Scenarios of Health Engagement Experiences and Health Justice in Rural Libraries

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Abstract

This article documents scenarios or narratives of health engagement experiences in rural libraries based on qualitative analysis of feedback collected from 15 rural librarians in the Southern and Central Appalachian (SCA) region during semi-structured interviews conducted in 2017-2018. The article focuses on respondents' perspectives of the "aboutness" of their health-related engagement, collaborating partners, encountered challenges, and resulting outcomes. Scenarios were documented in broader interviews that focused on specific health activities and community engagement in 11 domains, including agriculture, diversity, economy, education, environment, government, health, law, manufacturing, social welfare, and other. The research forms part of a planning grant entitled "Assessment of Rural Library Professionals' Role in Community Engagement in the Southern and Central Appalachian Region: Mobilization from Change Agents to Community Anchors (CA2CA@SCA-RL)" awarded by the Institute of Museum and Library Services to the University of Tennessee, sub-contracted to the University of Alabama this year (July 2017 – June 2019). Scenarios provide a taxonomic classification of health-related programs relevant to the region and a framework of practice related to their implementation. As a health justice tool, they also challenge the hegemonic imagination of mainstream American society, news media, and popular culture that has only presented the SCA rural belt in deficit light. The article becomes a counter-point to these past unfair and marginalizing representations in its constructive asset recognition of the SCA rural librarians' positive examples of health-related experiences. It spotlights the "invisible" of SCA librarians' individual/community empowerment as change agents making an impact on the lives of their rural residents.

Keywords: community engagement; health justice; rural libraries; scenarios; Southern and Central Appalachia

Publication Type: research article

Introduction

T his article documents scenarios or narratives of health engagement experiences in rural libraries based on qualitative analysis of feedback collected from 15 rural[1] librarians during semi-structured interviews conducted in 2017-2018. The research forms part of a larger planning grant entitled "Assessment of Rural Library Professionals' Role in Community Engagement in the Southern and Central Appalachian Region: Mobilization from Change Agents to Community Anchors" (CA2CA@SCA-RL)[2] awarded by the Institute of Museum and Library Services' Laura Bush 21st Century Librarian-FY 2017 Guidelines (Community Anchors Project Category) to the School of Information Sciences at the University of Tennessee, sub-contracted

to the School of Library and Information Studies at the University of Alabama this year (July 2017 – June 2019) (Mehra, Singh, & Sikes, 2018). The article focuses on the respondents' perspectives of the "aboutness" of their health engagement activities, collaborating partners, encountered challenges specific to the regions, and resulting outcomes. "Aboutness" is defined as an overview or general descriptive details about the information projects, programs, and initiatives getting discussed. The scenarios were documented in broader interview conversations that focused on specific health experiences and community engagement in 11 varied domains: agriculture, diversity, economy, education, environment, government/public policy, health, law and justice, manufacturing/industry, social welfare, and other. Scenarios/stories of experience shared by rural librarians helped to develop a taxonomic classification of health-related projects and programs relevant to the region and a framework of practice in terms of partners-challenges-outcomes related to their implementation and operationalization.

Health and Rural Context

As stewards of information and advocates of literacy, public libraries have long fostered health information literacy through educational programming, partnerships and collaboration with community health organizations, and outreach services to specific user populations, particularly those that are considered underserved or vulnerable (Barr-Walker, 2016; Mehra, 2014). For those who lack computers or internet technologies at home, public libraries facilitate improved access to health information and offer resources to community members in their provision of computer workstations and Wi-Fi (Rubenstein, 2017). In a time when people are more directly involved in decisions about their health care and in finding information related to health issues, libraries thus play an important and critical role for consumers who lack access to information resources (Prechtel, 2008; Zionts, Apter, Kuchta, & Greenhouse, 2010). Public libraries are considered to be trustworthy information resources that greatly contribute to the ability of users to find needed health information (Baker, Spang, & Gogolowski, 1998; Harris, Henwood, Marshall, & Burdett, 2010; Horrigan, 2015).

Public libraries serve as one of the few important resource places for meeting unique rural health literacy needs of those geographically-dispersed users who do not own computers or have internet access in their homes and where availability of health service providers is limited (Lukenbill & Immroth, 2009; Stanton, 2017; Temple, 2017). Borman and McKenzie (2005) noted that, in rural areas, healthcare providers regularly referred patients to the library for further information about their health and that public libraries were one of the few places where people in rural communities could go to find such information. According to Rubenstein (2016a), "There is often scant access to the internet in rural and disadvantaged communities due to lack of funding for high-speed connections, along with few other places to obtain information" (p. 332).

A study of people who utilized the library to find health information found these users often lacked home internet access and, compared to others, were less educated, had lower incomes, were more likely to be retired or unemployed, and had limited or no health insurance (Kwon & Kim, 2009). Real, McDermott, Bertot, and Jaeger (2015) noted that consumers who signed up for the Affordable Care Act (ACA) through a public library were more often disadvantaged in terms of the digital divide, indicating the crucial role libraries played in providing vital health information to vulnerable and marginalized groups. Public libraries have provided information and support found to be critical to efforts to promote health among underserved populations, particularly low-income families, users in rural areas, those with disabilities, and elder persons (Eng et al., 1998). This is particularly true in the Appalachian region, which is largely rural and

has historically been recognized for its socioeconomic challenges and for having a high proportion of residents who are considered disadvantaged (Appalachian Regional Commission, n.d.a; Eller, 2008; Mehra, Bishop, & Partee II, 2017a, 2017b, 2017c). Studies have shown evidence that health disparities between the region and the rest of the country have grown and that the association between poverty and lower life expectancy in Appalachia is stronger than in other regions of the U.S. (Gutschall, Thompson, & Lawrence, 2018; Singh, Kogan, & Slifkin, 2017).

While public libraries, as trusted sources in their communities, are able to both promote health information literacy and provide users with access to health information, Rubenstein (2016b) contended that little research has explored the ways libraries address health literacy as a matter of public good or how they work to close health literacy gaps. Mehra, Albright, and Rioux (2006) advocated for a social justice perspective in the practice of information professions and offered a framework for information science research that was focused on tangible outcomes and the facilitation of change in the lives of marginalized populations. The researchers utilized examples from qualitative studies, two of which represented an information service related to the provision of health information in order to meet the specific needs of an underserved group. Behringer et al. (2007) considered health disparities in the Appalachian region and also called for a perspective of social justice that utilizes place-based and collaborative action to raise the level of awareness of communities to healthcare challenges and encouraged local credible sources such as public libraries to become proactive in the dissemination of health information. The researchers drew particular attention to the "real access barriers faced by rural residents that should be acknowledged and addressed in regional health promotion programs and interventions" (p. 45) and suggested that solutions would require coordinated efforts by community members.

Flaherty and Miller (2016) noted the significant disadvantages for rural residents in regard to access to health information and health promotion activities and argued that, while public libraries do provide health information, opportunities exist for broader community engagement related to health. Flaherty (2018) later called for rural public libraries to promote and support active, healthy lifestyles and to collaborate with other professionals and community groups to introduce community health initiatives. Librarians can realize a host of unique opportunities that such collaborations may offer for positive changes in the communities they serve (Flaherty 2018; Flaherty & Miller, 2016; Jaeger, Wentz, & Bertot, 2015).

