive school climates which can affect the young person's educational outcomes and involvement in risky behaviors. A supportive school climate also influences students' self-concept, which affects self-esteem and mental health (Animosa et al., 2018). For young people, school connectedness enhances teacher support and consequently, delays, reduces and reverses involvement in risk-taking behaviors (Animosa et al., 2018). A welcoming school climate,

supportive language and communication and a sense of community ensure that adolescents feel that they belong and thrive at school and are supported to navigate cultural differences that promote mental health.

Mezzo-level Building Blocks

At the mezzo level, information sharing and timely communication within the community and across its members are important for providing community members with the appropriate knowledge about a particular health condition or issue (Rangel et al., 2016). In addition, cultural practices at the community level and community leaders who formulate unwritten rules for youth and other community members influence adolescents' health (Chimatiro et al., 2020). Chimatiro et al (2020) found in a study in Malawi that community leaders play various roles including advising, encouraging, regulating, and restricting cultural practices, formulating by-laws, and handling sexual abuse complaints. Community leaders play a prominent role in establishing and maintaining norms and decision-making at the community level that are key to the fight against HIV and promotion of family planning and reproductive health and rights (Chimatiro, et al., 2020). Aligned with cultural practices are religious rituals, which promote a sense of control and social justice among youth (Chow et al., 2021; Hassan et al., 2017). In turn, religiosity promotes individual resilience by enhancing youth's coping strategies, particularly positive religious coping such as forgiveness and benevolent religious appraisals (Chow et al., 2021). In other words, youth who use positive religious coping may rely on spiritual support and look for meaning in a traumatic or adverse event.

Through the community-based service systems, integrated psychosocial, economic strengthening, and clinical services are provided to HIV-affected households to reduce HIV-related stigma and perceived negative community attitudes towards HIV (Rosen et al., 2021). In South Africa, a cash plus care approach, which includes a cash transfer and a social welfare intervention aimed at building family strengths and functioning, was found to be more effective in building community connectedness than a cash transfer only approach (Patel et al., 2017).

Community building blocks include neighborhood social cohesion, community organization, communication and preparedness, social control (i.e., norms that regulate behaviors), and trusting relationships (Chai et al., 2019; Patel et al., 2017; Small et al., 2019). For example, social cohesion among neighbors in a village or neighborhood, defined as the willingness of neighbors to intervene in a situation for the common good of all, can have implications for maintaining public health (Bosqui and Marshoud, 2018; Small et al., 2019). Adolescents in a study in Jamaica reported that they perceived that neighborhood factors, such as good neighborhood networks, neighborhood order, low crime, and good living conditions (e.g., quality housing, good roads, efficient garbage collection), lowered their depressive symptoms (Chung et al, 2020). In addition, neighborhood social cohesion and trusting relationships (e.g., with caregivers) foster individual-level resilience that affects subjective well-being, as illustrated in a study conducted with left-behind adolescents or children who remain in rural China while their parents migrate to urban areas for work (Chai et al., 2019). The presence of community resources, although significant, is not sufficient to create resilient communities. Resilience-enabling resources should support community members, especially disadvantaged members, or those at risk of adverse outcomes (Wulff et al., 2015), and enable the same community members to find a sense of purpose and belonging (Rosenbaum et al., 2017).

Macro-level Building Blocks

At the macro or societal level, context or conditions affect the ability of communities to collectively cope with shocks or stressors. Improved health among youth is also determined by structural conditions, such as poverty, health infrastructure, and demographic changes (Barrington et al., 2017). Progressive and favorable policies that provide infrastructure and systems to support youth mental health are key to promoting positive youth health outcomes. On the other hand, policies exist that exacerbate the negative experiences for youth which lead to negative health outcomes. For example, Ruzibiba (2021) found that in Rwanda, punitive policies towards pregnant teens that resulted in school exclusion had lasting negative

outcomes for the pregnant teens. After these policies were amended to be less punitive, pregnant teens were eventually allowed to return to school after giving birth, but due to the stigma from the community, pregnant teens chose to stay at home (Ruzibiba, 2021).

Conceptual Framework for Understanding Community Resilience

The findings stated in the above sections reveal several components (i.e., building blocks of community resilience, shocks and stressors, and protective factors) that are necessary to developing an initial understanding of the bi-directional relationship that exists between individual resilience and community resilience and their linkages to youth health outcomes. Figure 3 presents a conceptual framework upon which these findings are synthesized.

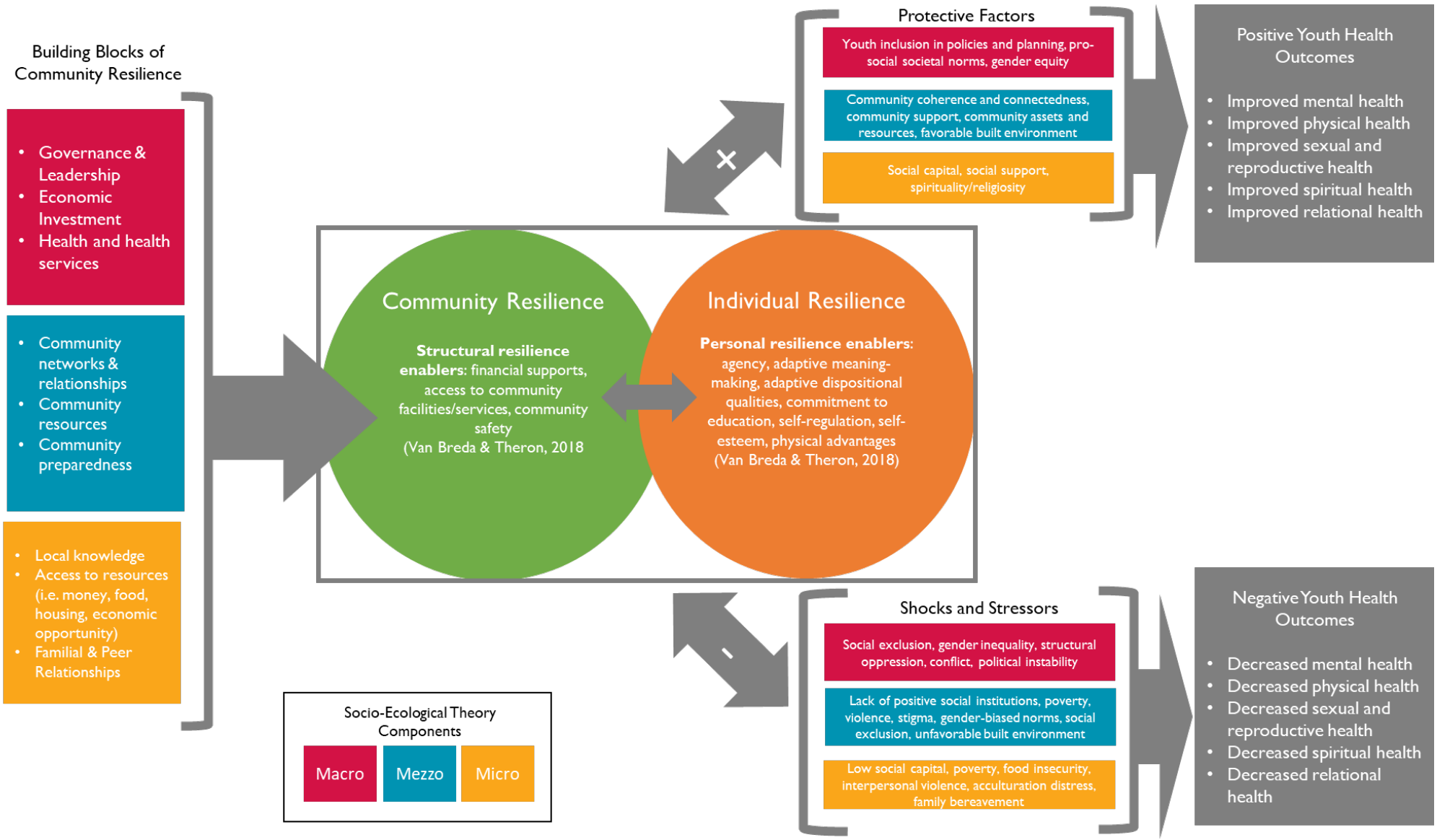


Figure 2. Conceptual Framework for Understanding Community Resilience in Health among Youth in LMICs

Research Question: What types of stressors or shocks affect community resilience and youth health outcomes?

Our review identified various shocks and stressors that exist across the micro (i.e., individual and household), mezzo (i.e., community) and macro (i.e., society/structural) levels. The shocks and stressors, which influence one another and operate within and between levels, are linked to community resilience (or lack thereof), building blocks, and health outcomes. Understanding how different types of shocks and stressors affect the health and well-being of youth and their communities is essential to developing resilience-building programs.

Micro- and Mezzo-level Shocks and Stressors

In **interpersonal relationships**, shocks and stressors include perverse social capital (i.e., negative dimensions of social capital that may have benefits for individuals, but in contrast, may result in negative outcomes for the wider community), poverty, and food insecurity (Collishaw et al., 2016), interpersonal violence (Collishaw et al., 2016), acculturation distress, or stressors associated with being an immigrant, an ethnic minority or a refugee (Abu-Kaf et al., 2021; Badri et al., 2020), and family bereavements (Collishaw et al., 2016).

In **communities**, shocks and stressors include lack of positive social institutions (Myers et al., 2016), widespread poverty (Badri et al., 2020; Rosen et al., 2021; Theron and van Breda, 2021), violence (Collishaw et al., 2016), community stigma (Collishaw et al., 2016; Rosen et al., 2021), gender-biased norms (Myers et al., 2016), the invisibility of youth in local policy and decision making and an unfavorable built environment (Myers et al., 2016).

The invisibility of youth, defined as the exclusion of youth in agenda setting and decision making, contributes to a policy agenda lacking a focus on health issues affecting young people. This invisibility may be reinforced by social norms and beliefs that prioritize older community members' decision making, such as parents, as reliable and trustworthy. Lack of youth involvement in decision making permeates many aspects of their well-being, including health (Challah et al., 2018; Wigle et al., 2020). The invisibility of youth may deprive them of an enabling environment that creates opportunities, fosters collective self-esteem, and enhances community belonging. Instead, existing institutions and systems may become unresponsive to the needs of youth, further denying young people opportunities to improve their health, and reinforcing the belief that their issues are not a priority. Continued invisibility in agenda setting and decision making may dampen young people's shared cultural identity and community connectedness as they perceive that their health issues are not a priority. This invisibility is heightened when the health conditions affecting young people remain stigmatized, such as substance use and mental disorders (Myers et al., 2016). In turn, health service utilization is negatively affected when youth perceive that they are "not on the policy agenda," such as the study by Myers et al. (2016) that described the exclusion in policy agenda of poor young South African women who use drugs and the impact of exclusion on the young women's health service use (Myers et al., 2016).

Another stressor is the accumulation of perverse social capital existing at the interpersonal and community levels. In communities where poverty is high, collective efficacy is low, and positive social institutions are nonexistent, youth acquire perverse social capital or social capital leading to undesirable community outcomes (Leon, 2020; Rubio, 1997). Perverse social capital elevates the likelihood that young people will get involved in violence and illegal activities, such as illicit drug trade, as described in studies conducted in South Africa (Myers et al., 2016) and Belize (Flores, 2018). Further, the built or physical environment in high-poverty communities may act as a barrier to healthy behaviors and outcomes. In another study conducted in South Africa, an urban community's physical or built environment, alongside its social norms, impedes healthy eating and diet as youth have easy access to high-fat and energy-dense cheap foods (Ware et al., 2019).

Macro-level Shocks and Stressors

In **societies**, shocks and stressors include social exclusion, gender inequality, racism, and discrimination (Badri et al., 2020), and conflict and political instability at the regional or national level (Bosqui and Marshoud, 2018; Rangel et al., 2016). We describe how these three macro-level stressors (i.e., gender inequality, conflict, and political instability) may affect community resilience by affecting the ability of community members to achieve collective self-efficacy, sense of community coherence, and shared identity, among other important characteristics.

