Pilot Study: Increasing Knowledge and Collaboration Primarily among Christian Faith Leaders and Health Providers for PTSD Survivors

Robert Daniel La Bril[1]*, Charles R. Senteio[2], Jeanette Schied[3], Clare Luz[4], Derek Suite[5], Cedric Johnson[3], Bruce Grady[6], Jessica Mims[7]

[1]College of Human Medicine, Michigan State University, Lansing, MI, USA; [2]Rutgers University School of Communication and Information, New Brunswick, NJ, USA; [3]Department of Psychiatry, College of Human Medicine, Michigan State University, East Lansing, MI, USA; [4]Department of Family Medicine, College of Human Medicine, Michigan State University, East Lansing, MI, USA; [5]Full Circle Health P.L.L.C., Bronx, NY, USA; [6]Department of Pastoral Care, Theological Seminary, Washington, DC, USA; [7]Division of Public Health, College of Human Medicine, Michigan State University, East Lansing, MI, USA

Corresponding Author: Robert Daniel La Bril; labrilro@msu.edu

Background: *The risk of exposure to trauma is part of the human condition, and given the mortality and morbidity associated with post-traumatic stress disorder (PTSD) properly supporting trauma survivors represents an important public health issue.*

Objectives: *The aim of our study is to assess a collaborative training model for faith leaders and health providers designed to help enhance their knowledge of PTSD and their confidence to collaborate together to support trauma survivors. The hypothesis was that our training model would increase participant knowledge of PTSD and increase confidence with interdisciplinary collaborations.*

Methods: *The study used experimental and interventional methods to develop and assess the training model. The curriculum for our training model is based on a learner-centered model of collaborative learning as described by the curriculum design for the interdisciplinary study. The study sample was drawn exclusively from conference participants. The total number of participants who completed all of the pre- and post-conference assessments was 16, of whom 7 were faith leaders and 5 health providers. All registered conference attendees aged 18 years or older were eligible to participate in the study. The instruments were designed by the research team, who administered pre- and post-conference instruments. The instruments examined subjective and objective knowledge of PTSD, as well as comfort in identifying and managing PTSD symptoms.*

Results: *The quantitative results of our study suggest the training model is effective for faith leaders and health providers to increase their knowledge and enhance their self confidence in participating in interdisciplinary collaborations between each other to support trauma survivors.*

Conclusions: *Future follow-up research is needed to determine the degree to which the participants actually applied their increased knowledge of PTSD and ability to collaborate with faith and or health providers.*

Keywords: *post-traumatic stress disorder (PTSD); religion; spirituality; clergy; collaborative care; training model*

INTRODUCTION

In the United States, an estimated 70% of adults have experienced a traumatic event at least once in their lives and up to 20% of these individuals develop post-traumatic stress disorder (PTSD).[1] An estimated 5% of adult Americans – more than 13 million people – have PTSD at any given time.[1] Approximately 8% of all adults – 1 of 13 people – will develop PTSD during their lifetime.[1] PTSD is associated with high mortality (i.e., suicide) and morbidity (i.e., major depression and substance use).[1] Therefore, properly supporting trauma survivors with PTSD represents an important public health issue. In addition to PTSD some trauma survivors may experience a spiritual crisis (e.g., feel anger at and/or abandoned by God).[2] Given the possible need to seek resolution of a spiritual crisis and their accessibility, faith leaders are commonly the first resource to which trauma survivors go for support.[3] Faith leaders are therefore in a crucial position to offer spiritual guidance to trauma survivors and direct them to mental health services.[4] (This paper

understands faith leaders as lay or formally trained and/or ordained people who are appointed by their religious community with the task of advancing its particular beliefs and comprehensive doctrines.) Given the complicated spiritual and biopsychosocial issues that may arise after a traumatic experience, there is a clear need for interdisciplinary collaboration between faith leaders and health providers to support trauma survivors.[5–9] However, collaboration between those groups can be limited by conflicting world views, divergent interventional approaches, and a long-standing distrust between these faith and medical disciplines; such obstacles must be overcome to promote effective collaborative care.[10,11]

There is a dearth of literature on concrete collaborations between faith leaders and health providers that improve assessment and treatment of the traumatized. To our knowledge there is no literature describing specific strategies or interventions to resolve barriers to collaboration between those two groups. To address those gaps we developed, implemented, and tested an educational program designed to foster interdisciplinary collaborations between faith leaders and health providers.