Flaherty and Grier (2014) studied health information practices that brought together medical and public library practitioners through a collaborative outreach project in which consumer health librarians were embedded in public libraries. The researchers found a positive effect on staff knowledge and awareness of consumer health resources, on user expectations, and on the provision of health information in general.

Malachowski (2014) explored community health initiatives that occurred in public libraries and found examples of several, including health screenings, vaccine clinics, health fairs, resource and support meetings, health insurance enrollment assistance, health-related programming, and even on-site healthcare professionals. A shared aspect of all initiatives was a working partnership with local health officials and practitioners. Woodson, Timm, and Jones (2011) provided an overview of a successful project by a library to serve its local community. Librarians created a web portal focused on children's health that provided information through appropriate games and activities. Story hours in the public library also made use of stories and follow-up activities selected by faculty members at a nearby university medical library.

For those users who have access to health information, Flaherty (2013) saw a need to understand the best ways to provide guidance and strategies for the evaluation of information: "With an ever-increasing emphasis on patient/consumer responsibility for health and an ever-escalating amount of information available, individuals are in need of support when it comes to utilizing health information resources" (p. 164). The author noted that widening access to online health information resources, even if only available through a local public library, meant that users are in need of support, education, and guidance in utilizing such resources. Eysenbach and Köhler (2002) echoed this issue, stating that once users encounter health information, they may not have the knowledge or ability to evaluate its authority and quality. Additional research has considered that access to information does not necessarily mean that the information is comprehended. Language barriers and difficulties in interpreting and evaluating health information present further elements of the issue of accessibility for underserved and vulnerable user populations (Chobot 2004; Gillaspy 2005; Oelschlegel, Earl, Taylor, & Muenchen, 2009).

Flaherty (2016) stated that public libraries are uniquely suited to assist community members in searching, finding, and evaluating available health information. The author noted a dearth of research assessing the quality of information users receive when they seek help with health questions at a public library and that there appeared to be no standardization regarding the manner in which health queries were handled in most libraries. A further study found this to also be the case for print materials or collection development policies related to health information (Flaherty & Kaplan, 2016). According to Rubenstein (2017), in addition to the problem of users who often lack the knowledge or ability to both find and critically evaluate information, librarians themselves may have limited proficiency or experience in assisting users with information needs related to health.

Rubenstein (2012) noted that public demands and expectations for health information had grown considerably in past years. Public libraries "have struggled to interpret their place within this burst of enthusiasm that has grown exponentially as the general population demands increased access to information as a way of taking control of health concerns" (p. 202). The researcher further stated that libraries can meet these changing information needs especially through collaboration with community partners and through the continued focus on full accessibility of online health resources for their users. While librarian education, budgets for collection development, the health information literacy gap, issues of diversity, and community partnerships all pose challenges for libraries in providing health information, such concerns are not new and creative solutions do exist.

SCA Context and Rural Libraries

The Southern and Central Appalachian[3] (SCA) region, including its rural areas, form part of the 205,000-square mile area in 13 states around the Appalachian Mountains (Appalachian Regional Commission (ARC), 2015a). For the period October 1, 2017 through September 30, 2018, based on an index-based county economic classification system, an assessment of the region's economic status indicated that out of its total 420 designated counties, 84 were distressed, 115 were at-risk with 231 distressed areas, and 208 were transitional with 651 distressed areas (ARC, 2017a). In comparison to the nation's 20% rural population, 42% of Appalachian residents live in rural areas, with a 16.7% poverty rate in the region with its 93 high-poverty counties (that have poverty rates more than 1.5 times the U.S. average) during the 2012-2016 period (ARC, n.d.a). The U.S. Census Bureau (2012) identified two-thirds of the Appalachian counties with populations of less than 50,000 people and 125 counties with fewer than 20,000 inhabitants. In the 21st century,

with federal funding support rural populations in these areas are advancing towards economic recovery and community development to overcome some of their historically debilitating circumstances (e.g., slow financial growth, unemployment, illiteracy, information poverty, and insufficient telecommunications substructure, amongst others) (ARC, n.d.b; Catte, 2018; Mehra, Black, Singh, & Nolt, 2011; Williams, 2003).

The ARC's (2017b) Performance and Accountability Report: Fiscal Year 2016 identifies an allocation of $109.2 million to fund 470 area development projects that further the five goals of ARC's 2016–2020 strategic plan that focus on economic opportunities, ready workforce, critical infrastructure, natural and cultural assets, and leadership and community capacity. As change agents and community anchors, rural libraries in the region are beginning to play a significant role in operationalizing these goals and bridging intersections between these agendas towards: 1) Community capacity and skill development; 2) Leverage of heritage asset management in community and economic growth; 3) Development of technological infrastructures in terms of their socio-technical dimensions; 4) Education, health, and knowledge management; and 5) Investment in entrepreneurial and business enhancement strategies (Mehra & Singh, 2014, 2017; Swan, Grimes, & Owens, 2013).

This article provides a glimpse of the "invisible" in the scenarios/stories of the personal and community empowerment of the SCA rural librarians who are serving as change agents in making a meaningful impact on the individual lives of their rural residents living in their traditionally debilitating communities, empowering them in the process (Mehra, Singh, Hollenbach, & Partee II, 2017; U. S. Environmental Protection Agency, 2017). According to Page and Scott (2001), a change agent "facilitates a 'bedding down' of new practices within organizations" (p. 530), develops skills they learn and pass on to others based on "changed work practices…and changes in their relationship to colleagues" (p. 548), and an "ability to take understandings arising in one 'world'" (p. 548) to use them for instigating change in another. In addition, these health-related scenarios/stories of experience represent library-and-community-wide empowerment that is subversive in that it challenges the hegemonic imagination of mainstream American society, news media, and the popular culture that has only presented deficit patterns of representations of the rural areas and of the SCA region (Hamby, 2018; Mehra, 2017).

This article becomes a counter-point to these past unfair and marginalizing representations in its constructive asset recognition of the SCA rural librarians' positive examples of health-related experiences (PDA Inc., et al., 2017). The qualitative pilot study provides a significant access point of granular data collection. Research methods developed in the CA2CA@SCA-RL are expanding similar qualitative approaches with a larger pool of SCA rural library professionals as well as use of additional quantitative survey-based strategies to document the rural librarians' perspectives in the region about their future directions of growth and application. Methods will be replicated in the future for other rural areas as well as the larger Appalachian region.

Health Justice Imperative

The documented scenarios/stories of health engagement experiences of rural librarians are intimately tied to issues of health justice on many levels; the following are a few salient aspects of note. First, rural libraries around the country, including in the SCA region, have long been overlooked in the library and information professions (Mehra, Bishop, & Partee II, 2017a; Real, Bertot, & Jaeger, 2014). The narrative stories of the SCA rural librarians' health-related experiences described in this article present a glimpse of an "untold" picture of rural library

engagement with external stakeholders to overcome challenges and achieve tangible outcomes in spite of the unique conditions and limited resources they had available at their disposal (ARC, 2015b; Mehra, Bishop, & Partee II, 2018). However, what dimensions of these many health-related scenarios from rural libraries have been heard in public forums within (and beyond) professional associations and organizations of library and information science (LIS) is debatable (Kruger, et al., 2012). They are often conspicuously missing as one encounters a "professional cacophony" focusing only around libraries in the metropolitan areas and those located in the Northeast, Northwest and/or Midwestern belts of the country, marginalizing others that are outside these geographic bastions of privilege and high visibility in LIS discourse in research, education, or the practitioner's world (Mehra, Bishop, & Partee II, 2017b; Real & Rose, 2017).