Gender inequality, a human-induced macro stressor, contributes to the social exclusion and stigmatization of young women. Gender inequality is reinforced by gender-biased norms that allow communities and societies to prioritize men's needs over women's and reinforces the invisibility of young women's health issues when setting policy agendas. As young women perceive their exclusion, their sense of community belonging, collective efficacy, and shared community identity are likely affected, which may affect community resilience. The combination of gender inequality and invisibility of young women's health issues negatively affects the health care utilization of young women, particularly those with stigmatized health conditions (Myers et al., 2016). The example of gender inequality and pathways linking gender inequality to low community resilience and adverse health outcomes are pertinent to other forms of human-induced exclusion and discrimination affecting youth in LMICs, such as racism, homophobia/heterosexism, ageism, ableism, classism, and other forms of oppression. Although the literature remains limited on the connection between community resilience and other types of exclusion and oppression, it is almost a truism that systematic exclusion of youth due to their characteristics dampens their motivation to participate in community affairs and strengthens community resilience. In other words, gender inequality and other types of discrimination and exclusion may weaken the social fabric that keeps the community resilient. In addition, young people experience exclusion and oppression differently than adults because for youth all these experiences are compounded with stigmatized environments based on age, power dynamics, and lack of capital.

Conflict and political instability are human-induced macro-stressors that weaken the social fabric, such as community coherence, sense of belonging, cultural identity, and trust and respect within the community. A weakened social fabric increases the likelihood of adverse health outcomes among youth (e.g., post-traumatic stress disorder and other adverse mental health conditions) (Abu-Kaf et al., 2021; Rangel et al., 2016; Theron and van Breda, 2021). For example, a study conducted with Syrian youth refugees identified direct exposure to war, such as the experience of bombs falling and damaging one's neighborhood and surroundings, as negatively affecting youth's sense of community coherence and their appraisal of a perceived threat to oneself, family, and friends in their new environment. In turn, a low sense of community coherence and high levels of perceived threat explained the various mental health problems reported by youth (Abu-Kaf et al., 2021).

Research Question: What protective factors exist to buffer the impacts of shocks and stressors on community resilience?

In contrast to shocks and stressors, protective factors reduce or buffer the impact of adverse events on community resilience and youth health outcomes. Our review identified various protective factors that affect community resilience and alleviate the impact of adverse events on health outcomes. Consistent with our classification of shocks and stressors, we categorized protective factors as micro, or those that exist at the individual and household levels, mezzo, or community levels, and macro, or those at the society, regional or national levels.

Micro-level Protective Factors

In **interpersonal relationships**, protective factors include social capital (Myers et al., 2016; Pfeiffer et al., 2017), social support (Alampay et al., 2017; Denov and Khan, 2019; Hebbani et al., 2018; Rosenbaum,

2017; van Aswegen, 2019; Panter-Brick et al., 2018; Fayyad et al., 2017), and participation in religious rituals and spirituality/religiosity (Hassan et al., 2017; Hebbani et al., 2018). Our review identified social support, including family and peer support, as constant protective factors that shape young people's resilience, building blocks of community resilience, and health outcomes.

Central to youth's social support systems are their families and friends. Family support has been operationalized in various ways, such as love and affection, advice and guidance, and motivation to create positive futures (Hebbani et al., 2018; Rosenbaum, 2017; van Aswegen, 2019; Ai and Hu, 2016). Positive family support is directly associated with individual-level resilience and desirable health outcomes across multiple countries and contexts. For example, in Rwanda, positive social support characterized by love, care, and acceptance, especially from their mothers, was reported by youth born of genocidal rape as key to their sense of connection, belonging, and true acceptance (Denov and Khan, 2019).

Parental support and supervision for studying, parents spending time with youth, and having non irritable parents were reported as factors that promote resilience among conflict-exposed adolescents in Lebanon (Fayyad et al., 2017). Another study conducted in Jordan with Syrian youth refugees and Jordanian youth reported family relations as critical to their resilience, as family support is leverage for accessing and negotiating social, economic, and political resources (Panter-Brick et al., 2018). In other words, the family is fundamental to constraining or enabling young people's futures in matters of school, marriage, employment, and other domains (Panter-Brick et al., 2018; van Aswegen et al., 2019). Family support also encourages desirable outcomes that facilitate youth resilience (Collishaw et al., 2016). For example, family support is associated with youth's optimism about their future, self-efficacy, sense of competence, and social connectedness (Badri et al., 2020; Collishaw et al., 2016; Kuo et al., 2020; Rosenbaum, 2017).

In addition to family support, peer support leads to social connectedness among youth (Gadais et al., 2021; Rosenbaum, 2017). Sports are commonly used to build social connections among youth (Gadais et al., 2021). Social support also comprises youth's social capital that they leverage to build their resilience and avoid adverse health outcomes (Bardi et al., 2009; Pfeiffer et al., 2017). In a study conducted in Dar es Salaam, Tanzania, adolescent girls relied on their parents and peers when they needed information on how to avoid or deal with teenage pregnancy (Pfeiffer et al., 2017).

Mezzo-level Protective Factors

In **communities,** protective factors include community coherence and connectedness (Abu-Kaf, 2021), community support (Hebbani et al., 2018; Alampay et al., 2017; Rosenbaum, 2017; Ndetei et al., 2019), and the built and natural environment (Theron and van Breda, 2021). Community coherence or social cohesion, connectedness, and support have been shown to buffer the impact of adverse events on the health and well-being of youth in LMICs (Fayyad et al., 2017; Sharp et al., 2018). These community-level protective factors exist within the various community institutions, such as schools, places of worship, civil society, and local government, and influence individual-level resilience. In a study conducted in South Africa, school connectedness was a vital resilience factor among adolescents regardless of their orphan status (Sharp et al., 2018). In turn, school connectedness had a buffering or moderating effect on the mental health of adolescents. School connectedness might be facilitated by having supportive teachers perceived as kind to students (Fayyad et al., 2017).

Community resilience is also influenced by the community's physical/built and natural environments. In a review of multisystemic enablers of resilience to maltreatment in sub-Saharan Africa, Theron and van Breda (2021) noted the resilience-enabling potential of built and natural environments when they provide safe spaces for youth. A community's collective efficacy determines the safety of those spaces by making the spaces clean (e.g., free from litter), accessible, and safeguarded by supportive adults.

Macro-level Protective Factors

In **societies**, protective factors comprise the inclusion of youth issues in health policy and planning (Myers et al., 2016) and culture (Alampay et al., 2017; Al-Krenawi and Kimberley, 2014). Inclusion of youth issues in health policy and planning may result in responsive systems that are available, accessible, and responsive to their health needs (Myers et al., 2016). Culture has an overarching effect on all levels of resilience—individual, family, community, and society. Culture enables a shared identity, allows for social bonds to develop and strengthen, and provides social support. In the literature, culture as a protective factor affecting resilience appears to be particularly salient in the context of war and political conflicts, when awareness of human vulnerability and death is imminent (Al-Krenawi and Kimberley, 2014). As Al-Krenawi and Kimberley (2014) described, Palestinian youth and their families residing in an area of continued conflict hold on to their cultural beliefs and embrace individuals like them as a strategy to reduce the pathogenic effect of stressors. Culture as a protective factor affecting community resilience may also refer to societal norms of youth, which include the processes and symbolic capital shared by young people, distinct from the general norms in the community. In a study conducted in Tanzania, internalization of cultural values around teenage pregnancy represented in media, such as TV, radio, or magazines, contributed to the competence of adolescent girls, especially girls who were never pregnant, to avoid teenage pregnancy (Pfeiffer et al., 2017).

In sum, these protective factors affecting community resilience may contribute to improved youth health outcomes by creating an environment that provides a strong sense of safety, promotes mental health and well-being, and allows greater community contact, connection, and inclusion. In turn, these outcomes may enable a strong sense of community efficacy, more vital community systems (e.g., schools) and social networks, and improved community cohesion.

Conclusions

Currently, there is more research on individual resilience, its associated shocks and stressors, its protective factors, and its role in youth's health outcomes, compared to studies exploring the link between community resilience and health outcomes. In our literature review, we found similar shocks and stressors (e.g., poverty and biased gender norms) and protective factors (e.g., social support and resource availability) affecting both individual and community resilience. Although individual and community resilience are interrelated, the pathways or mechanisms that link the same shock, stressor, or protective factor to health outcomes likely differ between individual and community resilience. In addition, the approaches we take to address the vulnerabilities that youth experience will also be different. A resilient community is not necessarily a community of resilient members. Thus, further research is needed to elucidate pathways and mechanisms that link individual resilience to community resilience and how various shocks, stressors, and protective factors affect those pathways.

Although we identified shocks, stressors, and protective factors affecting community resilience and health outcomes of youth in community settings, our review findings indicate that this topic remains under researched. The community resilience factors in this review are dominated by research on community resilience within the context of acute adversities, not chronic ones. The extant literature on shocks, stressors, and protective factors affecting community resilience has focused primarily on mental health effects, with fewer studies on non-mental health outcomes among youth. The studies in this systematic review mainly comprised research linking shocks, stressors, and protective factors to individual resilience or building blocks of community resilience, not community resilience as a multidimensional construct.

Section V. Phase 2 Findings

Section Overview

To effectively build resilient youth and communities within the context of health, programs must address both the individual and community level aspects of resilience.

The Phase 2 search activity identified eight programs out of 298 citations (refer to figure 1) that met our criteria for inclusion. Demonstrated by the number of citations included, there exists a dearth of information specific to youth-focused resilience programming. Many of those citations excluded were removed because they were not youth-focused, did not relate to concepts of community resilience and health, or they included data prior to 2016. As mentioned in the previous section, the concept of community resilience spans many fields and compared to the field of disaster preparedness, the number of youth-specific community resilience programs within the health sector is limited. Nonetheless, this section describes specific programs and program approaches found in LMICs as they relate to community health resilience programming specifically for youth populations.

Research Question: What specific programs and program approaches (e.g., cross-sectoral or sector-specific focus) have been successful at mitigating the impact of shocks and stressors on youth health outcomes? Who is targeted by community health resilience programming?

Different forms of behavioral therapy have been integrated into resilience programming for youth in LMICs (Watters and O'Callaghan, 2016). From the literature, the dominant use of behavioral health therapy is mainly due to the conceptualization of youth resilience as a psychological attribute; consequently, most programming has adopted a mental health focus.

Resilience-focused Mental Health Programs to Address Individual Youth Health

Almost all the programs identified used a behavioral health therapy approach. In Nigeria, the Responding to the challenge of Adolescent Perinatal Depression (RAPiD) program implemented a psychosocial intervention in primary maternal care settings to provide behavioral activation (i.e., an evidence-based technique for treating depression by helping individuals understand how behaviors influence emotions) and problem-solving sessions to young mothers aged 20 and below to improve social and parenting skills (Gureje et al., 2020). In addition to structured behavioral therapy, social and parenting skills (i.e., parental responsivity, acceptance of the child, organization of the environment, learning materials, parental involvement, and variety within the home environment) were offered to adolescent mothers through various delivery mechanisms (i.e., face-to-face or through mobile calls and texts and training agents (i.e., mental health service provider and "neighborhood mother") (Gureje et al., 2020). Another program identified in this review addressed health stressors for youth who were born to genocide perpetrators (i.e., their fathers were involved in the genocide as perpetrators) and survivors (i.e., their mothers were sexual assault survivors) in Rwanda. In this program, sociotherapy, a supportive approach to examine youth's behaviors within their environment, used "talking circles" for groups of 10 to 15 young participants. This approach used a six-stage model that focused on building safety, trust, care, respect, new life orientation, and memories among participants (Biracyaza and Habimana, 2020). The USAID-sponsored Family Matters Program is a Caribbean focused program that was implemented in St Kitts and Nevis, St Lucia, and Guyana. This program targeted 10–17-year-olds at risk for delinquency and implemented in-home face-to-face structured counseling sessions (i.e., strengthening familial cohesion and establishing connections with the wider community) with youth and their families to improve mental health outcomes, build individual resilience, and improve the familial environment (Diaz-Cayeros et al., 2020).

