

Public and Academic Libraries as Community Hubs to Promote Mental Health Help-seeking for Emerging Adults

1. PROJECT JUSTIFICATION

The School of Information (iSchool) at the University of Texas at Austin (UT) seeks \$149,610 for a two-year **National Leadership Planning Grant** to explore libraries' current and potential role as mental health resources for emerging adults (18-29 years). We propose to investigate (1) emerging adults' needs for and practices of seeking help for mental health concerns and their perceptions of public and academic libraries as both information and community hubs for mental health help-seeking; (2) public and academic librarians' perceived community needs for mental health support and efforts and barriers for providing such support; and (3) potential library programs, services, or tools to promote mental health help-seeking. The project will contribute towards the IMLS National Leadership Grants Program **Goal 2** and **Objective 2.3**: Establish or refine approaches that equip libraries and archives to contribute to the well-being of communities.

We will use a mixed methods approach in the investigation, including surveys with emerging adults, interviews with librarians, and participatory design workshops with the two stakeholders. The key deliverables of this project will include (1) a social-ecological model of sources for mental health help-seeking among emerging adults, which can help researchers and practitioners identify gaps in society's efforts to address mental health issues and shed light on library services from a system perspective; (2) a preliminary socio-technical framework of library mental health services for emerging adults that outlines the interplay of social environments (e.g., healthcare systems), library environments, emerging adults' mental health help-seeking needs and practices, and libraries' information, technology, and service artifacts. The framework will be substantiated with cases of existing library programs or services to allow librarians to concretely understand mental health services from a broad socio-technical system perspective and support their ideation of programs and services that fit their library contexts; and (3) several examples of potential library programs or services to promote emerging adults' mental health help-seeking. Together, these outputs will provide a solid starting point for libraries to build or strengthen mental health interventions to enhance emerging adults' help-seeking, contributing to libraries' mission to improve community well-being and reduce health disparity.

Beneficiaries. The direct beneficiaries of the project include public and academic librarians and emerging adults with mental health concerns. Nevertheless, it will benefit society at large by informing the construction of effective community resources to support mental health help-seeking and reduce mental health disparities.

An advisory board with experience and expertise in public and academic libraries, community health services, and academic research on libraries and health has been assembled to provide input into the research design, data collection, and result dissemination. We will also work with our advisory board to grow a sustaining community of researchers and practitioners interested in exploring how libraries as public and community institutions can contribute to addressing society's surging mental health challenges.

1.1 Why mental health and why emerging adults

The mental health crisis is growing at an alarming rate nationwide. In 2022, 23.1% of adults aged 18 or older (estimated 59.3 million) lived with a mental illness. Emerging adults (ages 18 to 29), particularly those aged 18 to 25, had the highest prevalence of any mental illness (36.2% or 12.6 million) and the highest prevalence of serious mental illness (11.6% or 4.0 million) (Substance Abuse and Mental Health Services Administration, 2022).

Emerging adults experience increasing family, community, and social responsibilities, such as helping family members, completing college education, becoming financially independent, and engaging in civic activities (Arnett, 2015; Flanagan & Levine, 2010). Taking on these new responsibilities, they face great uncertainties. At the same time, however, they experience decreasing structure and stability they may have received through school, family, and child- and family-oriented health and social services during adolescence (Wood et al., 2018). Thus, this group is more vulnerable to stress and anxiety and the associated societal stigma (Li et al., 2016; Martínez-Hidalgo et al., 2018) yet less equipped in terms of finances, time, and other resources to seek and maintain treatment as compared to their older counterparts (Gulliver et al., 2010; Mojtabai et al., 2011). Such structural barriers further perpetuate a low level of awareness of treatment as an option for coping with mental health concerns and a lack of perceived need for treatment among emerging adults, particularly those with low socioeconomic status (Li et al., 2016; Wilson et al., 2011).

As a result, while having the highest rate of mental health concerns, emerging adults had the lowest rate of receiving mental health services (National Institute of Mental Health, 2023). Without timely help, mental illness can be undiagnosed and worsen over time, further debilitating them, hindering their development, increasing suicide risk, and subsequently incurring more significant social and economic losses (Brent et al., 2015; Richards, 2011). Emerging adults are the future of our society; not properly addressing the gap between their mental health help demands and the offering of such help will have a bleak effect on the future of society.

1.2 Help-seeking, barriers, and help-seeking interventions

Treatment and prevention are the most effective ways to alleviate individual and societal burdens associated with mental illness (Office of the Surgeon General, 2021). Seeking help is a critical yet one of the most challenging steps for effective prevention and treatment (Rickwood & Thomas, 2012; Wilson et al., 2005; Xu et al., 2018). Help-seeking for mental health problems is any adaptive action or activity that individuals carry out to obtain informational, emotional, instrumental, affiliative, or health service support to deal with a mental health concern (Barker, 2007; Rickwood & Thomas, 2012). It is a process that begins with recognizing the need for help, followed by expressing the need, identifying accessible sources, and finally disclosing relevant information to the chosen source (Rickwood et al., 2005). Sources of help can be formal, informal, and self-help sources. Formal sources include healthcare and community services such as psychiatric care and school health services; informal sources include sources like peers, family, and friends; and self-help involves relying on oneself for support, such as reading books (Rickwood & Thomas, 2012).