To that end, we developed a conference entitled 'Healing from a Broken Place: Supporting Trauma Survivors through Collaboration of Ministry and Mental Health Providers' (HFBP). Our study was done in the conference. The goal of the conference was to create a space where faith leaders, health providers, and the broader public could learn about how to collaborate to support survivors of trauma. Our collaborative training model is based on a curriculum[12] teaching about the clinical aspects of psychological trauma and how religious and spiritual themes and faith communities can help support those influenced by traumatic experiences. Our primary objectives were to describe any increase in participant knowledge in identifying and managing PTSD symptoms and depict confidence level in supporting trauma survivors through interdisciplinary collaborations between faith leaders and health providers. Our hypothesis was that the HFBP conference would increase knowledge of PTSD and confidence to engage interdisciplinary collaborations to support trauma survivors.

BACKGROUND

Grame asserts that collaborative care is more efficacious than usual care, as detailed in a 2012 Cochrane Summary that reviewed 79 randomized controlled trials and 24,308 patients across the world.[13] Literature shows that collaboration with faith leaders is important for health providers to better assist trauma survivors.[3,14,15] Research has demonstrated a relationship between religion/spirituality and improved health outcomes, such as in post-traumatic healing,[15] lower levels of distress,[15] finding meaning and will to live,[11] quality of life,[11] less hospital time,[11,15] and reduced cost of care.[11,15] Some specific spiritual or religious interventions shown to reduce PTSD symptoms include but are not limited to writing about traumatic events from a religious perspective,[16] prayer,[17] and meditation.[18] With the exception of collaborations between faith leaders and health providers aimed at improving assessment and treatment of the traumatized, interdisciplinary collaborations between faith leaders and health providers with the aim of improving mental health outcomes for an individual, family, or group[19,20] have been well documented in literature and have traditionally involved various forms of consultation and referral.[10,14,21–23] There is research supporting that a 'bidirectional' collaboration model (i.e., team members contribute to reaching the common clearly defined objective) between faith leaders and health providers is effective.[22] Advocates of a bidirectional approach argue that it offers a greater possibility for shared respect and dialog between all parties involved.[14,22] Collaboration between faith leaders and medical providers should therefore include consideration of attitudes held among both groups towards collaborating together.[22]

Faith leaders are generally open to collaboration with various members of the medical community, especially 'when shared values are recognized and appreciated'.[14] Faith leaders are more likely to collaborate with nurses than with psychologists or psychiatrists,[24] because faith leaders may feel undervalued by health providers, psychologists, and psychiatrists in particular.[23] In addition, they perceive that sometimes psychological and or medical interventions can be in conflict with spiritual interventions.[23] The literature also indicates that health providers may be less willing to collaborate than their faith leader counterparts. Some health providers believe that faith leaders are too dogmatic to collaborate with,[22] spiritual interventions compete with psychological or medical interventions,[22] and sometimes have a fear that patients will not accept their limitations after religious or spiritual professional consultation.[19,25]

In addition to attitudes, it is important to consider what faith leaders and health providers actually *know* about the psychiatric, religious, and spiritual

aspects of trauma.[26] Few studies have examined the level of trauma knowledge demonstrated by faith leaders and health providers, which limits their generalizability.[23] These few studies suggest that faith leaders have views about the causes and treatments of mental illness consistent with most health providers (i.e., there exists some biological and social components to mental illness).[23] However, research suggests that faith leaders lack 'concrete knowledge about psychopathology',[22] knowledge of 'access to mental health resources',[22] and 'experience in dealing with severe mental illness'.[22] Moreover, health providers lack adequate exposure to matters of spirituality and health in their practical training,[19,25,26] resulting in a general lack of awareness of how spirituality influences the course of mental illness.[22] Such knowledge gaps illustrate the need for better education on the multidimensional nature of trauma among faith leaders and health providers.