Our review also identified a resilience-oriented family intervention program, "Our Family Our Future" in South Africa, which aimed to prevent HIV and depression among adolescents. The intervention targeted young people and their caregivers with the goal of preventing HIV by strengthening familial relationships through communication, psychosocial functioning, goal setting, and goal implementation to overcome challenges that youth experience in decision making and behavioral change due to lack of family involvement (Kuo et al., 2020). Although the main aim of the project was HIV prevention, addressing depression among young people was central to the theory of change to improve psychosocial well-being.

Although these programs have focused on mental health and individual resilience, they are likely to benefit community-level resilience and youth health outcomes. Individual resilience and mental health are

substantially influenced by interpersonal relationships, community, and societal-level factors. For example, youth may draw strength from positive relationships in their community to manage shocks and stressors, while being able to maintain an ambition and overcome adversity.

Non-Mental Health Resilience Program and Policy to Address Youth Health

Our review identified only one non-mental health program: Project SHINE in Tanzania. This project demonstrates the reciprocal relationship between individual and community resilience capacities that must be built to address vulnerabilities and build resilient communities as a strategy for improving health outcomes. Project SHINE was a participatory, school-based intervention to improve sanitation and hygiene in the community utilizing the training of trainers model to promote culturally and contextually relevant low-cost interventions that encouraged frequent handwashing. In this program, teachers trained students in developing low-cost, low-tech strategies for sanitation and hygiene-related science projects. Students then disseminated their findings at a community wide fair, targeted at improving the hygiene and sanitation knowledge of fellow students and the community (Hetherington et al., 2017). Project SHINE built the capacity of students to study local diseases related to lack of sanitation and unhygienic behaviors and to disseminate information through mobilization of community members.

In addition, in Malawi, we identified an inter-sectoral policy strategy (i.e., the National Youth-Friendly Health Services [YFHS] Strategy) that seeks to strengthen and streamline health services for youth by delivering services in a holistic manner that ensures high quality, accessibility, affordability, appropriateness, acceptability, and relevance. This strategy comprises five strategic areas: conducive policy environment; efficient service delivery; coordination and collaboration across sectors; mobilization of the community, including youth; and mobilization of resources.

Community Resilience Programs and Impacts on Youth Health Outcomes

The rigor and quality of programs varied greatly across the eight programs included in this review. Three programs (Gujere et al., 2020; Kuo et al., 2020; Diaz-Cayeros et al., 2020) used experimental designs with randomization to infer causal associations. However, only one program (Kuo et al., 2020) described the impact of "Our Family Our Future," a resilience-oriented family intervention program in South Africa. Although the pilot trial was not powered for efficacy or testing of primary and secondary outcomes, results demonstrated promising trends in the direction of effects in the intervention arm. For example, protective behavior change occurred post-intervention as illustrated by an increase in HIV testing, reduction in inconsistent condom use, and improved knowledge of HIV, risk perception and self-efficacy for condom use (Kuo et al., 2020). Further, intervention receipt led to lower levels of depressive symptoms among adolescents, higher levels of resilience in both adolescents and their parents, and positive family interactions, especially adolescent-parent communication.

Project SHINE in Tanzania used a quasi-experimental, mixed-methods design to measure changes in knowledge, attitudes, and practices among high-school students related to sanitation and hygiene, assess how students and the wider community engaged in the development and evaluation of sanitation and hygiene prototypes and health promotion strategies, and to understand the extent to which interest and motivation for science increased (Hetherington et al., 2017). An outcome evaluation of Project SHINE indicated positive effects of the intervention, including increase in the perceived importance of handwashing, reduction of unhygienic behaviors, and increase in intentions to use toilets. Similarly, the intervention increased students' perceptions that they contributed to health promotion in their communities.

None of the programs directly assessed their effects on mitigating the impact of shocks and stressors on youth health outcomes. As measures to assess changes in shocks and stressors were not included, it is challenging to discuss the impacts of interventions to mitigate shocks and stressors. Outcome evaluations or impact assessments of the programs reviewed focused primarily on health outcomes such as health-

related knowledge, attitudes, practices, and behaviors. In some cases, the evaluation of program impact on shocks and stressors is challenging, For example, many programs included a social support component or activities to enhance adolescent-parent communication. However, the impact of these activities on shocks and stressors has not been measured and evaluated. Similarly, programs provide access to community assets and resources to reduce the negative impact of poverty and other shocks and stressors on youth's abilities to participate and engage in the program, but targeted measurement of how these actions affect the impact of shocks and stressors on youth is not taking place. Therefore, the lack of evaluation of program impacts on shocks and stressors may be partly explained by the lack of data collection on protective factors and their interactions with shocks and stressors. Table 3 provides an overview of the programs, target populations, sector of intervention, intervention type, evaluation type, research design, and evaluation outcomes described in this section.

Table 3. Summary of Health-focused Youth Community Resilience Programs and Program Approaches in Low- and Middle-Income Countries

Citation Authors	Location	Target Population	Intervention Sample Size	Sector	Intervention Type	Type of Evaluation	Research Design	Health-Related Evaluation Outcomes (examples)
Gureje et al., 2020	Nigeria	Adolescents aged 20 and below with perinatal depression as defined by the Edinburgh postnatal depression scale	Not specified	H	Care service Intervention	Outcome and pre-post evaluation	Randomized Controlled Trial (RCT), mixed methods	Mental health outcomes, namely depression scores; measures adolescent take to prevent pregnancy after childbirth
Lipsky et al., 2020	Malawi	Young people aged 10-24	Not specified	H	National Youth-Friendly Health Services (YFHS) Strategy	Process	Policy	Forced/child marriage, teen pregnancy, misconceptions, or a lack of knowledge about YFHS
Kuo et al., 2020	South Africa	Young people aged 13-15 and their caregivers/ parents	n=37 families	H	Resilience-oriented Intervention	Impact	RCT	HIV-risk behavior, depression

Citation Authors	Location	Target Population	Intervention Sample Size	Sector	Intervention Type	Type of Evaluation	Research Design	Health-Related Evaluation Outcomes (examples)
Biracyaza and Habimana, 2020	Rwanda	Children of victims and perpetrators of the Rwandan genocide aged 20-30	Not specified	H, DG	Community-based sociotherapy	Process	Exploratory qualitative method	Psychosocial well-being: psychological healing, growth development and personality changes, social cohesion and family relationships restored, confidence and involvement in the community actions, reconciliation, and forgiveness, healing transgenerational trauma and social isolation, self-identification, decision making, responsibility and self-identification.
Hetherington et al., 2017	Tanzania	Young people aged 10-23	n=826	H, EDE	School-based intervention	Process, Outcome, and pre-post evaluation	Mixed methods: pre- post-quantitative survey and Individual interviews and FGDs. Process and outcome evaluation	Knowledge and practices of sanitation and hygiene.
Hechanova et al., 2018	Philippines	Not youth specific	n= 48	H	Community-based resilience intervention	Outcome	Quasi-experiment	Anxiety, adaptive coping, individual resilience
Diaz-Cayeros et al., 2020	St. Lucia, St. Kitts, Nevis, and Guyana	Young people aged 10-17	n = 566 youth	H	Community, family, and youth resilience program	Process	RCT	Individual risk and resilience factors as determined via YSET tool and improvement of family environment

Note: H = Health, DG = Democracy and Governance; EDE = Economic Development and Education; N/S = Not specified; LMICs = Low- and Middle-Income Countries; YSET = Youth Services Eligibility Tool.

Research Question: How do community resilience-focused programs address or deal with shocks and stressors?

Aligned with findings from Phase 1, our review identified how various community health resilience programs address or deal with shocks and stressors across micro-, mezzo-, and macro-levels. These findings, along with their associated protective factors, are further illustrated in Table 4.

Addressing Micro- and Mezzo-level Shocks and Stressors

Most programs included in our review identified low social capital as the primary stressor experienced by young people and their families. To address this, programs focused on building social capital and social support through targeted interventions across micro- and mezzo-levels to promote protective factors for mitigating stressors and future shocks. At the micro-level, the RAPid program was focused on improving the mental and psychosocial well-being of young mothers at risk for perinatal depression using behavioral therapy and socio-emotional skills training (Gujere et al., 2020). Additionally, USAID's Family Matters Program utilized a face-to-face counseling model with youth and their families to improve mental health outcomes (Diaz-Cayeros et al., 2020). At the mezzo-level, interventions capitalized on building relationships within the family and the broader community by leveraging youth's immediate social environment (i.e., parents, trusted adults, teachers, peers) and fostering active participation among youth and their families (Kuo et al., 2020, Hetherington et al., 2017, Biracyaza and Habimana, 2020, Hechanova et al., 2018, Diaz-Cayeros et al., 2020). Coupled with building relationships, mezzo-level strategies included fostering community connectedness, facilitating community support, and providing access to community assets and resources, especially in the context of poverty or in communities with low-resources (Hetherington et al., 2017, Gujere et al., 2020, Biracyaza and Habimana, 2020, Diaz-Cayeros et al., Hechanova et al., 2018).

Addressing Macro-level Shocks and Stressors

Only one program included in our review mentioned macro-level shocks and stressors that impede the building of community resilience. The youth-friendly health services project in Malawi identified social exclusion from policies and planning as a key shock faced by youth in attaining positive health outcomes. To address this issue, a national strategy to strengthen and streamline health services for youth was developed and implemented. This strategy included several components that were helpful in creating institutions that positively support and include youth and community members in planning and policymaking processes. These components include utilizing a bottom-up approach where community members participate in developing a common agenda, identifying mutually reinforcing activities (i.e., coordinated workshops that provided access to community, district, and national experts to support action planning efforts), developing shared measurement systems, ensuring continuous communication among community members, government officials and other members of the civil society, and identifying a backbone organization to oversee and coordinate all aspects of the strategy (Lipsky et al., 2020).

Table 4. Shocks/Stressors and Protective Factors in Reviewed Resilience Programs.

Program	Macro Shock/Stressor	Protective Factor	Mezzo Shock/Stressor	Protective Factor	Micro Shock/Stressor	Protective Factor
Our Family Our Future *Kuo et al., 2020*	None identified	None identified	None identified	None identified	Low social capital	Social capital and social support (mostly from parents)
Project SHINE *Hetherington et al., 2017*	None identified	None identified	Lack of positive social institutions, unfavorable built environment	Community connectedness, community support, community assets and resources	Low social capital, poverty	Social capital and social support (from teachers, fellow students, and community members)
RAPiD *Gujere et al., 2020*	None identified	None identified	Stigma, lack of positive social institutions	Community assets and resources	Low social capital, poverty	Social capital and social support
Community-based sociotherapy *Biracyaza and Habimana, 2020*	None identified	None identified	Stigma	Community connectedness and cohesion, community assets and resources	Intergenerational trauma	Self-esteem, social support (mostly from family)
Community, family, and youth resilience program *Diaz-Cayeros et al., 2020*	None identified	None identified	Poverty	Community connectedness and safety	Low social capital	Social capital and social support (mostly from family)
Resilience intervention for displaced survivors of Super Typhoon Haiyan* *Hechanova et al., 2018*	None identified	None identified	Poverty, unfavorable built environment	Community connectedness and coherence, community support, community assets and resources	Low social capital, poverty, family bereavement (deaths)	Social capital, social support, spirituality
Youth-friendly health services *Lipsky et al., 2020*	Social exclusion	Inclusion in policymaking and planning	Lack of positive social institutions, poverty, social exclusion	Community support, community assets and resources	Low social capital, poverty	Social capital, social support

*Note: * not youth specific*

Research Question: What, if any, community-level resilience capacities (e.g., across/grouped by absorptive, adaptive, and transformative capacities) are associated with improved health and health-seeking behaviors of youth during/immediately following a crisis?