Many factors may impede help-seeking. Most reported are those at the individual level, including low perceived need, perceived social stigma, low awareness of mental health treatments, difficulty identifying or expressing concerns, preferences for self-reliance, and poor mental health literacy (Andrade et al., 2014; Gulliver et al., 2010; Mojtabai et al., 2011; Salaheddin & Mason, 2016). As a result, most existing interventions adopted cognitive behavioral approaches to address these barriers using in-person or technology-mediated psychoeducation (Eisenberg et al., 2012; Taylor-Rodgers & Batterham, 2014; Xu et al., 2018).

Social determinants of mental health are increasingly being recognized. Some identified barriers at the interpersonal, institutional, or social levels include lack of support from one's social networks, the shortage of clinicians to treat mental health issues, cost, and the suboptimal quality of care (e.g., services lack cultural competence) (Kadison & DiGeronimo, 2004; Leech et al., 2020; Liu & Zhang, Under review). Thus, some interventions attempted to promote mental health help-seeking by involving interpersonal, institutional, or community players, such as family, teachers, and primary care facilities (Velasco et al., 2020; Xu et al., 2018).

Systematic and meta-reviews of the existing help-seeking interventions reported that they improved attitudes, mental health literacy, and help-seeking for people with or at risk of mental illness but not for the general population (Gulliver et al., 2012; Xu et al., 2018) and suicidal individuals (Hom et al., 2015). Further, these positive effects were limited to formal sources. The interventions only had short-term effects on self-help and failed to improve help-seeking from informal sources. Both self-help and informal sources are essential as they are often the first stop of help-seeking and critical for meeting the full spectrum of mental health needs (WHO, 2009; Wilson et al., 2011). With the prevalence of mental health concerns, these results call for more innovative interventions with long-term effects on enhancing help-seeking from all sources for more people.

1.3 Why libraries

Both the U.S. Office of the Surgeon General (2021) and the WHO (2022) pointed out that improving emerging adults' mental health requires an "all-of-society effort," including policy, institutional, community, and individual involvement. As mentioned, some interventions involved interpersonal, institutional, or community players, such as significant others, peers, gatekeepers (e.g., teachers), and primary care facilities, to promote help-seeking (Eisenberg et al., 2012; Xu et al., 2018), but few involved libraries. Thus, the roles that libraries can play and their potential to fend off the mental health crisis are untested.

Libraries are trusted community partners with a mission to enhance community health and health equity (Wilson et al., 2023). They have a long tradition of supporting community health needs through many different means, such as developing and organizing high-quality, understandable health information collections, creating and hosting health literacy instructions and interventions, and responding to acute health emergencies (Hammock et al., 2023; Luo & Park, 2013; Whitney et al., 2017). Thus, they are naturally positioned to be a strong community-level resource to promote and support help-seeking for public health issues such as mental health concerns (Philbin et al., 2019; Whiteman et al., 2018).

As a matter of fact, many libraries, including public and academic libraries, have started to explore means to provide mental health support. For example, some libraries provide education programs to enhance patrons' mental health literacy, and some incorporate or collaborate with public health and social workers and healthcare institutions to connect patrons with mental health resources (Benson, 2022; Kavanaugh, 2021; Schofield, 2018). Innovative services and programs were also extended to virtual spaces to enhance accessibility and effectiveness. For example, the Seattle Public Library (SPL) recently initiated a VR-based co-design intervention to reinforce positive teen mental health with support from IMLS (SPL, 2023). As these examples show, libraries are community-based informal sources for help-seeking, yet they can provide self-help sources and be easily connected with formal sources. Thus, as a nexus of many different informal, formal, and self-help sources, libraries are well-positioned to be a hub for mental health help-seeking.

However, limited knowledge exists on what programs and services (both in-person and virtual) are most needed by and useful for *emerging adults* with mental health concerns and what programs and services are most effective in enhancing their help-seeking behavior. Our primary goal of this project is to fill this gap by investigating emerging adults' information practices around help-seeking for mental health concerns and how public and academic libraries, as information and community hubs, can contribute to addressing the escalating mental health crisis for this group by promoting and supporting help-seeking.