Research Methods

The following is a brief discussion of the use of scenarios as a methodological tool in this research and the data collection and data analysis reported in the article.

Scenario Use and "Voice"

For many years, scenarios as representative of typical user-centered experiences have found significant application in usability testing and evaluation in software development and theoretical and applied systems design (Carroll, 1995). Scenarios provided real or imagined stories to engineers, designers, and computer scientists of actors other than themselves, of their unfamiliar activities that were unknown to these "experts," and elements of the user-oriented processes towards achieving certain purposes or agendas that had possibilities of improving technological and system infrastructures (Carroll, 2003). Unfortunately, scenario use as an instrument of social justice research to further concerns of equality/equity, fairness, justice, and empowerment of "invisible" perspectives and points of view has been used in very few studies (Mehra, 2015; Mehra & Rioux, 2016). For example, Mehra, Bishop, Bazzell, and Smith (2002) crafted scenarios as tools in participatory action research for studying health information seeking and use by African-American women across the digital divide based on intersections of race/ethnicity and gender (Helsper, 2010; Zickuhr & Smith, 2012). Andrews, Dyson, and Wishart (2015) employed scenario-based learning to advance ethics frameworks in support of educational research in the context of mobile technologies. In furthering this stream of tradition in previous work, the article's use of scenarios provides the authors an opportunity to represent and recognize the experiences and perspectives of a hidden category of professionals in our midst, namely rural librarians from an oft stigmatized geographical region of the Southern and Central Appalachia (Mehra, Bishop, & Partee II, 2016, 2017a, 2017b, 2017c). Scenarios became a mechanism in this research to provide "voice" to the SCA rural librarians in terms of what Belenky, Clinchy, Goldberger, and Tarule's (1986) consider as unheard and inter-personal connected ways of knowing and learning, though silenced owing to imposed social and cultural dogma and hegemony (Campbell, 2016). This article's purpose of scenario-building as the medium of the "voice" of the marginalized rural librarians highlights themes in a shared experience of the collective with potential for action to promote change from an imbalanced status quo within the LIS professions (Moraga & Anzaldúa, 2015).

Data Collection

Personal interviews were conducted with 15 rural library professionals throughout the select SCA region to provide input about their experiences in community engagement while collaborating

with external partners. A mix of intersecting factors related to the individual interviewee characteristics (e.g., number of years in professional service, professional role/title) and the contextual setting traits (e.g., size and scale of library and community, state and county, geographical and environmental conditions) were considered while narrowing representative regions of the interviewees. The personalized conversations between the interviewee-interviewer were one-on-one and implemented via Zoom, an online cloud platform that provides real-time remote conferencing services and web-based meetings (Zoom Video Communications, 2019). The recorded discussions took place through the use of built-in computer microphones without use of the video component owing to limitations of broadband width and stability of connectivity in rural environments (Federal Communications Commission, 2012). The research team elicited assistance of select state library data coordinators, grant partners, and 11 grant advisory board members to encourage rural library director and staff participation. Grant partners included: 1) Blount County Public Library, TN (http://www.blountlibrary.org/); 2) Clinch River Regional Library, TN (http://sos.tn.gov/products/tsla/clinch-river-regional-library); 3) Library of Virginia, VI (http://www.lva.virginia.gov/); 4) Sevier County Public Library System, TN (https://www.facebook.com/SevierCountyPublicLibrarySystem/); and 5) Wiggins Memorial Library, NC (https://lib.campbell.edu/). Library staff in rural communities had a vested interest in sharing their successes and challenges with the greater professional community. The potential of interview findings to help justify future rural library funding and assist other information agencies in community engagement has been incentive enough to encourage participation in past studies. A convenience sample was generated using snowball sampling – earlier interviewees from rural libraries were asked to identify individuals who might be potentially interested to provide relevant and valid interview datasets. Professional networks of the research team provided leads to some participants until saturation sufficiency was achieved (Charmaz, 2006; Dey, 1999). Determining saturation at a sufficient level involved considering three aspects: 1) Occurrence of redundancy and replication of themes and categories in interviewee responses; 2) Development of well-considered pilot research experiences (e.g., interview process, testing of data collection instrument, practice of data analysis procedures) that could be applied to a larger SCA rural librarian sample-set with use of additional qualitative methods (e.g., focus groups) (Mehra, Sikes, & Singh, 2018); 3) A diverse though limited selection of SCA representative regions intertwined with interviewee demographic characteristics. The essential criteria for interviewee selection was for potential participants to be a rural library paid staff member (e.g., library assistants, managers/directors, paraprofessionals) from a county in the SCA region. The research team intentionally included individuals who had played some role in decision-making in whatever capacity in their rural library to gather relevant, valid, and meaningful feedback regarding planning, developing, and implementing community engagement initiatives. All 15 interviewees were Caucasian women except one who was Hispanic/Latino. Table 1 summarizes participant demographics and relevant contextual information (e.g., professional titles).

The researchers created a semi-structured guide consisting of a series of open-ended questions to prompt participants to identify ways their rural library had collaborated, partnered, or engaged with external community stakeholders in the domain of health and others during the past five years. Table 2 provides the names and definitions of the twelve domains. The interview guide is available at URL: http://heramac.cci.utk.edu/INSC560Sp18/CA2CA@SCA-RL_InterviewGuide.pdf. As the interview guide shows, the 12 domains were areas that were specifically and deliberately covered in the interviews, with the "Other" category providing interviewees opportunities to share about initiatives and programming on topics that had not already been addressed. For the domain of health, the following are sample questions used during the interviews:

- Describe up to THREE initiatives (virtual or in-person) related to issues of health through which your library assisted or engaged with external community stakeholders during the past five years.

- For each initiative, list the collaborating external community stakeholders (e.g., non-profits organizations, institutions, agencies in the public and private sectors, groups of individuals, etc.) and what role they played in the initiative.

- What were the key challenges in these initiatives?

- What were the key outcomes of these initiatives?

Table 1. Participant Demographics and Professional Titles

Age	Number of Respondents
30-39 years	3
40-49 years	3
50-59 years	3
Over 60 years	2
Undisclosed	4
TOTAL	15
Years of Professional Service	
5 years or less	1
6-10 years	7
15-20 years	1
Over 20 years	6
TOTAL	15
Location in Rural SCA County	
North Carolina	3
Tennessee	8
Virginia	4
TOTAL	15

Self-Identified Professional Title	
Assistant Director	1
Branch Supervisor	1
Business Coordinator/ HR Specialist	1
County Director	2
County Librarian	1
Director of Libraries	1
Library Director	6
Library System Director	1
Regional Library Director	1
TOTAL	15

Participants were also asked to discuss the roles of both the library and the community partners in the initiatives and to identify and discuss related challenges, successes, and key outcomes. The interviews lasted 1-2 hours each and were conducted using a semi-structured format following the framework of the pre-written question guide; however, the procedure also allowed for latitude to pursue additional lines of inquiry or to seek further information from interviewees. Such an approach offered conversational flexibility, opportunity for more substantial responses, and provided for more reliable data (Herman-Kinney & Verschaeve, 2003; Patton, 1990).