The understanding of what types of resilience capacity (i.e., absorptive, adaptative, anticipatory, and transformative) are associated with improved health outcomes among youth is at an early stage of development. Nonetheless, our review indicates that most programs focus on strengthening adaptive resilience, defined as the ability to withstand and adjust to unfavorable conditions and shocks, and absorptive resilience, defined as the ability to withstand but also to recover and manage using available assets and skills.

As illustrated in the above sections, community resilience-focused programs build individual resilience by providing youth with skills or strategies to withstand shocks and stressors and recover from similar shocks and stressors by using the skills, strategies, or assets that youth and their families gained from the programs. Our review suggests that both adaptive and absorptive resilience capacities are associated with improved health, particularly mental health, among youth. However, additional research is needed to examine whether the positive effect of absorptive resilience capacity and its effect magnitude improve, decrease, or remain the same over time. Further, programs that build individual resilience and improve mental health, though important, may not include intervention components suitable to assessing anticipatory (i.e., the ability to predict and minimize vulnerability) or transformative resilience (i.e., transformative change so systems better cope with new conditions). We did not find evidence to support a positive association of anticipatory and transformative resilience capacities with youth health outcomes. This gap might be partly attributed to the inconsistent definition and measurement of community resilience and inadequate framework to understand the link between resilience and youth health and guide intervention development. In addition, aside from Malawi's National Youth-Friendly Health Services strategy, community resilience programs need to include or target systems to examine whether, and what type of, transformative resilience is associated with youth health in LMICs.

Research Question: What are the gaps in community resilience research and programming?

Based on the findings of this review activity, our team has identified the following gaps within community resilience research and programming:

Limited number of youth-specific and community resilience-focused programs in health. As indicated by the number of programs included in this review, very few youth-specific or youth-inclusive community resilience programs exist within the health sector. The community resilience literature is dominated by disciplines such as disaster management, whereas the health sector is only beginning to develop programs that have a community resilience focus. This lack of programs may be because the field of health and medicine is predominantly an individually focused discipline. With the emergence of global pandemics, such as COVID-19, community resilience has become an important area in the health sector with the potential for becoming a heavily studied area in the coming years. Although our review did not yield community resilience programming linked to COVID-19 and youth health outcomes, it is possible that some literature might have been published after our systematic search of academic databases and the grey literature.

Program designs and approaches vary in rigor and quality; documented impacts on youth health outcomes are limited. There is a lack of rigorous evaluations to identify and quantify the impacts of programming on youth health outcomes. Existing evaluations are limited in scope, only assessing individual-level outcomes (i.e., mental health and psychosocial well-being) rather than community-level resilience outcomes (i.e., responsive and inclusive policies and community preparedness). More research regarding the impacts of community level interventions on youth health outcomes needs to be conducted to build knowledge on what building blocks, or community characteristics and capacities, have the most impact and how these can be leveraged for optimal outcomes.

More programs need to actively engage young people. Although the programs in this review indicate that youth were engaged in delivering services and were active participants in their health interventions, not all programs reviewed included youth engagement as a core feature of service delivery. Further, operationalization of youth engagement across programs varied with some programs identifying engagement as being program beneficiaries (Kuo et al., 2020) and others providing opportunities for youth to study local diseases and disseminate findings (Hetherington et al., 2017). With these considerations in mind, to effectively build resilience, community resilience programming, like other youth programs, must promote youth engagement in ways that are contextually and culturally specific, so that youth can serve as active leaders in their health and have a voice in how they would like to engage.

Programs are multi-component and target young people and their families, but there were few community-focused programs. Although programs focused on improving youth mental health and related outcomes, their implementation consisted of multiple intervention components targeted at different levels of the youth's environment (i.e., individual, family, and community). Findings show that there was heavy emphasis on the youth themselves and less emphasis on the environments in which these youth live. Socioecological theory demonstrates the importance of young people's environments in contributing to positive outcomes, thus programming needs to be more targeted to the community.

Programs are primarily mental health focused. As indicated in our findings, most programs in this review are mental health focused. However, youth have needs and challenges in other areas that need to be addressed. Moving away from narrowly focusing on resilience in the context of mental health might allow for an expansion of interventions that can be offered and implemented. Cash transfers in the Malawi project, for example, could be considered as a community resilience initiative that addresses issues of youth economic marginalization. Alternatively, supporting economic advancement of young people has the potential to promote behavior changes, especially desirable behaviors associated with positive health outcomes. For instance, cash transfers provide adolescent girls and young women with financial resources to pay for their basic needs, such as food and toiletries, and may discourage them from engaging in risky behaviors, such as dependence on male partners to meet their basic needs (Pettifor et al., 2019).

Section V. Phase 3 Findings

Section Overview

Measurement of community resilience in the context of youth health outcomes is a critical step in building evidence of the source, presence, and/or strength of resilience (MHPSS 2021). Social and behavioral outcomes can be measured in a variety of ways with wide-ranging reliability, validity, applicability, cultural appropriateness, and translational relevance to communities being measured. The present section focuses on 1) identifying what measures of resilience have been developed and used in the context of youth health; 2) documenting the state of resilience measurement in this field, namely the extent to which these measures have been demonstrated to be valid and reliable; and 3) how these measures have been implemented in conjunction with measurement of youth health outcomes.

The Phase 3 search identified 23 relevant articles (refer to figure 1), of which 19 dealt with program evaluation or survey data and four presented summaries, such as toolkits or proposed frameworks. Of the first group of 19 articles, one study was a review, five studies used a qualitative methodology to measure community resilience and 13 relied on quantitative measurement. Four studies involved data from multiple countries; Malaysia and South Africa were most frequently represented with four (17 percent) and three (13 percent) studies each, respectively. Our research question differs from existing reviews (e.g., Sharifi 2016; Bhandari and Alonge, 2020) in that we specifically focused on studies where youth are involved, either as program recipients, data collectors, or key stakeholders, as well as with an eye to youth health outcomes. Through this review, we identified tools measuring community resilience at the level of the individual (i.e., youth/adolescent), program or organization, and community, though with a wide range of quality of validity and reliability information on each tool.

The following results are organized first into documentation of the tools (i.e., question sets delivered together to cumulatively provide a measurement of community resilience, in part or in sum) and of the general thematic areas of the indicators (i.e., questions used to probe and quantify resilience) that composed these tools. Findings were counted as being relevant to community and/or individual resilience if they mapped onto the Phase I definitions for each, where these two forms of resilience were conceptualized as 1) fundamentally overlapping and interacting, 2) modified by protective structural elements, and 3) mediators of response to shocks and stressors; each of which can potentially be measured directly or via proxies.

Research Question: How are programs measuring community resilience?

Quantitative Tools

We identified ten quantitative tools for community resilience measurement, one of which was made-for-purpose and nine that had been developed and used in at least one other context and re-implemented in the identified study. In three studies, researchers collected quantitative data in association with a program or intervention (e.g., evaluation), nine were used in descriptive studies, and five were studies that measured the validity and reliability of a tool (e.g., translation of a quantitative tool to a new language). Of the 13 studies with quantitative measures of community resilience, all reported or cited metrics of validity and/or reliability testing. Most of the tools were originally conceptualized and implemented in high-income countries then translated and adapted for low-income countries, with notable exceptions being the Brazilian Youth Questionnaire and the Youth Ecological Resilience Scale. The Child and Youth Resilience Measure (CYRM) or its revised, shortened version (CYRM-R) was the most commonly used tool (n=6 studies, 46 percent) and was especially used for cross-cultural or multi-country comparisons (e.g., Holtge et al., 2021). The CYRM-R purports to quantify the resources used to navigate obstacles and enable individual resilience. This tool has two sub-scales: one with 10 items on intra/interpersonal resilience (e.g., learning opportunities) and one with seven items on caregiver resilience (e.g., safety). Although it is an individual-level tool, it relates to community resilience because the subscales position respondents within their communities and measure the extent to which communities are sufficiently and responsively resilient for individuals. To measure youth health outcomes, the CYRM was used in combination with a variety of tools. For example, the CYRM was used with the Hopkins Symptom Checklist (HSCL-25) to gauge the prevalence of depression and anxiety and to correlate these issues with resilience (Badri, Eltayeb, Marwa, and Verdeli, 2020). It was also used with tools for measuring neighborhood environment (i.e., measures of social cohesion and adaptability) and perceived social support to understand contribution of environmental factors (Reyes-Sanchez et al., 2020), or religiosity (Hassan, Kassim, Tobi, and Munir, 2020) and cultural connectedness (Amini-Tehrani et al., 2020). Notably, three (50 percent) of the studies using CYRM were conducted by an overlapping group of authors with the express objective of testing CYRM in new contexts (i.e., translation to Arabic [Jordan], modification for young adult college students [Iran], and use of the Arabic version online [Syria]). The online version performed comparably to the face-to-face version and had high internal reliability[1] and similar convergent validity[2] with another tool, the Strengths and Difficulties Questionnaire, per the authors (Panter-Brick et al., 2021). The online respondents understood the questions and generally did not need help following online links, indicating that online measurement was appropriate for the studied population.

Other resilience measurement tools included the Connor-Davidson Resilience Scale (CD-RISC; n=2 studies), the Youth Ecological Resilience Scale (n=1 study), or the Brief Sense of Community Scale (BCBS; n=1 study), which were used to measure youths generalized coping abilities (e.g., "I can deal with whatever comes my way," "I tend to bounce back after a hardship or illness"), among other aspects. As

[1] The consistency of items within the tool and by extension whether the included items are sufficient to cover the concept (resilience)

[2] How closely the online version is related to measures of the same construct, in this case a well-validated behavioral screening tool

with the CYRM, these tools were nearly always used in tandem with conceptually related measures such as the Community Participation Index (CPI; Drescher et al. 2018) or measures of school or community environment (e.g., Liebenberg et al., 2016).

Dutra-Thome et al. (2019) used the context-specific Brazilian Youth Questionnaire that includes items on ecological risk (e.g., family, community, or college/university risks), protective, and promotive factors in a study of what risk and resilience factors promote positive youth development. The cross-sectional survey used structural equation modeling to identify promotive factors for health outcomes, such as likelihood of sexual risk-taking. This study found that engagement across the levels of Bronfenbrenner's socio-ecological model (see Phase 1) are the most promising for emerging adults in Brazil.