2. PROJECT WORK PLAN

2.1 Research questions

The following three main research questions (RQs) and their more specific sub-questions will guide our investigation:

1. What are emerging adults' information practices around help-seeking for their mental health concerns? Specifically, what sources do emerging adults refer to seek help for their mental health concerns? What are their unmet needs for support? To what degree do emerging adults use library services? How do they perceive libraries as information and community hubs for supporting their mental health help-seeking?
2. What are public and academic librarians' views of mental health services in libraries? Specifically, what are librarians' perceptions of emerging adults' needs for mental health support? What programs or services related to mental health do they offer? What socio-technical components are involved? What factors impact service effectiveness? What services or programs do they consider would be useful to support emerging adults' mental health help-seeking?
3. How can we design public and academic libraries as information and community hubs to better support emerging adults' mental health help-seeking? Specifically, what are some examples of potential mental health services and programs that both librarians and emerging adults desire to have? What forms of research output are most effective in supporting librarians in conceptualizing and ideating programs and services?

2.2 Research design

The proposed project will include three phases: Phase 1 (8 months) will address RQ 1 by surveying emerging adults' information practices; Phase 2 (9 months) will address RQ2 by interviewing librarians about their views of library mental health services for emerging adults; Phase 3 (7 months) will address RQ3 by conducting participatory design workshops with librarians and emerging adults to elicit ideas for building libraries as an information and community hub to support mental health help-seeking.

Prior work. This project builds on and extends our previous work on emerging adults' information practices for mental health help-seeking. In the work, we interviewed 18 emerging adults about their information practices related to mental health help-seeking and identified four levels of sources that they utilized to seek help for mental health concerns based on the social-ecological model (McCloskey et al., 2011; McLeroy et al., 1988), including technological, interpersonal, community, and societal sources (Liu & Zhang, Under review). In addition to this work, we are conducting a scoping literature review of academic and news articles to identify strategies and approaches that public and academic libraries use to address patrons' mental health needs and the challenges and barriers they face in providing mental health-related services. We have identified a list of relevant articles and created a preliminary coding schema. We expect to complete the review before the start date of this planning grant. The following sections detail our work plan for this proposed planning grant.

2.2.1 Phase 1 (Aug 2024 – Mar 2025). Survey of emerging adults about their information practices around mental health help-seeking

Theoretical perspective – Information practices. Practices are “recurrent, materially bounded, and situated actions engaged in by members of a community” (Orlikowski, 2002, p. 256). That is, practices are socially constructed and shaped and constrained by interactions of an individual – a member of a community – with their material and social contexts (Savolainen, 2007; Tuominen et al., 2005). Adopting this practice perspective, we view emerging adults’ information practices around mental health help-seeking as a socio-cultural phenomenon shaped by the context of their lifeworld, including their experience, social, cultural, and economic factors, and situational factors (McKenzie, 2003; Savolainen, 2008; Savolainen & Thomson, 2022). Thus, in the survey, we will examine not only emerging adults’ actions involved in seeking help (e.g., use of various sources) but also the experiential, social, cultural, and material factors that shape these actions (e.g., technology, community, and social agents that mediate information access; barriers of accessing sources).

Data collection. The survey questionnaire will be designed based on the information practices perspective outlined above and our prior work. The questionnaire will consist of three sections: (1) respondent demographics (e.g., age, gender, race, education) and mental health status. The mental health status will be measured by a validated screening tool for depression and anxiety, such as PHQ-4 (Kroenke et al., 2009), and an open-ended question about their specific mental health concerns; (2) respondents’ intentions to seek help for mental health concerns, the sources that they have used to seek support and their rating of the usefulness of these sources, their unmet needs, and barriers for seeking help. The intentions to seek help will be measured by the validated help-seeking measure, the General Help-seeking Questionnaire—Self (GHSQ-Self) (Wilson et al., 2005). Measures of sources used to seek support will be constructed based on the specific sources we identified in our interview study (Liu & Zhang, Under review). An open-ended question will allow respondents to add sources not in the measures. Unmet needs will be elicited using open-ended questions. Barriers to help-seeking will be measured by items derived from our interview study results, the review of the literature, and an open-ended question; (3) the degree to which emerging adults use libraries and their perceptions of libraries as information and community hubs for mental health support. These constructs will be measured by items derived from our review of existing library services and programs that support patrons’ mental health needs and several open-ended questions.

The respondents must be emerging adults aged 18-29 with mental health concerns to be qualified for participation. They do not have to be library users, but we will attempt to balance the number of respondents who use and do not use libraries. We will also attempt to balance respondents in terms of demographic features, including race, gender, and rurality (or urbanicity), to ensure that different perspectives and experiences are represented in the sample. The respondents ($n = 150-200$) will be recruited nationwide through venues including university listservs and social media platforms (e.g., Reddit and Instagram). Our advisory board members, representing libraries in urban, rural, and suburban settings and different geographic regions, will also be our key data-gathering partners to broaden the call for participation. They will be particularly instrumental for us to reach marginalized and underserved user groups.