Table 2. Domain Definitions

Domain Name	Definition
Agriculture (D1)	Initiatives and programming related to and in support of farming, farmers markets, personal and community gardening, seed libraries, local food movements, beekeeping, or other relevant topics of concern.
Diversity (D2)	Initiatives and programming related to multicultural issues, cross-cultural education, immigration, English as a Second Language, and providing support for minority and marginalized groups.
Economy (D3)	Initiatives and programming related to economic issues and policies, economic development, small business support and

Domain Name	Definition
	development, job seeking skills, and other similar aspects.
Education (D4)	Initiatives and programming in partnership with and supporting public school systems, private schools, homeschool groups, public and private preschools, and related issues such as literacy, enrichment programs, afterschool programs, summer reading programs, and the like.
Environment (D5)	Initiatives and programming related to issues of environmental health, education, advocacy, protection, and other relevant topics of concern.
Government & Public Policy (D6)	Initiatives and programming related to matters and questions of social and governmental policies and relevant information needs.
Health (D7)	Initiatives and programming related to issues and support of healthy living, nutrition, well-being, health education, fitness, illness management, mental health, long term care, health insurance, and related matters.
Information Technology (D8)	Initiatives and programming related to or providing education in the realm of various information and communication technologies such as computers, personal devices, Wi-Fi hotspots, and all manner of hardware, software, and associated applications.
Law & Justice (D9)	Initiatives and programming related to the provision of support, education, advocacy, and resources associated with questions and information needs in the realm of legal matters and concerns.
Manufacturing & Industry (10)	Initiatives and programming in partnership with and supporting manufacturers and various industrial sectors such as those generally related to skills training, workforce development and education, technology training, and others.
Social Welfare (D11)	Initiatives and programming related to and in support of the social well-being of all groups and vulnerable populations such as those that provide meals or shelter, and other provisions or that seek to meet similar needs.
Other (D12)	Initiatives and programming that fall beyond the scope and definitions of all of the above domains.

All participants received and signed an informed consent form approved by the researchers' university Institutional Review Board (IRB) prior to participating in the interview. Each

participant was provided with a $50 gift card in appreciation for their contributions and time. For purposes of piloting, feedback was solicited from an advisory team made up of library and community professionals and practitioners regarding the structure and content of the interview questions, which provided useful edits and guidance to the researchers and enhanced the validity of the questions in the interview guide.

Data Analysis

A grounded theory approach was utilized in the data analysis (Glaser & Strauss, 1967). The researchers systematically identified categories, themes, and project examples in the participant responses to the interview questions through a process of open, axial, and selective coding (Charmaz, 2014). According to Corbin and Strauss (1990), this type of logical and ordered evaluative process is crucial to an empirical interpretation of such qualitative data.

The data analysis occurred in the following steps. First, transcriptions were made of the audio recordings of the interviews. The interview transcriptions were subsequently compiled into a single digital file and open coding took place as the data was systematically sorted into broad themes. The next step, axial coding, entailed the identification of key topics and themes using illustrative project examples and scenarios of participant responses. Finally, through selective coding, categories, topics, and themes were established that were related to the inquiries of research. The open, axial, and selective coding procedure provided an analytic framework for understanding the data and for an investigation of the thematic relationships found in the responses of the interviewees. Table 3 presents code identifiers, descriptions, and illustrative examples from this research.

Table 3. Codebook

Code Identifier	Description	Examples
P1-P15	Designates individual participants.	*P6D7Q2p: "That is a very active health foundation, and so the library's just a great partner because we have good parking and a big meeting room and are always looking for partners."* [P6 = Participant 6, Female, Age 59 years, Regional Director].
D1-D12	Indicates domain under which the response falls.	*P11D7Q1p: "We have had blood drives. We've partnered with the Health Department to come in and do tables and talk about well-care and taking care of your children."* [D7 = Health].
a, p, c, *or* o	Response type classification. a = "aboutness"; p = partners; c = challenges; o = outcomes.	*P10D7Q2p: "But, talk about collaboration and partners. We've got lots of partners with that."* *P2D7Q3c: "Our space. Twenty-six hundred square feet causes some interesting challenges."*

Q1, Q2, Q3, Q4, etc.	Question asked in the interviews.	Q3: What were the key challenges in these initiatives? Q4: What were the key outcomes of these initiatives?
T1, T2, etc.	Designates primary theme or themes found in the response.	*P9D7Q5o: "So, it's a way for people to be in a private place and do this mental health assessment without having to go to a clinic or tell anyone that they think they need help (T6). We haven't seen that being used very much yet, but we are about to embark on a big LSTA-funded programming series with money devoted to mental health (T3) in the spring and that will be one of the things we try to advertise and highlight."* [T6 = Need for Anonymity; T3 = Grant Funded Opportunities].
C1, C2, etc.	Designates category of the response in different themes.	*P11D7Q5o: "I think we've had a lot more use of the library as a result of it (T1), which is a great outcome. Of course, we're hoping that they're becoming more information literate (T2) about whatever that topic (T2-C1) is and taking home more information to improve their family's lives (T2-C2). All of our programs and activities is about improving the community (T3)."* [T2 = Increased Information Literacy; T2-C1 = Individual Level; T2-C2 = Family Level].
PE1, PE2, etc.	Indicates project examples.	*"We have a group that comes and works and meets with and counsels with victims of domestic violence (PE2)."* [PE2 = Domestic Violence Counseling]

The researchers first compiled the transcribed responses for each individual participant (P1-P15). Subsequent coding then proceeded by categorizing the content for each question (Q1, Q2, Q3, etc.) within the appropriate domain (D1-D12), classifying the response type (aboutness [a], partners [p], challenges [c], outcomes [o]), and, finally, grouping all responses under themes (T1, T2, etc.) and related categories (C1, C2, etc.) in different themes, as relevant, using specific representative responses and project examples (PE1, PE2, etc.). Table 4 provides the response type definitions and examples from the domain of health (D7).