A study by Amir Zal et al. (2020) used census data to construct a social/community capital measure to stratify "non-economic" poverty (e.g., participation in the fishermen's union as an element of community capital) among youth

Table 5. Synthesis of Tools, Measures, and Indicators

Tool	Community Youth Resilience Measure	Student social-ecological resilience measure	Pathways to Resilience Measure	Youth Services Eligibility Tool	Brazilian Youth Questionnaire	Brief Sense of Community Scale	Maryland Safe and Supportive Schools School Climate Survey	Connor-Davidson Resilience Scale	Youth Ecological Resilience Scale	Resilience Scale-14
Individual	X	X	X	X	X	X	X	X	X	X
Program									X	
Community	X	X	X	X	X				X	
LMIC(s)	Jordan, Botswana, China, Colombia, Equatorial Guinea, India, Indonesia, Philippines, Romania, South Africa, Eritrea	Iran	South Africa	Guyana, St. Lucia, St. Kitts and Nevis	Brazil	Tanzania	Colombia	India, Indonesia	South Africa	Malaysia
Resilience indicator themes	Individual capacities (personal skills, social skills, peer support) Primary relationships (caregiver's physical and psychological caregiving) Contextual factors (spiritual, cultural, education)	All CYRM indicators combined with all ARMb indicators	Community risk (sense of safety at school, sense of safety in the community) Co-delivered with CYRM as a subscale	Stability of home environment Peaceful conflict resolution skills Presence of positive role models Communication with guardians	Ecological risks (community, family, school)	Needs fulfillment Group membership Influence Emotional connection	Sense of safety at school Perceptions of relationships with teachers Belonging Sense that socio-emotional needs were met at school	Coping ability	Relational dimensions Environmental security Interactional Personal Success in leaving care program	Perseverance Self-reliance Purpose Existential aloneness Equanimity

Tool	Community Youth Resilience Measure	Student social-ecological resilience measure	Pathways to Resilience Measure	Youth Services Eligibility Tool	Brazilian Youth Questionnaire	Brief Sense of Community Scale	Maryland Safe and Supportive Schools School Climate Survey	Connor-Davidson Resilience Scale	Youth Ecological Resilience Scale	Resilience Scale-14
Validity metrics	Arabic translation: face, content, construct (comparative fit index=.92-.98), and convergent validity with prosocial behaviors and household wealth Online modification: convergent validity with resilience concepts from the SDQ	Convergent/divergent validity with DASS-21c Construct validity (factor structure)	NR (refers to testing in other contexts)	NR (refers to testing in other contexts)	Structural equation modeling to map the questionnaire with risk and protective factors	Face validity with focus groups	NR	Indonesia study: NR India study: NR	Construct validity (via a previous study in the same population)	NR (refers to testing in other contexts)
Reliability metrics	Arabic translation: Cronbach's alpha=0.75 Online modification: Cronbach's alpha=0.89	Cronbach's alpha=0.89	Cronbach's alpha reported for each subscale	NR (refers to testing in other contexts)	Confirmatory factor analyses indicating acceptable fit	Cronbach's alpha=0.84 Low test-retest reliability	Cronbach's alpha=0.84, 0.74 for security at school and connectedness subscales, respectively	Indonesia study: Cronbach's alpha=0.91 India study: NR	Cronbach's alpha range=0.314-0.702	NR (refers to testing in other contexts)

Note. aSDQ=Strengths and Difficulties Questionnaire; bARM=Adult Resilience Measure, based on CYRM but for individuals over 23 years; cDASS-21=Depression, Anxiety, and Stress Scale

Qualitative tools

The authors of five studies employed qualitative methods to collect evidence of community resilience. Each study was an exploratory effort to identify context-specific and/or cross-cutting domains and themes of community resilience. Two studies employed a PhotoVoice methodology[3] and phenomenological design with youth, then analyzed the resulting data with youth to come to consensus on risk and protective factors that contribute to community resilience (Bireda and Demessie, 2018; Barrington et al., 2017). Vostanis et al. (2020) worked with youth from four countries to define "strategies" for coping with adversities and found support for an ecological systems approach to resilience for youth in LMICs. Finally, Abdullah, Cudjoe, Jordan, and Emery (2021) and Krauss et al. (2020) interviewed youth with research questions informed by the social ecological approach and identified aspects of community resilience as perceived by key informants. All five studies using qualitative methods involved some degree of participatory research, which was not the case for the quantitative studies reviewed. Each study using qualitative methods was more exploratory than confirmatory in relation to community resilience measurement, definitions of shock, and definitions of family, community, or lived environment (e.g., Barrington et al., 2017). Youth worked to identify themes of resilience. These themes included agency, social engagement, safety, and inclusivity, a supportive environment to build social capital with adults and peers, and youth voice in programs. There was no mechanism in place to quantify the strength (or variation in strength) of the identified resilience aspects or account for between- or cross-group differences.

Research Question: What indicators are being used to measure community resilience?

Indicators found in the above tools are related to community resilience and/or youth health outcomes in the context of community resilience and can be categorized in three sets: individual indicators, program/organization indicators, and community-level indicators. The evidence was by far the most well-reported and of the highest quality for individual indicators compared to the other two levels. Indicators at the individual level were clearly defined, rigorously measured, and there were more studies measuring individual level indicators. In contrast, fewer studies measured indicators at the program/organization or community level, and those measured were of lessor rigor or quality.

Individual (Youth)

Indicators of youth resilience, as conceptualized in Phase I, included items that quantified participation in cultural or religious practices, self-efficacy, empathy, future orientation (e.g., belief that there will be new opportunities to develop), group membership (e.g., connectedness to a community), national or cultural identity. Health outcomes related to community resilience included a general sense of safety (i.e., at home, at school, or in the community at large), ability to adapt to change, sense of relationship security, anti-social tendencies, impulsive risk-taking, depression and anxiety, and daily stressors (e.g., harassment, racism, acculturation distress, and restricted freedom). Generally, the indicators for both resilience and health were those from standardized instruments and not necessarily aligned with the standard indicators of USAID or other donors. Some additional individual indicators that were particularly compelling in the context of community resilience were queries about youth's perceived ability to bounce back from failures, having someone to turn to for help, ability to take pride in accomplishments, ability to deviate from a group belief (e.g., able to make unpopular decisions), and ability to externally attribute responsibility or blame for occurrences outside of the respondent's control (e.g., chance, fate, God).

[3] Photo Voice is a participatory research method whereby participants take photos in their community that are intended to elucidate an issue or answer a research question. Photos are later analyzed by the participants.

Program/Organization

Because so few identified studies were associated with a particular program or community resource, few indicators were identified at this level. However, the measures we did identify included items on frequency of service use, with some conceptual overlap as an individual indicator of "dose"; quality of school experience; and individual level reasons for program dropout (e.g., distrust, lack of time, or lack of interest on the part of the caregiver). An intervention program by Mathias et al. (2018) provided a resilience curriculum in South Africa but measured only individual-level outcomes and impacts. We did not identify any input (e.g., resource costs) or process (e.g., quality of programming) indicators. Only one program collected or reported information on reasons for study drop-out (e.g., did not like the counselor, hard to schedule meetings) (Diaz-Cayeros et al., 2020) or reasons why youth declined to participate in the first place. Although this is an intersectional individual- and program-level indicator, Diaz-Cayeros et al. found that logistical challenges, such as scheduling, drove drop-out, not individual participant characteristics. With reference to the resilience framework, there was little available information on community-level resilience, such as a school's ability to recover from shocks.

Community

Community, as envisioned in Bronfenbrenner's social-ecological model and outlined in Phase I, was operationalized in various ways as community capital, under which social capital (i.e., quantified relationship strength between community members) fell; community risk (e.g., feeling of safety at school, feeling of safety going to and from school, perceived level of crime in the community); reciprocally supportive youth-community relationship (e.g., feeling part of the community); religiosity; and caregiver resilience. As with individual and program indicators, we did not find direct reliance on standardized indicators from USAID or similar donors. Overall, there was a notable lack of indicators related to this level.

Research Question: To what extent have programs focused on promoting community resilience and related youth health outcomes been evaluated?

Only three identified papers were about implemented programs with components of community resilience promotion. One brief mental health and resilience program was piloted with young women in an urban slum in India and employed a quasi-experimental longitudinal design to evaluate the effectiveness of their mental health and resilience curriculum. While the program showed statistically significant effects on self-efficacy, resilience measured by using CD-RISC, anxiety, depression, and gender attitudes at the end of the intervention, these effects were not sustained at eight months post-intervention (Mathias, Pandey, Armstrong, Diksha, and Kermode, 2018). A USAID-funded Community, Family and Youth Resilience (CFYR) program in Guyana, St. Kitts and Nevis, and St. Lucia implemented a public-health-informed, place-based strategy to reduce likelihood of youth participation in risky or violent attitudes and behavior (described in detail in Phase 2); youth 10-17 and their caretakers completed a set of tools related to resilience, specifically the Youth Services Eligibility Tool (YSET), and were compared to communities in a control group. Resilience measurement included domains, such as a stable home environment, positive role models, higher self-esteem, and peaceful conflict resolution skills, although the authors noted that the YSET alone does not capture all these resilience factors (Diaz-Cayeros et al., 2020). One of the qualitative studies identified was an evaluation of a Malawian unconditional cash transfer program, where PhotoVoice was used to understand resilience from the perspectives of youth and their caregivers. By consensus, the resulting data indicated that the cash transfer program increased community resilience to shocks (Barrington et al., 2017).

Conclusions

Measurement of community resilience, individual resilience, and youth health in LMICs has been conducted using tools that perform moderately reliably and for the most part included metrics of validity where these

outcomes have been evaluated. Most of the current evidence is descriptive or cross-sectional rather than linked to program evaluation. However, an array of existing tools are positioned for future use with programs promoting community resilience and youth health. The tools that presently exist for youth-community resilience measurement are only one puzzle piece in appropriate, effective, and reliable measurement of the topic. These tools have been implemented in tandem with related questionnaires; no standalone tool on the distinct constructs of community resilience and youth health outcomes was identified. However, these two constructs were frequently measured in tandem using different tools. Exploratory qualitative work, particularly using participatory methods, such as PhotoVoice, provided an efficient mechanism for understanding community resilience holistically, but comparisons between communities using these methods is difficult.

There was generally consensus about the component sub-factors of community resilience that aligned with the Phase I findings on risk and protective factors. However, several measurement gap areas still exist (see Phase I, Figure 2), such as means to measure community preparedness, the role of structural elements (e.g., civic participation), and extent of reliance on local knowledge as core components of community resilience. Most identified tools and their indicators consider individual-level experiences of community resilience rather than any direct assessment of the community at large. It is also unclear how well existing measures perform for determining changes in resilience over time. These gaps provide clear avenues for future research; current evidence supports participatory methodologies as a strong approach to quantify these missing aspects.

Section VII. Phase 4 Findings (KIIs)

Section Overview

The team spoke with 16 experts through 11 interviews with wide-ranging geographic and content area expertise (Table 6). KII participants supported many of the findings that emerged within previous sections including that 1) definitions of youth's resilience and community resilience are complex, 2) building blocks, shocks and stressors span across macro, mezzo, and micro levels, 3) health resilience programming for youth largely focuses on the individual and assumes a ripple effect to community outcomes, and 4) existing tools for measurement fail to account for cross-cultural transferability. In addition to these findings, KII participants shared their expertise surrounding emergent themes not explicitly stated in the literature, which are discussed further in greater detail below.

Table 6. Description of Key Informant Interview Participants by Geographic Region and Area of Focus

KII Participant Category	Area of Expertise	Geographic Region or Focus
Researchers	Mixed methods: HIV/youth and resilience	LAC
	Participatory methods/youth resilience	South Africa
	Adolescent girls' SRHR	Kenya/Zambia
Practitioners	Mental health/MHPSS	Global (n=3)
	Youth/mental health	South Africa
	Community trauma and resilience	Global
	Child protection/mental health	Global (n=2)
	Youth	LAC (n=3)
	Adolescent mental health and conflict prevention	Global
USAID Staff and Representatives	Youth and food security	Global
	Mental health and trauma	USAID/CECA

Defining Community and Youth Resilience

When asked to characterize community resilience, most experts defined it as a positive reaction or response to stressors in the environment and challenging circumstances. That positive reaction was described as an ability to absorb, adapt, or transform; to withstand or recover; find meaning; bounce back; contribute to society; find connectedness, have social inclusion and bonding; have agency; navigate toward resources; collectively problem-solve; quickly recover; have hope; believe that things will change for the better and live on during strife.

"We think about community resilience—[components] of that being economic resilience and having the resources available to meet the basic needs of its citizenry. Youth health [is affected by] stress levels, emotional regulation, and their ability to form healthy social bonds and social relationship. That can all be impaired by stress from scarcity."— KII participant

Experts did not often distinguish between community or youth/individual resilience when asked to define community resilience. Several experts suggested that resiliency for youth must be viewed as a separate construct from community resilience because youth are a distinct group, whose identities, life experiences and brains are still developing and forming. Compared to adults in the community, youth have not yet lived long enough to generate appropriate coping mechanisms and adaptation skills, and they have different needs than adults. For example, a young person experiencing the loss of a parent—a person upon whom she or he relies emotionally and financially—is quite a different shock than someone who loses their parent as an adult. Even within youth resilience, differences by age and developmental stage are critical considerations in defining that resiliency.