METHODS

This pilot study used both experimental (pre- and post-tests) and interventional methods via a conference focused on faith leaders and health providers. We designed a conference to help address the dearth of literature concerning the efficacy of collaborations between faith leaders and health providers by targeting faith leaders from all walks of religious life, health providers, and trauma survivors. The intervention was attendance at the conference, which provided opportunities for faith leaders and health providers to hear from trauma experts and survivors and to discuss ideas to improve assessment and collaborative management of psychological trauma. The conference format provided an appropriate setting to offer practical approaches to collaborate and increase PTSD knowledge.

Curriculum Design

Our curriculum draws from a culturally responsive, bidirectional, and learner-centered model of collaborative learning as described by the curriculum design for the interdisciplinary study (CDIS)[12] (see Table 3). The conference featured speakers who were both faith leaders and health providers, and panel discussants composed of trauma survivors focused on assessment and treatment approaches from faith and health disciplines.

Recruitment of Participants

The study sample was recruited from attendees at the 1-day HFBP conference, held on October 13, 2011, in Dewitt, Michigan, at the St. Francis Retreat Center. The Michigan Victim Alliance and Eli Lilly's Sustaining Pastoral Education Grant financially cosponsored this inaugural HFBP conference. The conference targeted faith leaders from all Christian denominations (but welcomed faith leaders from any religious tradition), trauma survivors, and health providers, as well as the general public. The primary methods of recruitment were word of mouth and email using various listservs for faith leaders and health providers in the area. The cost of admission to the HFBP conference was $50 for nonstudents and $10 for students. Sixty-six individuals

Table 1. Participant information ($N = 16$).

	Number	Percent
Gender		
Male	6	37.5
Female	10	62.5
Age		
18–30	1	6.3
31–45	2	12.5
46–60	6	37.5
61 or above	7	43.8
Education		
Some college or professional degree	4	25.0
Master's degree	9	56.3
Doctorate degree	3	18.8
Annual household income		
<$25,000	1	6.3
$25,000–$50,999	4	25.0
$51,000–$75,999	5	31.3
$76,000–$100,000	4	25.0
>$100,000	1	6.3
Prefer not to answer	1	6.3
Religion/spirituality		
Catholicism	4	25.0
Non-Catholic Christian	8	50.0
Buddhism	1	6.3
Other (no religion, agnostic, atheist)	3	18.8
Occupation		
Faith/religious/spiritual leader	7	43.8
Health provider	5	31.3
Other	4	25.0
Exposure to PTSD		
Caregiver of someone with PTSD	1	6.3
Treat people with PTSD	6	37.5
Diagnosed with PTSD	2	12.5
I have not been significantly exposed to PTSD	5	31.3
Prefer not to answer	1	6.3
Other	1	6.3

Table 2. Pre-/post-conference attitude difference.

	Pretest		Posttest					
Q	M	SD	M	SD	*N*	95% CI	*t*	*df*
1	5.79	2.19	8.29	1.14	14	1.2355, 3.7645	6.01	13
2	4.71	2.61	7.79	1.58	14	1.0619, 4.0810	5.69	13
3	5.64	2.17	8.21	1.12	14	1.3185, 3.8243	6.62	13
4	4.71	2.46	7.29	1.77	14	1.1494, 3.9935	6.62	13
5	4.50	2.25	7.32	1.71	14	1.5254, 4.1175	4.84	13
6a	**7.38**	**2.36**	**8.08**	**1.12**	**13**	**-0.7859, 2.0716**	**1.39***	**12**
6b	**7.31**	**1.97**	**8.23**	**1.42**	**13**	**-0.2699, 2.1161**	**1.95***	**12**
6c	8.08	1.66	8.92	0.86	13	-0.1548, 1.8471	2.51	12
6d	**8.75**	**1.89**	**9.00**	**0.82**	**4**	**-2.7621, 3.2621**	**0.40***	**3**
7	4.71	1.90	7.93	1.44	14	2.1181, 4.3105	7.62	13
8	4.57	1.65	7.36	1.28	14	1.8326, 3.7389	7.61	13
9	**7.92**	**2.29**	**8.77**	**1.17**	**13**	**-0.5376, 2.2299**	**1.34***	**12**

$p \leq 0.05$; *Represents correct answer.

