

Librarians as Natural Disaster Stress Response Facilitators: Building Evidence for Trauma-Informed Library Education and Practice

Marcia A. Mardis, Faye R. Jones, Scott Pickett, Denise Gomez,
Curtis Tenney, Zoe Leonarczyk, & Samantha Nagy

Florida State University, USA

mmardis@fsu.edu, faye.jones@cci.fsu.edu, scott.pickett@med.fsu.edu, dmgcst17@my.fsu.edu,
cst17@my.fsu.edu, zcl18b@my.fsu.edu, samantha.nagy@med.fsu.edu

ABSTRACT

Public librarians are on the front line of catastrophic events that, each year, leave millions of people with significant mental health consequences; in the midst of these tragedies, librarians are often called upon to address community needs, often while neglecting their personal hardships. In this paper, we propose research, education, and practice opportunities centered on SOLAR, a community-based therapeutic approach that will allow librarians to recognize and assist patrons with symptoms just short of post-traumatic stress disorder (PTSD) related to natural disasters. This proposed therapy offers public librarians an opportunity to engage with a treatment framework to meaningfully support their patrons while benefiting from the self-care often overlooked in times of crisis. This work may be a template for contextually sensitive, community-facilitated mental health services critical for communities that lack financial and geographical access to larger health infrastructures. We include opportunities for research in librarians' trauma response to inform public librarians' education and practice to improve disaster preparedness and community well-being.

ALISE RESEARCH TAXONOMY TOPICS

continuing education; community engagement; community-led services; curriculum; public libraries

AUTHOR KEYWORDS

community resiliency; disaster response; natural disasters; public librarians; research; stress

STATEMENT OF THE PROBLEM

The United States frequently and increasingly experiences a variety of natural disasters (Coronese et al., 2019). In 2018, natural disasters such as storms, floods, earthquakes, hurricanes, and wildfires led to 355 U.S. deaths and over \$82 billion in property damage (Insurance Information Institute, 2019). However, the emotional toll on residents of the disasters' surrounding communities is largely unexplored. Mental health disturbances following natural disasters, such as anxiety, depression, substance abuse, and stress, are well documented (Acierno et al., 2007; Kessler et al., 2008); disaster-affected individuals may also experience functional impairments and an increase in somatic symptom severity (Pollack et al., 2016). Therefore, the mental health and well-being of community residents demands a localized primary response (Ghorbanzadeh et al., 2020). However, in the absence of clinical diagnoses and large-scale mental health treatment infrastructures, citizens in communities served by small and rural libraries turn to their trusted information source: public librarians. Less clear, however, is how librarians can most effectively respond while attending to their own needs. In this paper, we detail the challenges natural disasters pose for rural communities and outline a promising solution that includes therapeutic assistance and implications for research and education in library and information studies (LIS).

LITERATURE REVIEW

Librarians and disaster response

Public librarians build trust and continuity through resources and services tailored to community needs (Vårheim, 2014). Citizens know to reach out to their librarians for numerous supports: free computer and internet use, quality information, books, databases, and the ability to conduct meetings or accomplish work-related tasks in a safe location (Johnson, 2012). When a disaster strikes and people need relief from their personal emergencies, they turn to the library (Featherstone et al., 2008). Though seeking support from libraries is well established in many communities, librarians' official disaster response role is often unrecognized (Davis & Jankow, 2019). In 1988, the Stafford Disaster Relief and Emergency Assistance Act recognized public librarians as essential community workers for providing services following disasters. However, the Act does not specify how librarians are to function in disaster situations and community practices vary widely (Green & Teper, 2007).

Many survivors of traumatic crises need to share their experiences. Librarians, inundated with victims of catastrophic events, must employ active, empathetic listening throughout their disaster responses, though they may also be disaster victims. Ignoring personal impacts may lead librarians to "vicarious trauma," by repeatedly reliving their own catastrophes when helping survivors cope. As a result, many public librarians report "compassion fatigue" and "survivor's guilt," (Mardis et al., 2019) alienating feelings that can impair daily function.