Table 4. Response Type Definitions and Examples from the Domain of Health

Response Type	Definition	Example
Aboutness [a]	Responses that offer overviews or general descriptive details about projects, programs, and	*P11D7Q1a: "Last summer, part of our summer reading was a walking club and they walked and talked about the books they'd been reading."*

	initiatives.	
Partners [p]	Responses that name or specify external collaborating organizations and individuals who have assisted with or coproduced projects, programs, or initiatives.	*P6D7Q2p: "They have a very active health foundation and, over the last couple of years, the library there has partnered with the local health foundation to do at least a couple of different program series."*
Challenges [c]	Responses that outline, describe, or reference specific problems, difficulties, obstacles, or complications related to the deployment of projects, programs, and initiatives.	*P6D7Q4c: "Well, money's a challenge. Again, we have to do a separate fundraiser, or we couldn't do this just out of our budget. So, we're doing a fundraiser every year to be able to pay for the help and to set up and clean up and provide the programming."*
Outcomes [o]	Responses that specify or describe tangible or intangible results, products, or effects of projects, programs, and initiatives.	*P6D7Q5o: "We do a fundraiser in February to raise enough money to pay a couple of part-time people to kind of run that program just for the summer and it's been really popular and something we're really proud of."*

The coding procedure is illustrated in the following examples. The response below from participant (P10) is an example of aboutness [a] in describing initiatives within the past five years in which the library had engaged with external community stakeholders (Q1) related to the domain of health (D7).

> P10D7Q1a: "We also have a mental health kiosk (PE1) in the back of the library. All three counties have that and it's kind of like an assessment on a computer that you go through and how are you feeling today or, you know, and it asks a few questions and it's pretty simple and brief. And then, at the end of that assessment, then it will say, ok, what's your zip code and then it will give you resources or like a phone number and there's actually a phone right there."

The researchers identified the mental health kiosk as a project example (PE1) and the theme of stigma associated with mental health issues (T6).

The next example crosses multiple domains and shows a response that related health in relation to other domains. The interview participant (P12) was asked to describe initiatives (Q1) in the domain of environment (D5) and the response illustrates aboutness [a] of a program (PE2) that relates (self-described) to both the health (D7) and the environment (D5) domains as it describes an example that prompts users to engage in an outdoor physical activity (T2) and become environmentally conscious (T1).

P12D5Q1a: "So, what we have are these really cool backpacks (PE2) that are filled with, you know, leaf identification, animal identification, all of those kind of environment identification books (T1) and we have a compass and a magnifying glass, things like that that people can check out and take on a hike with them to improve your health (T2)."

The third example shows a response from a participant (P10) that discusses both partners [p] and outcomes [o] related to initiatives in the domain of health (D7).

P10D7Q2po: "Talk about collaboration and partners. We've got lots of partners with that. The programming (o1), we've brought in partners with that and even on a wider basis (T3), like statewide. The American Suicide Prevention Foundation (p1), the NC representative (p2), she's going to come and do some workshops. And the university, Appalachian State University, and their wellness department and Psychology Department, too (p3)."

In this response, the researchers identified the theme of planning and coordination with external stakeholders (T3) with various partners (p1, p2, p3) and one outcome (o1).

In the final example, a participant (P9) responded to a question (Q5) regarding outcomes [o] of initiatives in the domain of health (D7).

P9D7Q5o: "So, it's a way for people to be in a private place and do this mental health assessment (o1) without having to go to a clinic or tell anyone that they think they need help (T6). We haven't seen that being used very much yet, but we are about to embark on a big LSTA-funded programming series (o2) with money devoted to mental health (T3) in the spring and that will be one of the things we try to advertise and highlight."

The researchers identified in this response the themes of (T3) budget issues and (T6) stigma associated with mental health problems as well as two outcomes, one for the library (o2) and one for the users (o1).

Findings

The following sections highlight key research findings related to the "aboutness", partners, challenges, and outcomes rural librarians reported of their health-based initiatives in community engagement.

"Aboutness" of Health-Based Community Engaged Initiatives

From summer feeding programs to healthy living reading activities (e.g., on mental health and drug abuse), dental screening workshops, walking and exercise clubs, health materials for specific population subgroups (e.g., teens, elderly, Spanish speakers, etc.), healthy food vending machines and health programming series, domestic violence counseling, health fairs and free clinics, health insurance informational sessions, and mental health kiosks, the examples are many of rural library engagement with community stakeholders. Figure 1 visualizes select examples of specific health-related responses, programs, services, and other information offerings rural librarians participating in this research shared in this study.
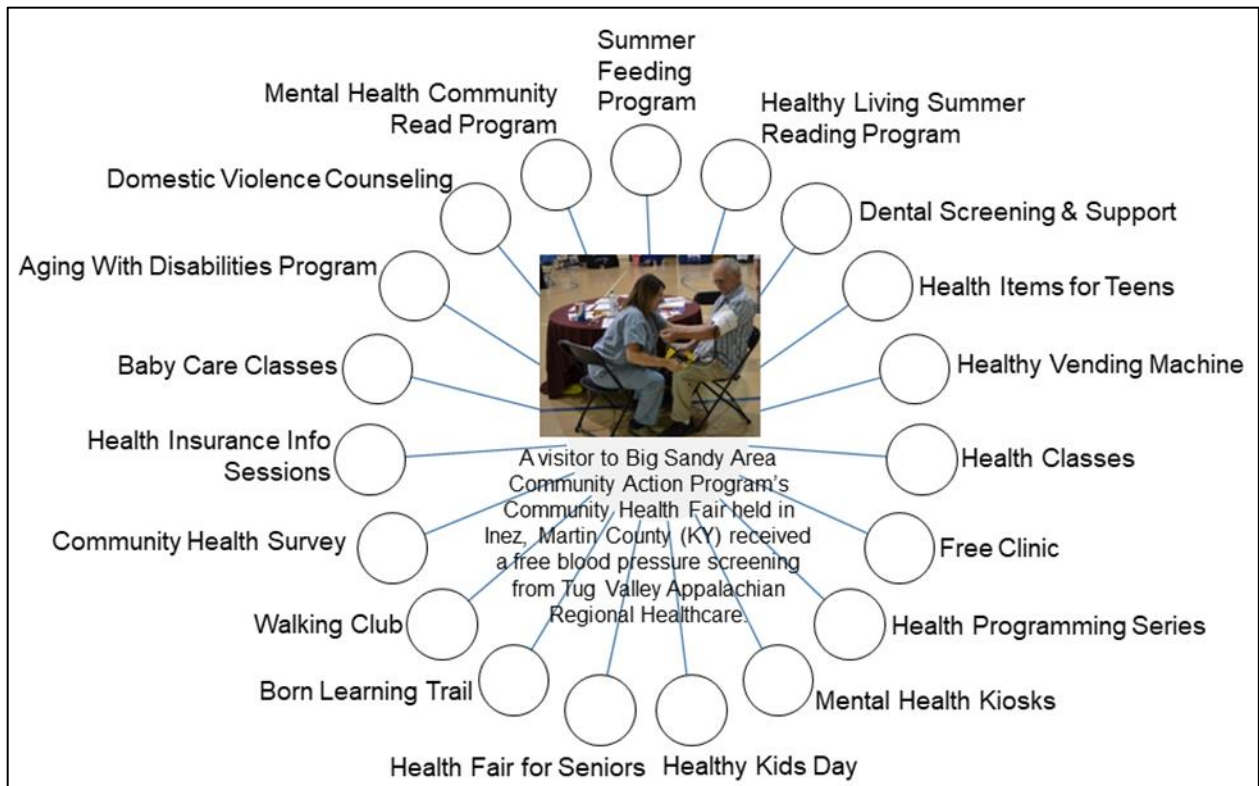
Figure 1. Health-related information offerings of rural libraries engaging their communities.