Experts mentioned numerous, important connections between youth and community resilience. Several experts mentioned that youth are only as resilient as their communities, and vice versa. This topic fed into larger discussions about programming and the importance of multi-component programming that addresses stressors and/or the building blocks of resilience for both youth, at the individual level, and the community. Working at one level was seen as essential for building resiliency at the other. For example, as young people develop resiliency skills, they decide to give back and contribute to their own communities (e.g., in the form of volunteerism), which bolsters community resilience in a time of need.

"We often discuss [that resilience is] like an ecosystem, and so building those assets at different levels of the community [is important]." — KII participant

This connection was also expressed the other way—that when community resilience or resources are absent, it impacts resiliency and successful health outcomes for individuals. For example, a program in Kenya may build a young girls' confidence and skills, but if the community norm is that she marries, she may be unlikely to execute her own desires in this context. Another example was from an expert involved in an empowerment program in South Africa that trained youth as health promotion officers. They found through research that many program graduates decided to leave their communities instead of staying and contributing, as leaving was seen as the only way out of a difficult life.

Types of Shocks and Stressors

Experts were asked about the types of shocks and stressors they are familiar with through their work that impact both young people and their communities. Categories of shocks and stressors included the following outlined in Table 7:

Table 7. Shocks and Stressors Defined in KIIs According to Socioecological Theory

Shock/Stressor	Macro Level	Mezzo Level	Micro Level
COVID-19 Pandemic	X	X	X
Gang-related violence	X	X	
Substance abuse			X
Economic insecurity *(i.e., lack of employment opportunities, loss of employment, poverty)*	X	X	X
Push/pull factors related to migration *(i.e., context of pulling parents away from their children)*			X
Education services *(i.e., lack of education services, poor educational opportunities, too few service providers)*	X	X	
Conflict and crisis *(i.e., long periods of war and natural disasters)*	X	X	X

Shock/Stressor	Macro Level	Mezzo Level	Micro Level
Climate change	X		
Gender norms that perpetuate gender-based violence and sexual harassment	X	X	
Pregnancy and early marriage			X
Overarching uncertainty		X	
High stigmatization and discrimination among marginalized populations (*i.e., LGBTQI+)*			X

Building Blocks of Resilience and Resiliency Programming

Experts were asked to share their thoughts on what facilitates or builds resilience—both in the theoretical and for programs aiming to enhance youth and/or community resilience. Most experts shared their experiences related to building and fostering youth resilience.

One trusted adult: Most importantly, experts shared that youth must have a trusting relationship with an adult in the community. This adult may be a family member, such as a parent, a mentor or role model. Religious leaders were commonly mentioned as key stakeholders for youth and community resilience, along with other caregivers and services providers.

"Our approach is to build relationships and make sure kids have a positive role model in their lives. That positive adult mentor who really impacts their lives and shows them a different perspective for their future." — KII participant

Trustworthy systems: Trust is key, according to most experts, not only within the relationship context but also with the community and the resources housed in that community. Youth must be able to trust the systems and structures in their enabling environment to be resilient and experience healthy outcomes.

"In childhood, if trusted relationships are broken, either with their caregivers or aid workers or teachers or health care providers, then youth are much less likely to seek support when they have health needs or mental health needs or education needs. If they're going through a period of stress in their life, they're much less likely to reach out to a trusted adult if that trust has been broken. And if you build that relationship of trust, if you rebuild that relationship of trust and they're able to see that, then that helps and translates into better life outcomes for health and economically." — KII participant

Youth also need enabling environments with supportive norms and attitudes, including adult perceptions that youth can make decisions and be leaders. Several experts noted that adult perceptions of youth capabilities is lacking in the low-and middle-income settings in which they work. Adults do not fully trust that youth can and should be involved in the programs and services designed for them. Youth must be heard, and their experiences valued for programming to successfully change health outcomes.

Safe spaces: Another key component of resilience programming included offering youth safe spaces, or as one expert put it, allowing youth to "take safe spaces for their own." These spaces were not specifically defined by experts but included places like classrooms, the beach, and online forums, and the focus was on creating an area where youth can comfortably share their experiences, their fears and hopes with each other and trusted adults.

An assets-based approach: To do resiliency programming well, program designers and researchers must start with assessments and activities to understand what resources and assets the community already has and understanding the ways in which communities and youth are already resilient, instead of taking a needs-based approach. A few experts mentioned the importance of multi-sectoral programming and working with various actors in the community such as government agencies and civil society.

Barriers to Resilience and Resiliency Programming

Throughout the interviews, experts noted several challenges to successfully designing and implementing programs for youth and resilience. Again, most experts spoke from their experience implementing youth programming:

Norms are not challenged: One difficulty noted by several experts was the normative environment surrounding youth; specifically, one that does not value meaningful youth engagement nor gender equity, thus attenuating program impacts. Shifting attitudes and biases of adults and entities working with youth, including the corporate sector, was regarded as an area for key programmatic action. Adults around the globe continue to see youth as a group to take care of, lacking autonomy, and incapable of making good decisions for themselves. In cultural contexts that value elders as primary decision makers, meaningful youth engagement is often a strained activity. Related, a few mental health practitioners mentioned that a lack of understanding and normalization of mental health issues stigmatizes young people and impedes progress.

Too much focus on individual empowerment: Several experts noted that current programming focuses too much on "empowering" individual youth, and not enough on enabling community resilience. This results in youth with leadership skills but nowhere to exercise those skills; one expert said this could lead to a dangerous outcome of programs, in which youth feel defeated and hopeless. Part of the challenge is a lack of resources in the community. Experts specifically mentioned a lack of professional workforce to support programming, poor services infrastructure (e.g., schools) and overburdened providers (e.g., teachers). Others noted that even when there are a plethora of community-based organizations working for and with youth, they are often siloed and fractured in their approaches, or duplicating efforts. Better collaboration between actors would improve coordination and efficient resiliency-building.

Insufficient funding: Experts noted that insufficient funding and short funding cycles negatively influence the sustainability and scalability of resiliency programming for youth and their communities. This insufficiency included funding from donors but also resource commitments by local and national governments to take ownership of promising programs. One expert reported that even when the government can scale up quality programs, it often systematically leaves out marginalized youth or efforts are not robust enough to affect meaningful change.

"The project time frame is two years. [Then] the project ends and then what? For sustainability, we have to use the local people from within that country. It can be done in two ways. There's a capacity building aspect to it and then there's a sustainability aspect to it. Sustainability can be supported by structures that can be used by youth on the ground." — KII participant

Youth engagement is not always meaningful: A few other experts suggested that the field has yet to fully master meaningful youth engagement in program design and implementation. Until we do that successfully, we will continue to have challenges influencing resiliency and health outcomes for youth and their communities. Examples of insufficient engagement included tokenistic youth advisory boards, light-touch involvement of youth, and not putting forward sufficient time and resources for meaningful youth engagement throughout the program design process.

"Young people's voices aren't heard at all levels of resilience building. I think what a lot of our young people need is culturally accessible youth engagement-language wise and culturally appropriate. It's a tall order, but I do think that's a big barrier for young people to really feel that are engaged." — KII participant

Programmatic Approaches

Most experts' programmatic approaches focused on providing socio-emotional training and mental support to young people across various under-resourced settings, such as conflict zones, impoverished regions, and communities plagued by violence. Specific skills taught or enhanced by individual youth programming included conflict resolution, problem solving and decision making, and socio-emotional

aspects, such as self-control and self-esteem. A few programs also taught vocational (i.e., related to technical or practical professional employment) and/or sector-specific skills, such as health literacy and mental health counseling. Other program components with youth included connecting them to adults in their communities, making sure they have a positive adult role model, and facilitating peer-to-peer support networks. A few programs provided safe spaces for youth to gather.

At the community level, experts described programs that worked with or in the health sector, specifically with health care providers; schools including with teachers, school administrators, counselors, and parents; and law enforcement. A few informants mentioned their programs worked specifically on economic recovery and facilitation of access to services, education, and information services. Specific activities and skills at the community level of intervention included promoting social cohesion, social organizing, training of certain organizations or entities (e.g., the corporate sector to offer young people internships and jobs), building child-adult communication skills with parents (e.g., a program that reintegrated former child soldiers back with their families), hosting regular community meetings, building capacity and empowering local providers, such as the police and mental health professionals, to provide trauma-informed services.

A few experts spoke about programs that directly provide cash as a means of stimulating resiliency and support at the community and household level. According to one informant, cash transfer programs are successful and can be sustainable—specifically those in the context of young girls' education and sexual health programing. A few other experts opined similarly, suggesting that even though it is not always an appealing option to a donor to provide cash, it can make a huge difference in health and resiliency outcomes.

Experts discussed theoretical and actual approaches to program design, development, and implementation that they felt were best practices in the field. These approaches began with community asset mapping and an understanding of who are the trusted individuals and institutions in the community, followed by building out programming based on what assets already exist, as opposed to a "new" program, or one that comes from a deficit mindset. Most programs start with individual-focused activities with young people, and then build out a few relevant elements of intervention at the community level—for example, by providing youth socio-emotional learning skills and psychosocial support while also training counselors and providers. Many of these approaches assume a "ripple out" effect of programming—if you have basic skill building at the local level benefits can spread (e.g., trauma healing and recovery programming in areas with high trauma exposure). Another program that trained youth as health promoters reported that youth felt empowered to be out in their communities providing essential services, especially during the COVID-19 pandemic.

Measurement Approaches and Tools

When discussing the approaches and tools used to measure community resilience, experts noted the importance of participatory qualitative and formative data collection methods that put youth at the forefront of the research process. Specific methodologies described photo elicitation methods, which allow youth participants to avoid academic and jargony language around resilience/shocks/stressors, and show what resiliency looks like through action rather than perceptions. Another frequently mentioned methodology was asset and resource mapping, which includes a mapping of key trusted adults and institutions in a community. A few experts talked about specific elements of resilience that should be initially assessed, including the presence of problem solving among community members, and the extent of social equity within a community (i.e., the extent to which resources are distributed equally, especially during a crisis). The need for gender perspective assessments that investigates underlying gender norms in a community was noted as key by a few experts. Understanding of gender norms within a community is essential in a programming context, given how the roles men and women play in society become templates that young people desire to follow, whether consciously or not.

Participatory methods involving and led by youth are critical. One expert noted he was amazed by how many youth-focused programs are still designed by adults. Participatory approaches must include activities

like youth co-designing programs that serve young people, collaborating on curriculum development, and leading research on program effectiveness.

Few experts mentioned specific quantitative or qualitative tools for measuring community resilience, although several specific measurable constructs were mentioned that approximate resilience, including social cohesion, trust, stigma at both the individual and community levels; collective action; and perceived belonging and inclusion. Social cohesion and trust were most discussed as constructs that researchers and practitioners currently use; specifically, the extent of how much communities are supporting each other and relying on each other during crisis, often framed as a buffer or response to stigma. Social cohesion measures also look across groups at the level of bonding among individuals and extent of civic and community participation. According to experts interviewed, measurement of trust has focused on individual youth trusting other individuals (e.g., peers, parents) but also community entities such as public institutions and the government. Many experts consulted tend to rely on individual scales and tools measuring youth's mental health and perceptions of belonging and connection to friends and family; a few specifically mentioned the lack of community-level tools as a reason for over-reliance on these individual tools.

A few challenges with current approaches mentioned included the non-transferability of existing scales/tools into different cultural contexts and the need for further validation of existing tools, along with the fact that in many cultures, resilience is not a term that is well understood, communicated, or easily translated into a local language. One expert team reported that a child and youth resilience scale, a quantitative tool they used in their work, did not resonate in their context. They highlighted the importance of qualitative work to contextualize resiliency and ensure that measures are responsive to unique contexts.