Library staff face ongoing challenges in their communities with homelessness, drug abuse and overdoses, gun violence, and myriad social and community issues. Those unfortunate enough to be in communities affected by mass shootings must go through simulations and training to give them a sense of traumatic circumstances. Some librarians assist with information resources at homeless shelters or provide services and programs for the homeless patrons at libraries (Anderson et al., 2012). Still others are trained and prepared to administer the intranasal spray, Narcan, to prevent an opioid induced overdose (Wahler et al., 2019). Librarians are first responders now, but without the proper therapeutic training to address stress-related needs. What librarians and libraries provide to their communities following disasters varies widely; the mental support and coping skills librarians need to support disaster survivors and their personal challenges is unclear and requires further research.

Therapeutic responses to natural disasters

In the aftermath of disaster and trauma, many people experience a range of psychosocial difficulties and distress that impair recovery. While there are evidence-based treatments for those who develop psychiatric disorders in the aftermath of disaster, there are no evidenced-based interventions for those who do not meet criteria for disorder but who are experiencing psychosocial difficulties and impairment.

Mental health practitioners have used several psychoeducation interventions in natural disaster affected communities (Forbes et al., 2010; Sijbrandij et al., 2015). Of particular note, the Skills for Life Adjustment and Resilience (SOLAR) program (O'Donnell et al., 2018), developed by trauma experts as a five-session community-delivered program, combines elements of several types of therapeutic approaches to address mental and emotional issues following exposure to a traumatic natural disaster. Unlike these other approaches, SOLAR makes use of local community leaders to deliver the therapy among affected community members, thus building on established trust, cultural sensitivity, and local knowledge. Although developed to target survivors of natural disasters, SOLAR may also be adaptable to additional traumatic events experienced by a large number of people (e.g., mass shootings, pandemics).

In an early Australian SOLAR study involving 15 brush fire survivors and eight community facilitators, researchers documented a decrease in psychological distress and PTSD symptomology (O'Donnell et al., 2018). In Tuvalu, an independent island nation within the British Commonwealth, coaches delivered SOLAR following disastrous flooding resulting from Tropical Cyclone Pam in 2015. In that study, community researchers documented decreases in distress, functional impairment, and PTSD symptoms, with no reported serious adverse events (Gibson et al., 2019). From the initial study data, researchers and community coaches have found SOLAR to be effective, appealing to participants, easy to learn and implement, and safe to deliver by laypeople (Gibson et al., 2019; O'Donnell et al., 2018). Given its effectiveness in

community-based and service organizations, SOLAR potentially offers public librarians a method to support themselves and their communities in times of disaster.

SOLAR LIBRARIANS: A PROPOSED STUDY

SOLAR is an evidence-informed intervention with, as Figure 1 shows, six modules: arousal/affect management, promotion of healthy lifestyle and sleep, worry/rumination management, emotional processing of trauma, promotion of healthy relationships, and behavioral activation and engagement.



Figure 1. SOLAR Program Modules (O'Donnell et al., 2018)

SOLAR is specifically designed to be delivered by individuals who are not mental health professionals and are members of the affected community. These laypeople are referred to as “coaches.” Coaches are trained using a manual with example scripts and justifications for each section of the intervention. Participants are given a highly structured workbook with activities to be completed in-session and at home. SOLAR is appropriate for individuals who are experiencing mild-to-moderate distress or impairment as a result of trauma exposure without meeting criteria for a formal diagnosis.

Building evidence by studying SOLAR

We propose that SOLAR be operationalized with a waitlist control design over one year, in phases, with public librarians in Florida panhandle region who were affected by Hurricane Michael.

Phase I. Recruit, Screen, Train Librarians as SOLAR Coaches (four months). In approximately four months, we will use our local librarian networks to recruit 20 public librarians in the Florida Panhandle region. Librarians will be informed about SOLAR's purpose and components and that they have an opportunity to serve as a coach and deliver SOLAR to other librarians affected by natural disasters.