Rural librarians discussed their health-related information offerings in terms of community engagement in individual-centered activities such as one-on-one appointments for explanation of Affordable Care Act and community information referrals for health insurance, amongst others. They also described their engaged information responses in terms of programming and events for specific collective groups (e.g., seniors, kids) or open-to-public happenings such as Tai Chi classes, yoga classes, Breast Cancer lunch 'n' learn, diabetes management classes, healthy cooking classes for children, etc. The following health-related scenario illustrates a rural library community-engaged example:

> "Part of what I do is work with a free sustained clinic to provide education for chronic disease management and to partner to reach more clientele, the working uninsured, for people that sort of fall between the cracks, you know, they're working but they either are not provided insurance through their place of employment or else they're underinsured if they have insurance…Or with some people who were able to get insurance, but still they couldn't afford the premium under the Affordable Care Act. So, we partner with people that are in our community and provide health services like doctors, nurses, that serve as library board members, and we work with them through grants and contracts and local fundraising, to support the clinic and to provide healthcare not just for our one county, but for about a three-county area."

Collaborating Partners in Health-Based Community-Engaged Initiatives

Participants shared a range of collaborators in their health-based community-engaged initiatives. Figure 2 selectively visualizes a taxonomic classification of partner types with specific examples.
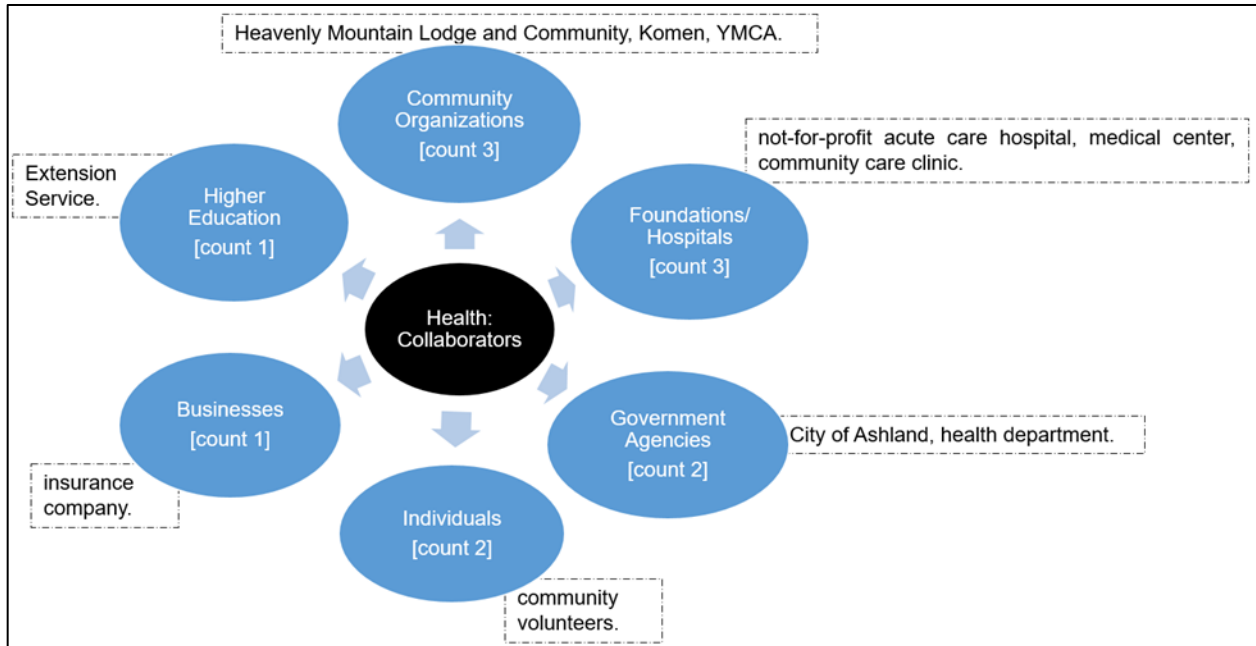

Figure 2. Selective taxonomic classification of health-based partner types in rural library community engaged initiatives with specific examples.

The following two scenarios identify collaborators and partnerships in health-based community-engaged initiatives highlighting the "out-of-the-box" efforts that are getting operationalized and implemented in rural library settings:

Service: Health Programming Series

> "In Wilkes County, they have a very active health foundation and, over the last couple of years, the library there has partnered with the local health foundation to do at least a couple of different programs…The Susan B. Komen breast cancer program has been presented in each of my libraries in each of my counties. And again, that's just something they offer that we're happy to offer a home for."

Service: Health Classes

> "We partner with the Extension Office…You really have to rely on your partners because library staff can give you book information about it, but we're not trained health professionals, so we certainly don't want to speak to health things that we don't know about."

Challenges in Community-Engaged Rural Health

Participants reported challenges reflected in their health-related experiences that were intertwining owing to the impact of limited availability of resources, time, space, and staff working under constraining conditions. For example, shortage of financial resources had a "ripple effect" in having limited monies to build additional space (or rent larger premises) and few salaried staff whose time was at a premium, utilized only for certain amount of prioritized work possible within the available time. The three prioritized themes related to challenges in health rural library community engagement efforts included: *Community characteristics* (e.g., lack of public awareness) in rural settings, *limited resource availability*, and *resource management and organization* in the context of constraining circumstances (e.g., meager staff training, poor technological infrastructures, etc.). These were seen as major hurdles to address and overcome in the development of community-engaged health activities by rural libraries. Table 5 illustrates these themes and select categories of challenges in the domain of health.

The following scenarios illustrate these important concerns:

Lack of Public Awareness

> "I would say that meeting and attracting your target population is probably our biggest challenge. Information sharing about our programs. Making sure it's in the paper and on Facebook…You have to really be mindful when you're planning for your resources or your health programs that people may be limited as far as being able to take advantage of that. They may not have that background. They might not be library-oriented...maybe, you know, growing up they didn't avail themselves to library services. So, it's not an automatic mindset for them to think that the library may have the answer or the library may have the health resources. So, it's really educating people as well as providing the services."

Limited Resources and Space

> "If you could imagine three hundred and fifty people in twenty-six hundred square feet…In April, I'm going to do a session on the logistics of programming from fifty to three and fifty in twenty-six hundred square feet and some of the lessons we have learned on furniture purchasing, staff management, computer purchasing, chairs, and how we have come to deal with that issue."

Limited Planning, Organizing, and Managing Resources

> "For the summer feeding program, with schools, it was a little bit chaotic, the planning…I can't recruit volunteers if I don't know the details on your end…somewhere the paperwork didn't get filed, it was not as organized as I would prefer…we learned that kids don't care about sandwiches, they want a hot lunch and, the library does not have the equipment to keep it hot…as I said, this community self-segregates. And, all of my volunteers were Caucasian and occasionally some African-American kids would look into the room where we had the lunches and look around and then leave. I don't know what was motivating that, but, you know, it's unfortunate."