Analysis. The demographic and quantitative data will be analyzed using descriptive statistics to reveal sample demographic and socioeconomic characteristics, intentions for help-seeking, sources used for help-seeking and their usefulness, barriers encountered, and general perceptions of the potential of libraries to support their mental health help-seeking. The qualitative data collected by open-ended questions will be analyzed using the thematic content analysis method (Zhang & Wildemuth, 2017) to identify more idiosyncratic information concerning respondents’ sources used, unmet needs for support, barriers encountered in help-seeking, and thoughts about how public and academic libraries may support their mental health needs and help-seeking.

2.2.2 Phase 2 (Apr – Dec 2025). Interviews with librarians about their views of library mental health services

Theoretical perspective – Socio-technical perspective. The socio-technical perspective highlights the interdependence between social and technological systems in organizational or everyday life settings and emphasizes the co-evolution of these systems (Trist, 1981). We view libraries as socio-technical systems comprising two jointly independent but correlative interacting systems: the social and the technical. The social system is concerned with the attributes of people (including librarians and patrons, their attitudes, skills, and values), their relationships, and authority structure. The technical system is concerned with processes, tasks, and technologies, programs, or services needed to transform libraries to provide effective help-seeking support for emerging adults’ mental health concerns (Bostrom & Heinen, 1977). Libraries, at the same time, also

belong to a larger socio-technical system that supports emerging adults' mental health help-seeking. This system may comprise other entities such as universities, healthcare systems, and information and communication technologies in organizational or everyday life settings. Understanding how libraries can support mental health help-seeking requires knowledge of these two levels of socio-technical systems.

The socio-technical perspective is recognized as an intervention strategy for organizational development (Appelbaum, 1997), which aligns with our purpose for this planning grant – to inform future action research. Thus, we use it to guide our interview with librarians about their views of mental health services in libraries.

Data collection. We will conduct semi-structured interviews with librarians in different roles (e.g., reference services, information literacy instructions) in public and academic libraries of different sizes across the U.S. The interviews will ask librarians questions concerning (1) characteristics of their libraries, communities that they serve, the degree to which they serve emerging adults, and their perceived community needs for mental health support, particularly for emerging adults; (2) existing physical or digital programs, services, or tools related to mental health, parties or stakeholders (both inside and outside of the libraries) involved, service effectiveness, factors influencing the effectiveness, and barriers and challenges in providing the services; and (3) physical or digital library programs, services, or tools that they perceive would be valuable and effective to support emerging adults' mental health needs and promote help-seeking from different sources (including formal, informal, and self-help sources), stakeholders involved, and the resources (e.g., external support, staff training) needed to offer such services. The interviews will be on Zoom or in person, depending on participants' locations and preferences, and will last about one hour.

The participants (estimated $n = 20-25$) will include librarians with experience serving emerging adults with mental health concerns or designing or delivering programs serving patrons' mental health-related needs, library directors, and heads of services. Participants with these different roles will provide a more holistic view of the operation of the current programs or services and the feasibility of desired programs or services related to mental health. At the same time, we will balance other social demographic features of the participants, including age, gender, race, rural/urban region, and years in service. Solicitation messages will be posted to various listservs, such as the Association of College & Research Libraries (ACRL)'s Community and the American Library Association (ALA)'s Discussion Lists (e.g., the Consumer Health Information Librarians Interest Group's list). Our advisory board members will help advertise the study through their institutional communication channels. We will also use our personal networks (e.g., LinkedIn profiles) to call for participation. The snowballing method and purposive recruitment by searching academic and public libraries' webpages will be performed when we need to diversify our sample based on specific social demographic parameters.

Analysis. The interviews will be transcribed and analyzed using the qualitative content analysis method (Miles et al., 2014). The analysis will begin with open coding, identifying themes related to library characteristics, participants' perceived community needs, programs and services provided, stakeholders involved, perceptions and evaluations of the effectiveness of the programs and services and factors influencing their effectiveness, barriers to providing services, and resources needed. Then, we will compare the codes and organize them into categories, such as community needs, artifacts in library settings that support mental health help-seeking (including programs, services, and digital technologies), stakeholders involved, and influencers of service effectiveness. Based on these categories and their relationships, we will generate a socio-technical framework for mental health services that can guide librarians in conceptualizing mental health-related programs and services that fit their library contexts. We will also identify programs and services that librarians desire to offer, the features of the services, and the resources needed.

2.2.3 Phase 3 (Jan – Jul 2026). Participatory design workshops with emerging adults and librarians

Theoretical perspective – Participatory design. Participatory design is about giving equal voices to different stakeholders and their types of knowledge and worldviews (Simonsen & Robertson, 2012). In the design process, stakeholders share their problems, practices, lived expertise, and contexts, and researchers and designers envision ideas about possible solutions (Jagosh et al., 2012). Then, ideas were concretized through sketching or prototyping, which are intended for exploring and mutual learning rather than for specifications of a solution (Bratteteig et al., 2013). Thus, participatory design is about learning from each other, building trust, and exploring solutions. This perspective will guide our design workshops, which will involve emerging adults, librarians, and researchers. Emerging adults will share their knowledge and experiences of seeking help for mental health concerns; librarians will share knowledge of libraries as a community organization and their work practices and constraints; and researchers will facilitate the co-

construction of ideas about possible solutions that can enhance or transform emerging adults' help-seeking practices.