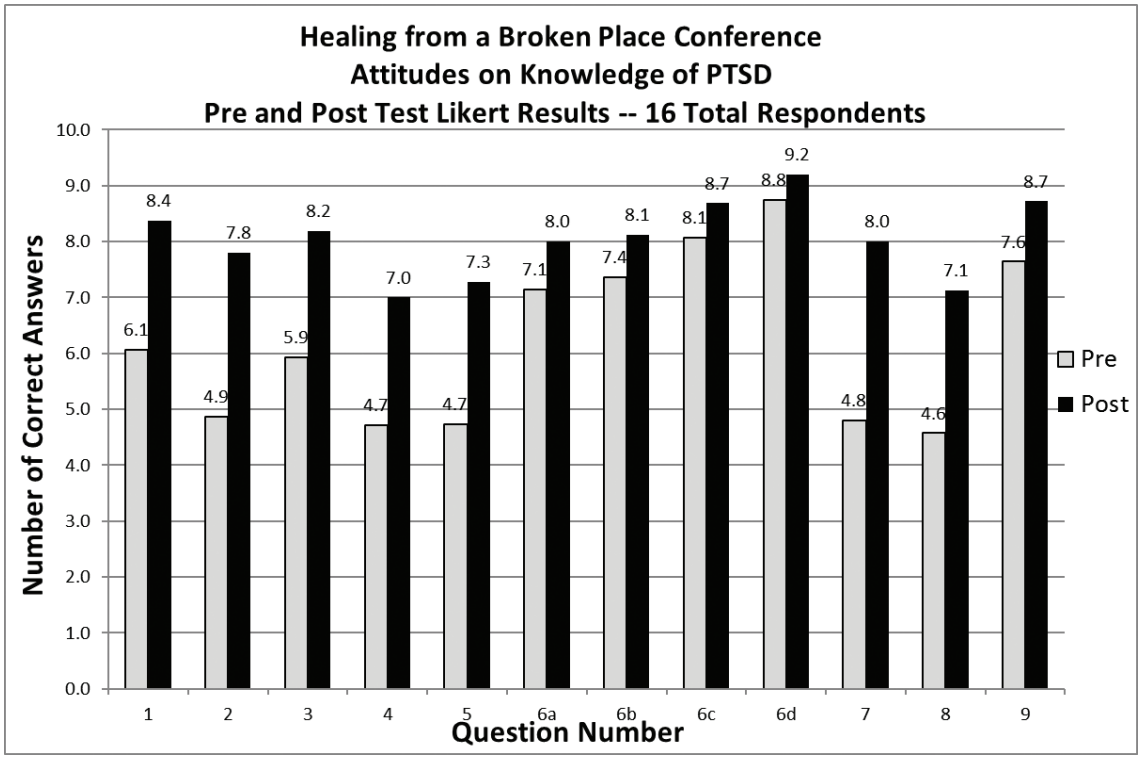

Figure 1. Subjective knowledge of trauma/PTSD and self-confidence in participating in interdisciplinary collaboration.

attended the event. Conference attendees were eligible for continuing pastoral educational credits through the American Association of Pastoral Counselors. Members of the research team informed conference attendees of the voluntary study onsite during conference check-in. All registered conference attendees aged 18 years or older were eligible to participate in the study.