Interested librarians will then be screened for moderate to severe psychiatric symptoms using the *DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure, Adult*. Screened librarians with symptoms beyond the cutoff will not be eligible to deliver the intervention as a coach and will be provided with referrals to mental health providers or invited to receive the intervention in Phase II. We expect at least half of the librarians to meet the cutoff requirements and become SOLAR coaches. Experienced mental health practitioners will train eligible librarians to deliver the SOLAR in a total of 12 hours, including modules, role-plays, and quizzes to assess the efficacy of training and the competency of coaches. Although this program is voluntary, librarian coaches are provided with stipends during this period to cover the cost of gas or other incidentals required to attend training.

Phase II. Recruit & Screen Participants, Deliver Intervention (six months). In Phase II, about 10 public librarians will be re-informed about SOLAR, with the recruitment focus shifting to librarians who would like to receive the intervention. Interested librarians will be screened for severe psychiatric symptoms using the *DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure, Adult*. Individuals with symptoms above the cutoff will not be eligible to receive the intervention and will be provided with referrals to mental health providers. Librarians will be recruited as participants, with each Phase I-trained librarian delivering five weekly interventions to three participants, for a total up to 30 participants.

We will use a waitlist control design, often used in psychotherapy research, to deliver the intervention, assessing cohort baseline in Week 1 of Phase II. We chose this design because it allows us to bypass having a control group which does not receive the intervention; librarian participants on the waitlist still receive the SOLAR intervention at some point after the initial treatment group, while allowing the study to benefit from a modified control group. Cohort 1 will proceed with the intervention, and subsequent cohorts begin treatment when the previous group has finished.

For each cohort, follow-up data are also collected three months after the intervention has concluded. Therapy specialists will supervise coaches to ensure intervention fidelity. Following delivery of the intervention, the research team will collect unstructured, qualitative feedback from coaches and participants to assess the feasibility and acceptability of the training and intervention.

Phase II is long enough to ensure that five weekly interventions are delivered to each participant, supervision of coaches is adequately scheduled, and time is permitted for any required makeup sessions needed by SOLAR coaches. In this phase, librarian coaches receive

incentives for all five weekly interventions delivered to each participant, while participants receive stipends for their attendance once all sessions have been completed, plus an additional stipend when participants complete the three-month follow-up.

Phase III. Data Collection and Analysis (ongoing; 12 months). We will collect data at baseline, immediately post-treatment, and at three months afterward using the *Action and Acceptance Questionnaire (AAQ)*, *Pittsburgh Sleep Quality Index (PSQI)*, *Pittsburgh Sleep Quality Index, Addendum for PTSD (PSQI-A)*, the *Pre-Sleep Arousal Scale (PSAS)* the *PTSD Checklist for DSM-5 (PCL-5)*, *Psychological Outcomes Profiles Questionnaire (PSYCHLOPS)*, and *Kessler Psychological Distress Scale (K10)*. We will conduct an analysis of variance (ANOVA) to determine whether the intervention improved participants' PTSD symptoms in the 3-point time series. Phase III data collection is conducted throughout the entire process and up to 3 months after the last intervention to conclude data analysis and study findings.

IMPLICATIONS FOR EDUCATION AND PRACTICE

Adapting SOLAR to library practice

We propose to use SOLAR as a community-based model that can be administered to librarian coaches, who then take the learned strategies and use SOLAR with patrons in their communities. SOLAR can also be built into existing disaster response training such as the Department of Homeland Security (2019) Community Emergency Response Team (CERT) training which includes a unit on disaster psychology and considers that events resulting in potential injury or destruction of homes can lead to traumatic crisis and stress that affects cognitive functions, physical health, and interpersonal relationships.

Librarians are well-positioned to be SOLAR coaches because they may already be involved in disaster efforts, are community insiders, and have experience delivering programming. A SOLAR intervention for librarians and library patrons includes four steps:

- 1) Adapt SOLAR for librarians and patrons. The first step involves interviews with the librarians on their experiences, personal therapeutic needs, and professional support needs, followed by pre-test data collection and therapeutic activities in six areas drawn from the SOLAR program. The key areas include arousal/affect management; promotion of healthy lifestyle and sleep; worry/rumination management; emotional processing of trauma; promotion of healthy relationships; and behavioral activation and engagement. A participant workbook includes activities for the sessions and follow-up home activities. Step 1 concludes with a post test and participant feedback on the usefulness of the therapy and improvements for more effective delivery.