Data collection. Building on the insights gained from Phases 1 and 2, we will conduct two to three design workshops with emerging adults and librarians following participatory design principles and methodologies (Kensing & Blomberg, 1998; Simonsen & Robertson, 2012) to create several examples of library programs and services with promising potential to meet emerging adult patrons' needs. We will refer to the *Community Forums in Public Libraries Toolkit* that Dr. Vanessa Kitzie, our advisory board member, developed based on her IMLS-supported work on the health of LGBTQ+ people to guide our activities in preparing and organizing the workshops.

Each workshop will involve four to five emerging adults and one to two librarians and be facilitated by at least two researchers with library and information science, design and user experience, or public health backgrounds. The participants will be solicited from the Phases 1 and 2 participants. Again, we will balance the social demographic features of participants, such as age, gender, race, rural/urban region, and work role, to ensure that a wide range of perspectives and experiences are represented. We will run recruitment as we did in Phases 1 and 2 when needed. The workshops may be in-person or conducted on Zoom. At the beginning of the workshop, researchers will introduce the purpose of the workshop (i.e., to alleviate mental health crises for emerging adults by supporting help-seeking), main stakeholders (i.e., emerging adults and librarians), its format (i.e., mutual learning through conversations and co-design activities), and etiquette. Participants will then briefly introduce themselves. Following the introduction, all participants (including emerging adults and librarians) will be instructed to write down programs or services (including technologies) that they would want the most from their public or academic libraries to help address emerging adults' mental health concerns. Then, all participants will vote on these ideas. If an insufficient number of ideas were generated, we will incorporate some solutions identified in Phases 1 and 2 for voting.

Two to three top-rated ideas will be discussed further by the participants. The participants will be asked to collectively outline specs about the solutions (e.g., who are involved, what activities, functions, or processes are entailed; when and where to take place), their potential pros and cons, resources required, and feasibility for implementation. The researchers will facilitate the co-construction process by ensuring that major aspects of a program or service (e.g., who, what, when, where, why, how, and resources required) are covered in the discussion. The researchers will also probe how to present the co-constructed programs and services to make them more accessible for librarians. We will use materials such as post-it cards and sketch boards in in-person workshops and digital tools such as Figma, Miro, and Google Docs in virtual workshops to facilitate the voting and co-construction of solution ideas. Each workshop will last about one and a half to two hours.

Analysis. The workshops will be recorded and transcribed. The transcripts will be analyzed using the qualitative content analysis method (Miles et al., 2014), with a focus on analyzing top-rated ideas and identifying their features, such as program or service format, stakeholders involved, resources (e.g., technologies, staff expertise) required, and potential pros and cons. The ideas and their corresponding features will be organized to form examples of library services and programs for mental health and presented in a way that is easy to understand. These examples can serve as design cases to illustrate how public and academic libraries can go about designing programs or services to support mental health help-seeking for emerging adults. They can also serve as a starting point for future projects intending to implement and evaluate mental health interventions in libraries.

2.3 Evaluation plan

We will take two main approaches to guard the effectiveness, efficiency, quality, and timeliness of the project. First, we will hold weekly project team meetings to discuss progress, data collection and analysis, and findings and address unexpected challenges to ensure the smooth progress of the project. Students working on the project, including Ph.D., master's, and undergraduate students, will attend the meetings. Their perspectives as members of the target emerging adult group can thus be deliberated and influence decisions about specific research activities and processes.

Second, we will work with our advisory board to create a review schedule and plan to allow us to receive ongoing and timely feedback on research design, data collection (including recruitment) and analysis, and findings so that we can adjust and improve the efficiency and effectiveness of subsequent research activities and the quality of the outputs. More specifically, we will share with our advisory board members a report at the end of each phase to summarize the research design, execution, and preliminary findings and ask them to

provide feedback on data collection instrument design, representativeness of samples, potential bias or unexpected issues, utility of information gathered, and usability of the outputs.

2.4 Dissemination of project findings

Conferences. We will present our preliminary results at conferences, such as the *ALA annual meetings* and the *Association of Information Science and Technology (ASIS&T) annual meetings*, to receive feedback from both practitioners and researchers. Feedback will be incorporated into the research process.

Journals. Manuscripts will be submitted to journals such as *Health Information and Libraries Journal (HILJ)*, *Library and Information Science Research (LISR)*, and the *Journal of Association for Information Science and Technology (JASIST)*. These journals have a broad readership, including both researchers and practitioners.