Lessons Learned about Resiliency During the COVID-19 Pandemic

Nearly all experts expressed challenges in their resiliency work due to the ongoing pandemic; namely, that their ability to gather and work collectively in person has diminished, and the extent of the mental health toll on their young colleagues has significantly impacted programming. New stressors have emerged (e.g., isolation, loss of job opportunities, clinic closures) that have triggered trauma and depleted youth and their communities of resources and reserves.

Despite the challenges, experts found surprising benefits of how they conduct programmatic work during the pandemic. Due to the restrictions on gathering, experts found that they relied on community members in new ways to deliver key research and programming activities, which in turn shifted power back to the community. One expert talked about how the pandemic in South Africa helped foster a renewed sense of community, with individuals young and old supporting each other in tangible ways. The ability to use the internet also expanded program outreach and connection in novel ways. This expansion included community members sharing their own stories at academic conferences, instead of the stories of U.S. or Western-based researchers.

Section VIII. Discussion

Section Overview

This systematic review aimed to understand community resilience programming and its impacts on youth health outcomes. We did this by identifying promising community resilience programs that promote positive youth health outcomes, identifying the health outcomes that are most impacted by community resilience programs, and identifying available community resilience measures.

This section attempts to draw out some themes from the findings we have presented in the systematic review. At the same time, we identify gaps in the literature that are important to note for future research. It should be kept in mind that the studies included in this report are a subset of the available literature that might have a broader focus other than that defined by the inclusion criteria used in this review. Therefore,

the gaps discussed here will also have a narrowly focused view based on the intersections of the inclusion criteria for this systematic review. The discussion should be read in that light, given that we cannot generalize our findings beyond the inclusion criteria in this review. We conclude this section by presenting recommendations for future research and programming.

Key Themes

Definition of community resilience in youth health outcomes is in its infancy. Through this review, although community resilience emerged as an important concept that has significant implications for youth health outcomes, the literature indicates that community resilience as it applies to youth health outcomes is still in its infancy and much work still needs to be done. For example, definitions of community resilience and the genesis of it are from disciplines outside health, and more work needs to be done to define it as it pertains to youth health. Barrington et al. 2017, presented a definition that indicates converging economic, social, and cultural resources to address chronic and acute health situations, but most of the studies in this review were focused more on acute health situations than chronic ones. A definition that goes beyond a process-oriented focus of mobilizing and aligning resources to identify a resilient community's optimal state would be ideal, and the field needs to be working towards this definition.

There is a bi-directional relationship between individual and community resilience. Personal resilience is often not mentioned when community resilience is discussed. The lack of mentioning personal resilience is a gap in the literature as the personal resilience of a young person allows them to take advantage of the building blocks of community resilience when these are made available to them. Building this personal resilience should be a focus of community resilience and efforts could be built in tandem to ensure that youth have the capacity to leverage community resilience. The caveat, as mentioned before, is that building personal resilience does not mean that community resilience will be a given. Therefore, both need investment, planning, development, and execution. Individual resilience and how youth fit into their immediate nexus are essential to young people's integration into their communities. Young people's knowledge, skills, and capacity must be enhanced to cultivate resilience at multiple levels.

The socio-ecological model is critical to understanding community resilience programming for positive youth health outcomes. The SEM was predominant and informed the other models and approaches identified in the literature. The prominence of the SEM is a key finding and demonstrates the foundational role that the socio-ecological model's tenets play in a young person's development. The supporting and enabling environments of a young person provide a buffer against health shocks and stressors and alleviate the impacts of crisis when it occurs. The SEM allows for understanding the young person's environment and integrating interventions at the micro, mezzo, and macro levels to address the health challenges and adversities that young people face. Developing multi-sectoral interventions that assess and address physical and mental health, education, employment, finance, and community and family issues (e.g., norms, relationships, and social support) is key to promoting positive youth health outcomes. The principles of the SEM align with the Positive Youth Development (PYD) goal of creating healthy, productive, and engaged youth by improving their assets, agency, contribution, and enabling environment.

Programs build individual resilience through positive mental health. Building youth or individual-level resilience is a common characteristic of the programs included in this review. Programs build individual resilience by providing youth with skills or strategies to manage shocks and stressors and improve mental health. These skills and strategies (e.g., problem solving) are delivered through structured counseling or training sessions. Although mental health is a key focus, programs use multilevel strategies to build youth resilience, including participation of parents or caregivers in the intervention and implementation of programs within community institutions (e.g., schools). In addition to structured counseling and training sessions, current programs enhance youth's support systems by creating an enabling environment within the family (e.g., parent-youth communication) and schools (e.g., participatory science projects) and between youth (e.g., sociotherapy). While the emphasis might have been on building individual resilience

to manage shocks and stressors, our assessment of current programs suggests a multilevel and multidisciplinary approach.

Program evaluation focuses on mental health and related outcomes. Our review indicates assessment of mental health as the most common study outcome. Mental health has been primarily operationalized as either anxiety or depression. The overwhelming emphasis on mental health illustrates the dominant conceptualization of resilience as an individual or personal attribute that allows youth to "bounce back" from a challenging experience or adapt well in the face of shocks and stressors. Thus, health outcomes expected to correlate with resiliency, albeit individual resilience, are mental health focused. In addition to mental health, other study outcomes included sexual and reproductive health, HIV prevention, and sanitation and hygiene. Assessment of non-mental health outcomes are driven by the programs' focus on specific health issues affecting youth, particularly adolescent girls and young women (e.g., child marriage and early pregnancy, and HIV prevention). However, there remain crucial gaps in our understanding of the connection between community resilience and youth health outcomes in general. To address the gaps, we developed a conceptual framework (Figure 3) that links resilience to health outcomes in general, with the aim of testing its validity with empirical data.

Evidence supports positive effect on health outcomes. Evaluation studies on five of the eight programs reported positive impacts of resilience programming on a range of youth health outcomes. These studies evaluated the impacts of the overall program and did not assess whether observed impacts were due to particular intervention components. Although the evidence is promising, it is early to suggest conclusive positive impacts of resilience programming on youth health outcomes. There remain few programs focused on youth resilience and health. Even fewer are youth-oriented resilience programs with published and accessible evaluation studies. Nonetheless, current studies assessed program efficacy and effectiveness using experimental designs, which strengthen causation. However, generalizability of evidence remains a challenge as most programs are context or country specific.

Emergent Gaps

Context-specific community resilience models: Western-based theories and models dominated the community resilience theoretical models identified in this review (see pages 16-17 discussion of theories, models, and approaches). Some theoretical and practice models were adapted to align with the context to which they applied. Given this reality, it is not surprising that most programming identified in this review also follows the same pattern. The interventions, particularly individual or group therapy activities, heavily relied on western models (e.g., RAPiD in Nigeria), and some were adapted to the local context (e.g., Sociotherapy intervention in Rwanda). Further research that develops locally grown models that address youth health issues in local contexts is necessary. These specific community resilience models would include building indigenous problem-solving mechanisms that address local issues. Western models typically focus on public institutions that are sometimes not present in LMICs and sometimes do not comprise the mechanisms that local people often think of as resources for addressing their issues.

Target groups: Most of the programming in this review targeted adolescents and young women. As a result, most of the programming and findings were school based, indicating a gap in research and programming that target young people who are post-high school and are in tertiary education or work. These studies would have highlighted other community resilience building blocks specific to young people and influenced young people, such as work environments, college campuses, gender-biased social norms that celebrate male success and not female success, and community stigma against the LGBTQI community.

Harmful cultural practices: None of the studies identified discussed harmful cultural practices and religious rituals detrimental to young people. In some LMIC contexts, some practices can reduce young people, particularly girls' self-confidence, self-esteem, and sense of control. Although some studies mentioned traditional and religious leaders as an asset, the caveat is that these leaders in certain settings can also

negatively influence young people's positive health outcomes. For example, in some settings, it is believed that young women should not access sexual and reproductive health services (SRH). In some cases, the young women who are barred from accessing SHR services are already sexually active and may end up with unwanted pregnancies. These harmful practices are often tied to unwritten rules regarding the rites of passage for individuals moving from one life stage to the next.

Youth participation: Community resilience is fundamentally communal. The studies in the review did not discuss youth participation. This gap in the literature needs to be addressed moving forward. The participation of youth in building community resilience is critical as their engagement and agency contribute to an alignment between the solutions and the challenges faced by youth. When youth are isolated and lack access to community resources (defined broadly), youth cannot thrive in such an environment. This participation will have to take place at the micro, mezzo, and macro level, not only for youth to have a sense of belonging but to also respond to what their environment offers and change it for good. The centrality of meaningful youth participation is well-aligned with the PYD model, which was also a gap in the literature.

Recommendations

Develop a Theory of Change (ToC) that will lay the foundation to address gaps in the community resilience for youth health outcomes literature. This ToC will integrate findings from this systematic review, youth contributions, and knowledge from a more representative sample of experts and key stakeholders who are deeply immersed in community resilience work and youth health outcomes in LMICs. Given the lack of clarity between individual (i.e., youth) resilience and community resilience, the ToC might also further define differences between these two concepts and help identify opportunities for program interventions that address both youth and community needs that can be implemented and evaluated.

Conduct research to develop a clear pathway of how stressors, shocks, and protective factors influence youth health outcomes. In this review, the research investigates the association of stressors, shocks, and protective factors on youth resilience but does not go further to establish how youth resilience translates to positive health outcomes. Research that would test these pathways might also identify preventative measures to promote youth well-being and avoid negative health impacts for youth before they occur.

Establish inter-sectoral work that will connect community resilience and youth health outcomes work with PYD. There is a dearth of literature on this connection. However, given findings from this systematic review, a case can be made on how community resilience for positive youth health outcomes is well aligned with PYD. Connecting this work while community resilience for youth health outcomes in LMICs is in its infancy might enrich the development of community resilience with a PYD framework. PYD can provide a comprehensive foundation that will provide plausible explanations to questions and gaps that still exist in the community resilience work for youth health outcomes.

Incorporate financial resilience-building efforts into interventions designed to improve youth health outcomes. Prior interventions notably lack a financial resilience component, despite the known linkages between financial resilience and health. To strengthen both youth resilience and community resilience, financial and asset building interventions will be key to promoting positive youth health outcomes.

Develop measurement tools for community resilience with particular attention to community-level indicators, without diminishing the importance of the reciprocal relationship between individual resilience and community resilience for positive youth health outcomes. These measurement tools should be developed with an eye for incorporating context-specific aspects that will allow for tools to respond to the needs of different environments across LMICs. The participation of youth in creating these measures is key, coupled with participatory methods that will leverage stakeholders' knowledge across relevant sectors. This research will aid in understanding the constructs, for measurement, of resilience that are

cross-cultural, and cross-sectoral. Community Resilience can be measured reliably with validity across settings versus context-specific components.

Develop a blueprint for adapting practice models to local contexts. This blueprint can be developed as a framework for practitioners who want to adopt models from other contexts and/or develop a local community resilience model to address youth health outcomes and will assist in building capacity within communities to deliver resiliency programming more efficiently and successfully.