- 2) Develop instruments and manuals. In this step, a co-construction of knowledge as the therapy is refined using the feedback from the previous step, culminating in the development of a coaching manual with each section of the therapy and example scripts. Step 1 participants recruit

co-workers and community members for the therapy, providing pre-tests. Step 1 participants engage as coaches and deliver the therapy to the recruited members in their community. Step 2 includes post-tests and participant feedback on the efficacy of the therapy, as well as interviews with the coaches using their co-constructed knowledge as both participants and coaches for possible improvements to the framework. Of importance in this phase is that co-construction of knowledge includes participating librarians, researchers, and trained SOLAR therapists, so that library practice and research requirements are satisfied in the developed intervention.

3) Refine instruments and manuals. This step involves analyzing the results, drawing conclusions, refining a therapeutic model, and distributing updated materials for continued support and implementation.

4) Continue to build a SOLAR research base. Beyond the pilot study described in this paper, SOLAR gives researchers an opportunity to collaborate across disciplines, allowing medical, public health, social work, and LIS researchers to develop larger innovative proposals for cognizant funding agencies such as the Institute for Museum and Library Services (IMLS) and the National Institutes of Health (NIH). These collaborations would be especially helpful for identifying ways in which SOLAR can be scaled to be systematically implemented within a library system or across community organizations.

Building SOLAR into library education

For librarians, coach training will emphasize building their skills in understanding disaster reactions along, with other key ACRL and PLA competencies such as verbal and nonverbal communication skills; active listening; empathetic service; and comfort with open-ended questions.

Though certificates are available in disaster management and courses accessible in health librarianship, future information science professionals are not always prepared for the mental stresses associated with the duties of librarians in the current society. Coping strategies akin to those reflected in first responder training or counseling coursework is lacking from current curriculum in accredited LIS graduate programs. SOLAR training is well-suited to be the basis for a certificate program and/or a meaningful program of professional learning for preservice and in-service librarians. While there is evidence that SOLAR is extensible to many natural disasters, its care principles may apply to therapeutic responses to bullying, violence, economic stress, and pandemic responses.

Practitioner preparation

There are several programs available as professional development courses, including Psychological First Aid (PFA) and Mental Health First Aid (MHFA), to help people respond to mental health circumstances and de-escalate traumatic situations. The programs are optional,

though many library directors across the country have arranged for staff training. Other organizations have information available to disseminate to patrons on a variety of mental health topics. However, a missing component are coping strategies for the information professional to reflect and nurture their own mental health processing; SOLAR provides this self-care.

CONCLUSION

Training librarians to be trauma response facilitators is critical. In our proposed study, we aim to 1) engage public librarians as SOLAR beneficiaries and coaches; 2) facilitate public librarian SOLAR coaches to deliver intervention to affected librarians; and 3) refine the SOLAR model for implementation by additional librarians in more communities. The proposed approach will yield new knowledge and evaluation data on SOLAR's effectiveness as a unique disaster response model with public librarians as community hubs of mental health and well-being immediately and over time.

The proposed study will consider the efficacy of building a therapy program of community care, providing needed coping skills and therapeutic strategies to regional librarians, who will in turn share it with community members. Findings may lead to a refined therapeutic model that could be used in library information graduate programs and better prepare future librarians to deal with the stresses of possible traumatic events occurring in the daily operations of libraries throughout the country. While SOLAR has only been used to treat survivors of natural disasters, it may also be appropriate for librarians who are experiencing effects from service during a pandemic or violent event.

A trauma-informed approach generally means understanding that library patrons may have experienced trauma and working with them to engender trust in libraries. Adopting trauma-informed approaches reduces barriers to library access, makes the library a more welcoming place, and positions the library as part of the solution for many of the issues faced by patrons experiencing trauma.