Project website. We will create a project website to introduce the project, share summaries of findings, and provide links to our conference and journal publications and presentations.

Digital repository. We will store the paper preprints and presentations in Texas ScholarWorks, UT's digital repository that supports open access, to widen our project exposure.

Listservs and social media. We will also disseminate the project findings through relevant listservs, such as JESSE and ASIS&T (e.g., the Midwest Chapter, SIG Health Informatics, and SIGUSE), and our institutional channels, such as the school's newsletters and social media accounts. We will publicize our work through the Community Institute for Rural Communities and Librarianship (<http://circl.community>), whose membership includes state libraries, associations, scholars, and libraries.

Webinars. We plan to organize a webinar at the end of the project to share our project findings and seek feedback from interested researchers and practitioners to enhance our work and generate new ideas and potential future collaborations.

Advisory board. We will also ask our advisory board members to help disseminate the findings to their networks by sharing the project and findings in talks, panels, and workshops at different events and conferences (e.g., the ALA annual meetings, the Association for Rural and Small Libraries (ARSL) annual conferences).

2.5 Project team and partners

Our project team consists of faculty (PI Dr. Yan Zhang; Co-PI Dr. David Lankes) and graduate student researchers from UT-Austin iSchool and undergraduate students from the iSchool and other UT programs, such as education and public health.

- Dr. Yan Zhang, Associate Professor in the iSchool at UT-Austin, will lead and coordinate the overall effort. She will be responsible for designing the survey questionnaire and the interview and participatory design workshop guides, training and supervising students on data collection, data analysis, and scholarly writing for publications, and working with the advisory board to recruit participants and seek their ongoing feedback on the project. Zhang studies consumer health information practices, information credibility evaluation, and the design of information environments that support access to high-quality information. Her research has been published in high-impact information and library science and health informatics journals, such as the *JASIST*, *LISR*, and the *International Journal of Medical Informatics (IJMI)*. She has been serving on the editorial boards of *JASIST* and *LISR* since 2017.
- Dr. David Lankes, Virginia and Charles Bowden Professor of Librarianship in the iSchool at UT-Austin, will contribute to the test and revision of the data collection instruments, co-supervise students on data collection, analysis, and writing scholarly publications, and work with the advisory board to recruit participants and elicit feedback on project findings. He will also disseminate the project outputs to broad library communities, including rural library communities. Lankes' research spans new librarianship, community-centered librarianship, library and AI, librarian education, and community-based literacy solutions. He has been a PI and Co-PI on several IMLS grants on these topics. He is a founder of the Community Institute for Rural Communities and Librarianship.
- Students. One iSchool Ph.D. student will be funded for a full year to work with the PIs on data collection and analysis of the survey and interview data. Two student technicians will help facilitate the participatory design workshops. These students will be iSchool graduate students specializing in library science and user-centered design. We will also involve undergraduate student volunteers from iSchool or other

programs such as public health. All student members will participate in project meetings and write and review scholarly publications. The PIs will provide mentorship to develop students' research skills, topic knowledge, presentation skills, and confidence, as well as share knowledge about campus and professional community resources to support their career development and provide social and emotional support when needed.

Our advisory board includes representatives from urban, rural, suburban, and university libraries in multiple states, a certified mental health specialist, and an academic expert on library and health and the participatory design methodology. They will help with participant recruitment, provide feedback on our research design and findings, and help disseminate the findings to broader audiences.

- Dianne Connery, Development Director, City of Pottsboro Library (TX). Dianne has been committed to rural public libraries since 2010 and is active in efforts to improve digital inclusion in rural communities. She was honored as an Innovator in Library Journal's "Move & Shakers class of 2021." She is also a member of the Health Literacy Solutions Center's Connecting the Health Literacy Community.
- Angela Craig, Executive Director, Charleston County Public Library (SC). Angela has been with public libraries for 16 years. She firmly believes that public libraries are a platform to meet the needs of their community, including mental health needs, particularly those of marginalized groups. Her practices emphasize cultivating creativity and developing a patron-focused experience by removing barriers to library services. She was elected as the president of the South Carolina Library Association for 2024.
- Christopher Cox, Dean of Libraries at Clemson University (SC). His mission is to provide a clear vision of the evolving role of libraries and new action plans that directly support the university's strategic initiatives and intellectual core. He is passionate about cutting-edge and innovative education technologies and instructional design and using them to support university communities' productivity and health. He was named president of the Association of Southeastern Research Libraries in 2022, one of the largest regional research library consortia in the U.S.
- Takisha Moore, Certified Mental Health Specialist and L4H (Libraries for Health) Coordinator at Via Hope and St. David's Foundation (TX). She has been engrossed in peer work for the last six years as she has overcome her own mental health battles. She holds the Recovery Support Peer Specialist, Mental Health Peer Specialist, and Peer Specialist Supervisor Texas certifications.
- Dr. Vanessa Kitzie, Associate Professor at the University of South Carolina iSchool. Dr. Kitzie studies the information practices of marginalized groups, with a focus on LGBTQ+ people and communities, to inform information centers, like libraries, to better serve these individuals. She is the PI on two IMLS grants; one examined public libraries' service to LGBTQ+ communities for health information and the other developed training for and established partnerships between community health workers and medical librarians for LGBTQIA+ health promotion. She will provide advice on working with marginalized communities for health and using the participatory design methodology in library contexts.