Table 5. Select Illustrative Theme and Category Descriptions Related to Challenges in the Domain of Health

Code	Theme Identifier	Theme Description	Category Identifier	Category Description
P9D7Q4c	T1	Lack of Public Awareness	C2; C3; C7	C7 = Target Population; C2 = Use of Social Media; C3 = Public Education About Library Resources.
P2D7Q4c	T2	Limited Resources and Space	C1	C1 = Programming Logistics.
P1D7Q4c	T3	Limited Planning, Organizing, and Managing Resources	C4; C5	C4 = Volunteers; C5 = Lack of Resources.
P9D7Q4c	T4	Need for Organized Efforts in Program Assessment, Evaluation, and Documentation	C6	C6 = Measurement of Impacts and Outcomes.

Need for Organized Efforts in Program Assessment, Evaluation, and Documentation

> "We are really, really bad at measuring impacts and outcomes. We're…kind of one of our organizational goals for the next year is to try to start tracking outcomes using PLA's projects outcomes. So, right now, it's all anecdotal, but we hope to do a little bit better in the future."

Outcomes in Health-Based Community-Engaged Initiatives

Select scenarios in the following specific project examples spotlight health-based outcomes in rural library community engagement:

Project 1: Healthy Living/Summer Reading Program

> "That began about four years ago that we have had the medical practitioner out regularly to assist us and us to assist her in getting our families the best information that they can have on healthy eating and healthy living… I think one of our programs that we did happened every Thursday morning during summer reading for children, and it's actually making sure that the people that especially need the information

get it. Often, it's the ones that are interested are already doing a lot of those practices."

Project 2: Dental Screenings and Support

"We also partner with the Department of Health and do dental screenings, because there is equipment to set up that they do not like to take down every day, we advertise all through summer, in the newspaper and on Facebook, and every year our numbers have increased. We kind of doubled our numbers this last summer over the previous summer."

Project 3: Health Materials for Teens/Seniors

"We collected hygiene items for teens, partnered with the Family Resource Center, basically do a bag for them for Christmas, like a stocking, for teens who don't have, like, shampoo or soap or a comb or wash cloths...asked for donations so that we can give to them before they go home over winter break. So, we collect items here. We ask patrons to bring them in and, if they do, we waive their fines…we also do a collection for the elderly where we collect hygiene items as well."

Project 4: Healthy Vending Machines

We have a healthy vending machine that we put here for a healthy snack option for children and patrons. They can basically purchase . . . I think it has, like, juices and stuff in it and, like, granola bars and nuts.

Project 5: Health Literacy

"We partner with the health and medical providers to help our community becoming more information literate about whatever that topic is and taking home more information to improve their family's lives. All of our programs and activities is about improving the community either individually or as a family as a whole. And, I'm sure that we've gotten more library use out of opening up our library and having these programs in and people seeing what's available for them here."

Project 6: Domestic Violence Counseling

"We have a group that comes and works and meets with and counsels with victims of domestic violence in quiet, out-of-the-way space where people don't see them coming and going…So, it's a way for people to be in a private place and do this mental health assessment without having to go to a clinic or tell anyone that they think they need help…we are about to embark on a big LSTA-funded programming series on mental health in the spring and that will be one of the things we try to advertise and highlight."

Project 7: Mental Health Community Read Program

"The American Suicide Prevention Foundation, the NC representative, she's done some workshops. And the university, Appalachian State University, and their wellness department and Psychology Department, too... So, also, a lot of suicide prevention

awareness is going on and, with the workshops, that foundation does Toxic Lives and they do it with different age groups and providers, seniors. So, they're going to be doing a couple of those programs at the local senior centers, but also one at the library."

Project 8: Healthy Kids Day

"It's everything from health, nutrition, animals, sports, and things like that. And, we usually have about four hundred to five hundred people come through in four hours' time. So, it's a big, huge event...the kids are excited. They make their parents post it on the refrigerator, circle the calendar. They know how much fun they're going to have because everything is free. There's no cost at anything."

Project 9: Health Fair for Seniors

"The seniors get the blood pressure. They find out what all is available to them if they've just moved here in the county. They can find out from the librarian what's available to them that they didn't know at the different agencies...she's handing out insurance forms, she will even do classes at the nursing home or here or at the senior center about how to do your finances for later on...insurance needs and things like that."

Project 10: Born Learning Trail with Health Kiosks

"And so, we got grants to do a Born Learning trail and then we got grants to do learning kiosks...Part of our money came from the United Way through the Healthy Community Action Team...the catch phrase I was using was creating healthy kids from head to toe...so, the idea that we would work together to help kids get more activity. And so, their goal was [to] fight childhood obesity."

Project 11: Walking Club

"Last summer, part of our summer reading was a walking club and they walked and talked about the books they'd been reading while exercising."

Project 12: Aging with Disabilities Program

"We have had groups from the hospital that came and met about children with disabilities. Just families talking to the librarian and nurses about how to cope with and how to deal with if they're aging and they're trying to plan for what's going to happen to their child who can't be alone in the world when they're gone."

Discussion

Rural librarians provided a diverse range of descriptions of their health-related community-engaged initiatives. Readers can recognize from the scenarios represented in this article that a common meta-level theme that also emerged from our analysis of participant feedback is related to a cross-over of health with other domains. Several examples were discussed; the following is a scenario of an interviewee that represents cross-over of health programming with need to generate education impacts in the Teen Day Program Germ City:

> "…we participated in Tullahoma city during the summer break in special programs for kids…partnered with the Department of Health in the Germ City, actually, a small tent, probably about at least seven feet tall, we set that up so children could see how…whether or not they were doing a good job at hand-washing...we had simulated, there is, like, a lotion or powder that children put on their hands and then they go wash their hands and then they come back and then where they didn't get their hands clean, it glowed in the dark. So, they would then get some information about cleaning habits and importance to their health."

Another participant shared cross-over of health with the environment and education as illustrated in the following scenario about "green cleaning":

> "We have a program on green cleaning in helping people to just think about how hazardous some of the over-the-counter cleaning products are and helping people to economically make some of their own home cleaner."

These instances illustrate that in the development of health information-related offerings, an important strategy rural librarians adopted in their conceptualization, operationalization, and implementation of the health-related initiatives was a consideration of generating outcomes in various spheres of people's lives, such as agriculture, diversity, economics, education, environment, information technology use, law, manufacturing skills, social welfare, and others. Their community-engaged activities in health efforts were always considered in relation to how delivery of their information-related offerings would impact other aspects of people's lives. Figure 3 shows these intertwining aspects of health with other domains of activities in people's lives.

Figure 3 also identifies the importance of considering the return-on-investment and/or economic impact in rural librarians' planning and implementing of health-related initiatives. This theme was reflected across all participants' feedback in their intentional consideration of evaluating the health information offerings through the lens of return-on-investment (i.e., cost-benefit analysis) and/or potential economic impacts prior to their implementation. Reflecting on this value of the health-information offerings from a library-centric perspective provided thoughtful appraisal of what resources the rural library was investing in to generate what kinds of potential benefits. Rural librarians were also reviewing user-centered points of view of their possible economic returns while deciding to make avail of the health initiatives provided at the library.