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Appendix A. Phase Specific Search Terms, Databases, and A-Posteriori Exclusion Criteria

Phase 1: Identify what goes into "optimal" community resilience and its connection to youth health outcomes

Search Terms and Concepts	
Community Type	communit* OR neighborhood* OR town* OR village OR rural OR urban OR peri-urban
Community Characteristic	resilien* OR connectedness OR cohesion OR adapt* OR capacit* OR shock* OR stress* OR absor* OR transform*
Domain	*health*
Target Population	youth* OR adolescen* OR teen* OR young OR young people* OR young person* OR young adult* OR early adult* OR minor*
Location*	"low and middle income" OR international OR Africa OR Asia OR "Southeast Asia" OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" OR "Middle East"

A-Posteriori Exclusion Criteria

- Dissertations and Book Chapters
- Does not mention specific building blocks or aspects of community resilience
- Proportion of youth in sample less than 50 percent

Phase 2: Identify specific programs and their connection to individual health outcomes

Search Terms and Concepts	
Primary Topic	"community resilience"

Domain	*health* OR “health outcome” OR “health behavior” OR “health behaviour”
Target Population	youth* OR adolescen* OR teen* OR young OR young people* OR young person* OR young adult* OR early adult* OR minor*
Program Type	program* OR intervention OR approach* OR component OR service OR assistance
Location*	"low and middle income" OR international OR Africa OR Asia OR "Southeast Asia" OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" OR "Middle East"

A-Posteriori Exclusion Criteria

- Dissertations and Book Chapters
- Does not include discussion of individual or community-level outcomes
- Components of the intervention do not relate to systems-building

Phase 3: Identify measurement of community resilience

Search Terms and Concepts	
Community Type	community OR neighborhood
Domain or Focus	resilience OR multilevel OR “social capital” OR “collective efficacy” OR “social cohesion” OR “connectedness” OR “community networks” OR asset* OR “strengths-based” OR teamwork OR “supportive leadership” OR "health literacy" OR "health competence"
Target Population	youth* OR adolescen* OR teen* OR young OR young people* OR young person* OR young adult* OR early adult* OR minor*

Measurement	measur* OR tool* OR indicator* OR index OR indices OR roadmap OR assessment OR analysis OR scores OR instrumentation OR validation OR scale OR outcome OR construct OR concept OR variable* OR item*
Location[4]	"low and middle income" OR international OR Africa OR Asia OR "Southeast Asia" OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" OR "Middle East"

A-Posteriori Exclusion Criteria

- Dissertations and Book Chapters
- Not related to measurement

Phase 1 – 3 Databases (n=26): Google Scholar, Academic Search Premier (EBSCO), Cinahl Plus With Full Text (EBSCO), Econlit (EBSCO), Education Full Text (EBSCO), ERIC (EBSCO), Global Health (EBSCO), Psycinfo (EBSCO), Social Work Abstracts (EBSCO), Pubmed/MEDLINE, Web Of Science, Social Services Abstracts (PROQUEST), Health Management (PROQUEST), Health Source, Scopus, Embase, Eldis, IDRC Digital Library, World Health Organization, Development Experience Clearinghouse (DEC), Department For International Development (DFID), Ausaid, African Development Bank, Asian Development Bank, Organisation For Economic Co-Operation And Development (OECD), World Bank

[4]For location we included all countries defined as low-and middle-income countries following the World Bank Classification list (https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups)

Appendix B. Key Informant Interview Protocol

YouthPower2: Learning and Evaluation (YP2LE)

Community Resilience SOW Activity

Key Informant Interview Protocol

GSDI Team: Gina Chowa, Rainier Masa, and Miranda Manzanares

ICRW Team: Elizabeth Anderson, Heather Marlow, Laura Hinson

Background and Purpose

This review seeks to better understand how to build community resilience to support youth. The team will conduct a thorough examination of available literature, current trends, and future directions. This systematic review will take place across four phases. Each phase includes a set of guiding research questions.

- Phase 1: Identify what goes into "optimal" community resilience and its connection to youth health outcomes
- Phase 2: Identify specific programs and their connection to individual health outcomes
- Phase 3: Identify measurement of community resilience
- Phase 4: Conduct qualitative key informant interviews with identified stakeholders

This protocol is specific to Phase 4. To supplement the peer-reviewed and grey-literature searches, the Key Informant Interviews (KIIs) will serve as a mechanism to further our understanding of emerging gaps and assist us in further contextualizing our learnings. The systematic review seeks to better understand how to build community resilience to support youth. This includes developing an understanding of how researchers and practitioners are working to build youth's community resilience through different programs and the resources and tools that exist to measure community resilience. These activities are part of a larger systematic review funded by the United States Agency for International Development (USAID) through the mechanism YouthPower2: Learning and Evaluation (YP2LE), a project led by Making Cents International. This systematic literature review is an activity under YP2LE, which is being carried out by YP2LE research partners from Global Social Development Innovations (GSDI) at the University of North Carolina at Chapel Hill and the International Center for Research on Women (ICRW).

i. Key Informant Interview

KIIs will be one-on-one interviews conducted with adult researchers and practitioners engaged in community health resilience programming for youth, with a particular focus in the health sector. Participants in these one-on-one interviews will include practitioners, researchers, and USAID Mission, Bureau or Independent Office (MBIO) staff.

Procedures

i. Recruitment

Team members from Making Cents and ICRW are responsible for helping to identify and recruit KII participants for this activity. Team members from Making Cents will provide electronic introductions between GSDI and ICRW identified KII participants. On behalf of GSDI research team members, the GSDI Project Coordinator will lead and be responsible for scheduling of KIIs. On behalf of ICRW research team members, Dr. Elizabeth Anderson will lead and be responsible for scheduling of KIIs.

ii. Eligibility Criteria

All participants for the KIIs must meet the following eligibility criteria to participate.

1. *Must be 18 years of age or older*
2. *Must have at least two years of professional experience in relation to community resilience, youth, and health.*
3. *Must provide verbal consent.*
4. *Must be able to speak and understand English*
5. *Must have access to reliable internet connection.*
6. *Must have access to or create a Zoom account.*
7. *Must have a working email address.*

iii. Informed Consent

The research information sheet (Appendix A) is to be delivered via email prior to scheduling KIIs for participants to review, download, and save for their records. Reception of the research information sheet and acceptance of the meeting invitation will be received as consent to participate. Adult KII participants will be required to provide verbal consent to having the virtual KII recorded. Upon obtaining informed consent, KII participants will be encouraged to not share information learned as part of the discussion with people outside of the KII. Only participants who consent to participate will be included in the virtual KIIs.

iv. Data Collection

All adult KIIs will be conducted virtually through Zoom, a secure video conferencing platform. Adult KIIs will be facilitated by members of the GSDI and ICRW research team. Virtual KIIs will be up to 60 minutes in length. Each session will have its own unique link and a unique password that only members of the GSDI or ICRW research team and participants will be provided with. KII participants will be placed into a waiting room prior to joining the virtual meeting and will be admitted into the virtual meeting by a member of the GSDI or ICRW research team leading the KII. GSDI and ICRW personnel responsible for leading the adult KIIs will receive protocols to review prior to conducting virtual KIIs and will be instructed to follow specific processes outlined in Appendix B. During the KII interview, GSDI and ICRW team members will take notes that will be included for coding during the analysis process. Following the KII, the verbatim transcript will also be downloaded from Zoom and coded for analysis.

v. Data Safety and Monitoring

To ensure data collected through virtual KIIs is safeguarded, audio recordings will be stored in a password protected account on Zoom's cloud recording platform. GSDI and ICRW research team members will share audio files via Zoom through password protected links. Additionally, GSDI and ICRW research team members will download verbatim transcripts from Zoom for each KII. These files will be stored on a password protected computer in separate password protected files on Box. Access to audio recordings, transcripts, and notes will be restricted to members of the GSDI and ICRW research teams. Other members of the research team, including members from Making Cents, USAID, and Mathematica, will have access to de-identified data only by request.

The GSDI Project Coordinator will destroy all data by permanently deleting the files and its contents following conclusion of YouthPower2: Learning and Evaluation activities in 2022.

vi. Anonymity and Confidentiality

Any personal information that could identify adult KII participants will be removed or changed before the final report is shared with other researchers and findings are made public. No participant names or unique identifying information, which may reveal participants' identity, will be mentioned in the report. To further ensure anonymity and confidentiality, during virtual KIIs, participants will be given the option to turn off their video cameras and utilize a pseudonym.

Key Informant Interview Prospective Questions

During virtual KIIs, GSDI and ICRW research team members responsible for leading KIIs will ask participants to provide responses to the questions below. GSDI and ICRW facilitators will use the below questions as a guide but will include clarifying questions as needed. Not every question will be asked in each KII, GSDI and ICRW research team members will modify questions as needed to align with the expertise of the KII participant.

1. How would you define community resilience? *(Interviewer should refer to definition in Phase 1 write-up)*
    - In what ways, if any, does the definition you just described/described to you relate to youth and their health outcomes?
    - What are some of the stressors and shocks youth experience that affect health outcomes?
    - What are some of the community resilience factors that mitigate stressors and shocks for youth health?
    - How does community resilience compared to youth resilience address these shocks and stressors?
    - What are the common barriers to offering youth specific support in challenging, fragile and conflict settings?
2. In your opinion, how do youth respond to communities that have the necessary features or building blocks of resilience?
    - What are some of the challenge's youth face with insufficient resilience in communities? *(Interviewer explain what we mean by insufficient. Refer to the building blocks.*)
    - How can researchers and practitioners work with youth to engage communities for positive health outcomes?
    - What are some shocks and stressors that youth have experienced in your work? (*Interviewer should have examples of shocks and stressors to share with interviewee.*)
3. What community level supports or remedial supports (e.g. schools, shelters, food programs, health facilities, health hubs, classes) exist to support youth in need during times of shock or stress? Are the unique needs and experiences of youth considered? What can be done to improve these supports to address the needs and experiences of youth?
    - To what extent are communities, especially health centers and programs, able to mitigate the effects of shocks and stressors regarding youth health and health-seeking behaviors?
    - How do communities address risk? *(Interviewer to define risk.)*

- What are the roles of community members and other key stakeholders in building/nurturing/maintaining community-level resilience capacities (e.g., parents, youth-led and youth-serving organizations, government)?

4. Which community members/leaders (e.g., religious/spiritual leaders, teachers, community leaders, mental health providers, community healers/health workers) or a combination of these are best poised to support youth in times of stress or shock?
    - Why do you think these leaders are well poised to support youth?
    - What challenges do these leaders face in supporting youth?
    - In your opinion what support do these leaders need to promote optimal health outcomes for youth?
        - Do those folks previously named have sufficient capacity to support young people? Please explain why or why not.
    - How can the capacity of those leaders who do not have sufficient capacity be strengthened?
    - Have you seen these individuals/groups able to support large numbers of youth that require support or more individualized and ad-hoc support? What made this broad-based support possible?
5. Do you know of any programs (e.g., mental health, family planning or reproductive health) that are successful at mitigating youth stressors to improve their health outcomes (e.g., mental health, family planning/reproductive health)? If so, what made these programs successful? How were they able to overcome youth shocks/stressors?
    - In these programs, in what ways are/were risks defined or identified? *(Interviewer to explain what risk means.)*
        - Are there any community action plans that programs have created to prepare and respond to risks?
    - In these programs, what adaptations were made to prepare for specific risk factors that youth were exposed to?
    - How do shocks/stressors vary by health outcomes (e.g., mental health, family planning/reproductive health)? How do shocks/stressors vary among youth (e.g., by gender, ability)? How do shocks/stressors vary from other populations (e.g., adult)?
    - Were youth included in the development of the program? If so, how? If not, how would you address or make recommendations to include youth?
    - What are the barriers related to sustainability and scalability and of these programs and how does that vary by programming components?
6. What types of emergency financing exists to support community-level health organizations? Is any of the financing earmarked for youth, or otherwise planned to be inclusive of youth?
    - How does emergency financing account for vulnerable sub-populations of youth (e.g., LGBTQI youth, youth with disabilities, conflict-affected youth)?
7. What indicators or tools are used to measure community resilience in health programs?
    - Do these indicators give you all the information you need? If not, what is missing?

- Can you differentiate health program impacts for youth vs. other sub populations (e.g., girls/boys, conflict-affected youth, LGBTQI youth)?

9. What lessons on community resilience have been learned from the COVID-19 pandemic?
    - What about lessons specific to vulnerable sub-populations of youth (e.g., LGBTQI youth, youth with disabilities, conflict-affected youth)?