3. DIVERSITY PLAN

The project team will recruit emerging adults from various communities, including college and non-college and rural and urban settings, and with diverse demographic backgrounds. For example, we will recruit from UT-Austin, which is a Hispanic-serving Institution with more than 25% total undergraduate Hispanic full-time enrollment. Special efforts, including working closely with our advisory board members who regularly work with underserved groups, will be exerted on recruiting participants from marginalized and underrepresented groups who are more likely to lack mental health support when needed. We will also recruit librarians with diverse demographic backgrounds (e.g., gender, age, and race) and work roles from public and academic libraries of all sizes and locations.

Our advisory board is diverse, consisting of two directors of large public library systems (one in SC and the other in TX), a dean of a large public university library, a community health worker, and a researcher in a state university. We will seek their feedback on an ongoing and iterative basis to ensure that their different professional perspectives, expertise, and experiences are incorporated into the research process and that the findings and materials created represent and reflect these different perspectives. At the same time, we will diversify our research team by including students at different stages of academic pursuits (i.e., Ph.D., master's, and undergraduate) and from different academic disciplines. In our prior work (the interviews and the review), we have involved Ph.D. and master's students from the iSchool and undergraduate students from psychology,

education, and public health. We plan to involve students from more marginalized groups when we carry out the proposed research.

One of the proposed project's research outputs is examples of potential library programs or services that public and academic libraries may provide to meet emerging adults' needs for mental health help-seeking. We will make these examples diverse by ensuring that different settings (e.g., public and academic libraries, rural and urban contexts, technology-mediated and in-person modalities, and different librarian roles) and different needs of emerging adults are represented.

We, including our advisory board members, will disseminate our work through multiple channels, such as various listservs, conference and event presentations, journal publications, and open-access institutional repositories. Through this effort, we intend to reach a wide range of audiences, including but not limited to public and academic librarians, researchers in library science and relevant disciplines (e.g., public health and medicine), students interested in library and mental health, and anyone or agency across the world who are interested in community interventions for mental health.

4. PROJECT RESULTS

4.1 Intended results

The outputs of this project will include:

A social-ecological model of sources for mental health help-seeking among emerging adults. Based on the survey of a large sample of emerging adults with diverse sociodemographic backgrounds, we will extend the preliminary inventory of formal, informal, and self-help sources emerging adults use for mental health help-seeking that we started in our prior interview study. Based on the extended inventory, an updated social-ecological model of sources for mental health help-seeking among emerging adults will be created. The updated model intends to address some shortcomings of the preliminary model, including an artificial separation of technological interventions from their social contexts and a lack of nuanced categorization of community organizations. Overcoming these shortcomings can enhance the model's capacity to help practitioners and researchers understand the ecosystem of efforts that support emerging adults' mental health help-seeking and identify opportunities for community-based interventions. The survey will also produce an initial inventory of emerging adults' unmet needs related to mental health help-seeking.

A preliminary socio-technical framework of library mental health services for emerging adults with cases to substantiate it. Based on the interviews with librarians and the survey of emerging adults, we will create a preliminary socio-technical framework of library mental health services for emerging adults to outline the interplay of major factors concerning the social environment (e.g., healthcare systems, universities), library environments, emerging adults' mental health help-seeking needs and practices, and libraries' information, technology, and service artifacts. We will define these factors, provide detailed descriptions of their relationships, and substantiate them with library program and service cases provided by the interview participants. This framework and the accompanying descriptions and cases can (1) lead librarians to understand library mental health services from a broad socio-technical perspective and (2) guide them in conceptualizing and ideating programs and services that fit their library contexts. We will test and develop the framework further in our future work.

Several examples of potential library programs and services to support emerging adults' mental health help-seeking. Based on the participatory design workshops, we will generate several examples of potential mental health programs or services that public and academic libraries may provide to meet emerging adults' needs for mental health help-seeking. The examples will present some initial solution ideas by outlining their approaches and features, such as program or service format, stakeholders involved, resources (e.g., technologies, staff expertise) required, and potential pros and cons.

These results will be presented on an ongoing basis to our interdisciplinary advisory board, which possesses knowledge and expertise about library service and administration, community health interventions, and marginalized communities' health needs. Their feedback will be incorporated into the outputs iteratively to enhance their practicality, adaptability, understandability, and usability.