These valuations and the assessment of the impact of health-related initiatives on multiple domains makes logical sense especially in the light of constraining resource availability and other extenuating circumstances librarians and their patron communities encountered in their rural environments. Generating positive impacts across different domains/spheres of activity in people's lives provided a strong justification for enacting such activities as well as requesting funding resources to support the delivery of such information-related offerings.
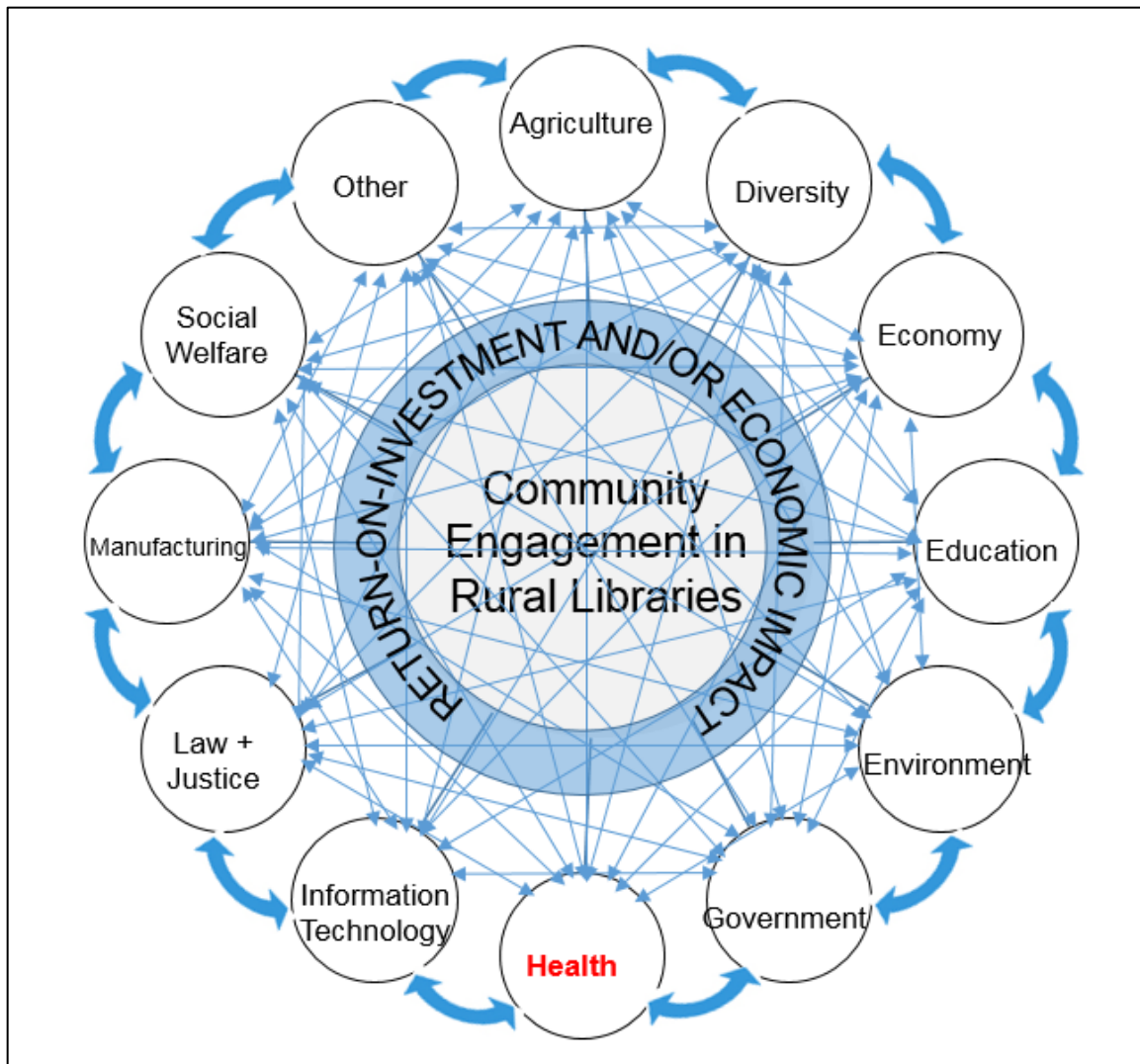
Figure 3. Intertwining Aspects of Health with Other Domains of Activities in People's Lives.

Conclusion

Select scenarios presented in this article provide a glimpse of community-engaged health-related practices and experiences of rural librarians in the SCA region. As tools to further health justice within the broader context of marginalization in the LIS professions, they provide a "voice" of/to rural librarians towards individual, social, and community empowerment. These narratives also serve to highlight the understanding of health-related information offerings in the context of their impacts on other domains representing the intertwining elements in the lives of rural residents. As a result, they provide strong justification for the rural librarians to plan and implement health initiatives in terms of constructs related to return-on-investment associated with impacts generated across multiple settings. Realistically, such an approach provides

potential opportunities to rural librarians to include community partnerships across different spheres to facilitate successful delivery of health-related information services. For example, in the planning of a book talk on holistic health, rural librarians can also map impacts on agriculture in terms of improvements in organic food production, on education in helping children and teens learn of nutrition and eating habits, on environment in terms of facilitating sustainable farming, on diversity in anchoring the conversations to needs of specific populations (such as seniors, low-income families, racial/ethnic groups, etc.), and so on. Health and medical service providers, local non-profit farmers, K-12 teachers and students, environmentalists, and others might be interested in the planning and management of such an event since it would relate to their vested interest. In this manner, the rural librarian can garner community support of individuals, groups, organizations, institutions, and others to come together in the provision of support, staff, money, resources, time, etc. that might lead to a more effective delivery and success of such initiatives.

Theoretically, this research highlighted the need for expanding the human information behavior discourse (in health information and the broader information context) and library services/practices design work to understand the information creation-organization-management-dissemination processes beyond theory and practice in its inclusion of impact and outcome-driven constructs (Mehra, Sikes, & Singh, 2018). Methodologically, strategies and approaches of inclusion of rural libraries and community engagement in health information research are also new directions to pursue in future studies.

Acknowledgements

Endnotes

1 The term "rural" used in this article encompasses several meanings and characteristics. These include the U. S. Census Bureau's definition as areas with fewer than 2,500 people and open territory (Economic Research Service, 2007). It also recognizes The Encyclopedia of Rural America's related concept of "nonmetropolitan" counties to include the spread of housing developments outside the boundaries of metro areas that have no cities with as many as 50,000 residents (Rathge, 1997), in addition to being non-urbanized (OMB, 1998). Further, the meaning of rural areas according to the U. S. Census Bureau (2010) is also significant in terms of anything not deemed an Urban Area (which is defined as having a population density of at least 1,000 people per square mile and surrounding census blocks with an overall density of at least 500 people per square mile).
2 See grant website for details at URL: http://scholar.cci.utk.edu/ca2ca-sca-rl.
3 The Appalachian Regional Commission (ARC), created as a Unites States federal-state partnership, demarcates Appalachia to include 420 counties in Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. The ARC (1974) identifies Central Appalachia to include: West Virginia's nine southernmost counties, eastern Kentucky, Virginia's southwestern

tip, and the northwestern portion of Tennessee's Appalachian area (Bush, 2003), while southern Appalachia includes: most of Appalachian Virginia and Tennessee as well as the western Carolinas and the northern parts of Georgia, Alabama, and Mississippi.

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