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REFERENCES

- Acierno, R., Ruggiero, K. J., Galea, S., Resnick, H. S., Koenen, K., Roitzsch, J., de Arellano, M., Boyle, J., & Kilpatrick, D. G. (2007). Psychological sequelae resulting from the 2004 Florida hurricanes: Implications for postdisaster intervention. *American journal of public health, 97*(Supplement 1), S103-S108. <https://doi.org/10.2105/AJPH.2006.087007>

- Anderson, K. A., Simpson, C. D., & Fisher, L. G. (2012). The ability of public library staff to help homeless people in the United States: exploring relationships, roles and potential. *Journal of Poverty and Social Justice*, 20(2), 177-190. <https://doi.org/10.1332/175982712X652078>
- Coronese, M., Lamperti, F., Keller, K., Chiaromonte, F., & Roventini, A. (2019). Evidence for sharp increase in the economic damages of extreme natural disasters. *Proceedings of the National Academy of Sciences*, 116(43), 21450. <https://doi.org/10.1073/pnas.1907826116>
- Davis, A. S., & Jankow, C. (2019). On why library workers are well-suited to serve during disasters. *Collaborative Librarianship*, 11(1), 5.
- Featherstone, R. M., Lyon, B. J., & Ruffin, A. B. (2008). Library roles in disaster response: an oral history project by the National Library of Medicine. *Journal of the Medical Library Association: JMLA*, 96(4), 343.
- Ghorbanzadeh, M., Ozguven, E. E., Tenney, C. S., Leonarczyk, Z., Jones, F. R., & Mardis, M. A. (2020). Natural disaster accessibility of small and rural libraries in Northwest Florida. *Public Library Quarterly*, 1-20. <https://doi.org/10.1080/01616846.2020.1772027>
- Gibson, K., Forbes, D., & O'Donnell, M. L. (2019, 22 February). Skills for Life Adjustment and Resilience (SOLAR)—A pilot study in Tuvalu. Proceedings of the 7th World Congress of Asian Psychiatry, Sydney, Australia.
- Green, S. L., & Teper, T. H. (2007). The importance of disaster planning for the small public library. *Public Library Quarterly*, 25(3-4), 47-59.
- Insurance Information Institute. (2019, February 14). *Facts + Statistics: U.S. catastrophes. 2018 natural catastrophes*. Retrieved March 10 from <https://www.iii.org/fact-statistic/facts-statistics-us-catastrophes#Natural%20Catastrophe%20Losses%20In%20The%20United%20States.%202018>
- Johnson, C. A. (2012). How do public libraries create social capital? An analysis of interactions between library staff and patrons. *Library & Information Science Research*, 34(1), 52-62. <https://doi.org/10.1016/j.lisr.2011.07.009>
- Kessler, R. C., Keane, T. M., Ursano, R. J., Mokdad, A., & Zaslavsky, A. M. (2008). Sample and design considerations in post-disaster mental health needs assessment tracking surveys. *International journal of methods in psychiatric research*, 17(Supplement 2), S6-S20. <https://doi.org/10.1002/mpr.269>
- Mardis, M. A., Jones, F. R., Tenney, C. S., & Leonarczyk, Z. (2019). *Bay County Public Libraries focus group transcript*.
- O'Donnell, M. L., Lau, W., Fredrickson, J., Bryant, R. A., Bisson, J., Burke, S., Busuttil, W., Coghlan, A., Creamer, M., & Gray, D. (2018, 9 November). SOLAR: The Skills fOr Life Adjustment and Resilience program: A brief intervention to promote adjustment following disaster. Proceedings of the 34th meeting of the International Society for Traumatic Stress Studies, Washington DC, USA.
- Pollack, A. A., Weiss, B., & Trung, L. T. (2016). Mental health, life functioning and risk factors among people exposed to frequent natural disasters and chronic poverty in Vietnam. *BJPsych open*, 2(3), 221-232. <https://doi.org/10.1192/bjpo.bp.115.002170>
- Vårheim, A. (2014). Trust in libraries and trust in most people: Social capital creation in the public library. *Library Quarterly*, 84(3), 258.
- Wahler, E. A., Provence, M. A., Helling, J., & Williams, M. A. (2019). The changing role of libraries: How social workers can help. *Families in Society*, 101(1), 34-43. <https://doi.org/10.1177/1044389419850707>