4.2 Impacts

By creating an updated social-ecological model of sources for mental health help-seeking among emerging adults, this planning project will advance the current knowledge and understanding of this group's information

practices for mental health help-seeking from a broad social-ecological perspective. Such understanding is critical for identifying gaps in existing interventions and designing future interventions that support the U.S. Office of the Surgeon General and WHO's vision for an "all-of-society effort," including policy, institutional, community, and individual involvement, to battle surging mental health crises for emerging adults, the group that has the highest rate of mental health concerns but the lowest rate of receiving professional help.

Most of the current interventions on mental health help-seeking adopted a cognitive behavioral approach, addressing individual barriers such as stigma, attitudes, and intention to seek help. Some interventions involved stakeholders like primary care doctors and school counselors. However, no interventions reported in the existing literature explored how libraries may support mental health help-seeking for emerging adults. One project result – a preliminary socio-technical framework that outlines the interplay of factors that shape the interactions between emerging adults and libraries on mental health issues – will enhance the understanding of how libraries, as information and community hubs, may play a role in helping address mental health challenges facing today's emerging adults and provide a conceptual guide for librarians in creating mental health-related programs or services for this group. The other project result – examples of potential library programs and services that support emerging adults' mental health help-seeking – will provide some concrete examples to demonstrate libraries' potential to help address patrons' mental health concerns. Together, these two results will provide a solid starting point for libraries to plan mental health-related interventions to enhance emerging adults' help-seeking, contributing to realizing libraries' value as community centers and missions to improve community well-being.

4.3 Sustaining project benefits

The results from the project will provide a foundation for the PIs to continue their research on libraries and mental health. They are interested in directions such as designing, implementing, and evaluating help-seeking interventions in different library settings for emerging adults and educating future librarian workforce to address community mental health challenges. During this planning project, we expect to connect librarians, library directors, emerging adults, community health workers, and faculty and student researchers interested in this topic and build a community around it. We will gauge the interest of this community in collaborating with us on our future research pursuits.

The benefits of this planning project will also be sustained through the education of the next generations of library and information science students. The PIs will involve both Ph.D. and master's library and information science students in the project. They will also use their project experiences and the results to inform teaching practices and materials for courses they teach, such as *Survey of Information Studies*, *Consumer Health Informatics*, *Library Foundations*, and *Community Engagement in Libraries*.

Digital Products Plan

The following project deliverables will be part of our digital products:

1. A social-ecological model of sources for mental health help-seeking among emerging adults
2. A preliminary socio-technical framework of library mental health services for emerging adults with cases to substantiate it
3. Several examples of potential library programs and services to support emerging adults' mental health help-seeking

Type: These digital products will be made available in printable PDF format.

Availability: These documents will be posted on our project website and stored in UT's digital repository, Texas ScholarWorks (<https://repositories.lib.utexas.edu/>), which supports open access.

Access: They will be published under Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0) to allow sharing and attribution, such that these digital products are free to be shared but must be given proper attribution in reuse.

Sustainability: The digital repository will ensure long-term access to these documents.

We will create the following digital products in the process of our ongoing dissemination of the project findings:

- Conference papers, presentations, and journal papers
- A webinar to share project process and results with interested researchers and practitioners

Type: The preprints of conference and journal papers and conference presentations will be made available in printable PDF format. The webinar will be conducted through Zoom, a digital conferencing platform. The presentation section of the webinar will be video recorded and saved in MP4 format. We will not record the Q&A session to protect attendees' privacy.

Availability: The paper preprints, presentations, and the webinar video recording will be posted on our project website and stored in UT's digital repository, Texas ScholarWorks.

Access: These files will be openly accessible on the project website and in the repository without restriction.

Sustainability: The digital repository will ensure long-term access to these files.

Additionally, we will have datasets generated from our data collection and analysis activities, including:

1. Survey data (n = 150-200) concerning emerging adults' information practices around mental health help-seeking
2. Interview recordings and transcripts (n = 20-25) of public and academic librarians' experiences with and views of library mental health services
3. Recordings and transcripts of participatory design workshops (2-3 workshops) with emerging adults and librarians about potential library mental health service examples

Type: The survey data will be saved in a CSV file, interview and workshop recordings will be in MP4 format, and the transcripts will be in TXT format.

Availability: We will deidentify the survey data so individual respondents cannot be uniquely identified and store the data in the Texas Data Repository (<https://dataverse.tdl.org/>). We will not share the recordings and transcripts of interviews with librarians and the participatory design workshops to protect participants' privacy because librarians will talk about their libraries' mental health services and their roles in and perceptions of the services and that emerging adult participants may mention their mental health struggles such that their identities may be inferred from the content.

Access: The deidentified survey data will be openly accessible in the Texas Data Repository.

Sustainability: The digital data repository will ensure long-term access to the dataset.