Study Instruments

The research team designed the pre- and posttest instruments. We solicited information in three

MSRJ © 2018 VOL: 06. Issue: Fall
epub December 2018; www.msrj.org

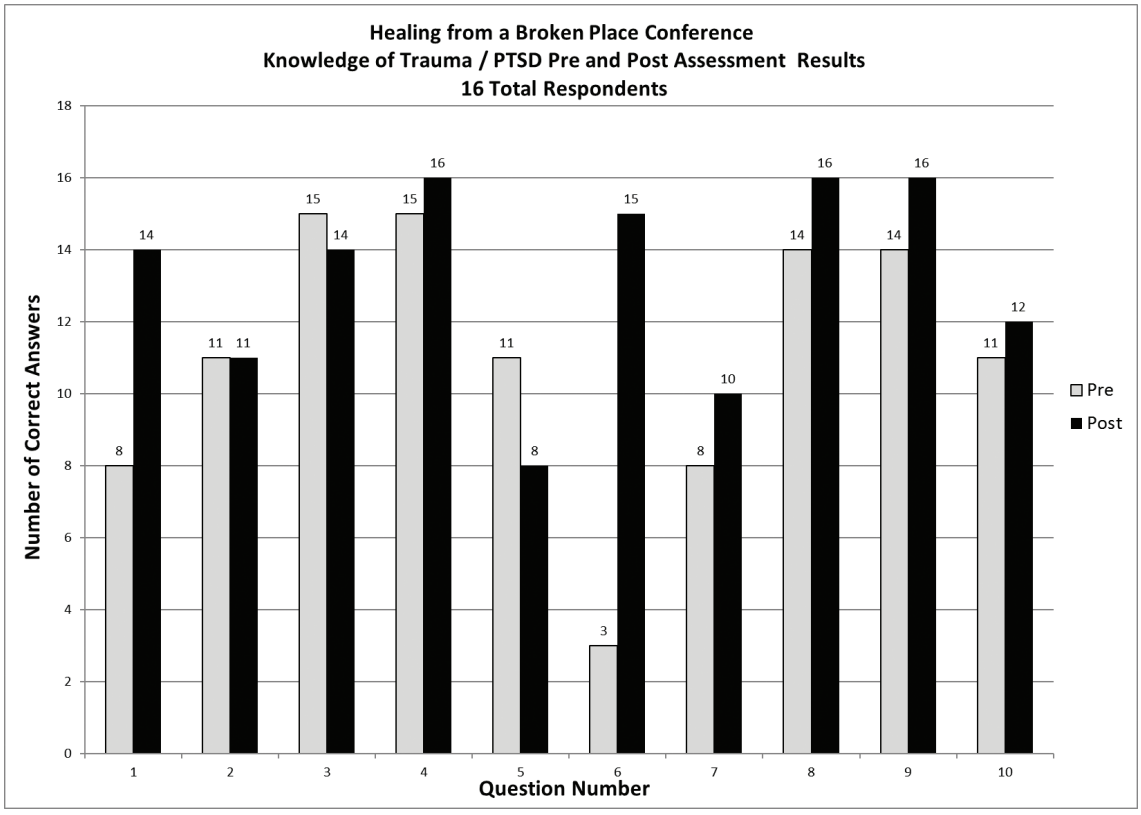

Figure 2. Objective knowledge of trauma/PTSD.

sections: (1) demographic information (see Table 1); (2) *subjective* knowledge of trauma and PTSD and confidence with participating in interdisciplinary collaboration between faith and health providers (using nine questions in Likert-type scale format) (see Figure 3); and (3) *objective* knowledge on trauma and PTSD (using nine multiple choice questions with five foils) (see Figure 4). *Subjective* knowledge of trauma and PTSD was measured by self-reported comfort in identifying and managing PTSD symptoms. Self-confidence with participating in interdisciplinary collaboration was measured by self-reported comfort with locating community or religious support networks and working with faith or health providers.

Data Collection

We assessed PTSD knowledge and attitudes to measure the degree to which participants assimilated content offered during the HFBP conference. We also measured confidence in merging religion or spirituality and medical science in the assessment and treatment of trauma survivors. Last, we measured the degree of comfort in collaborating with faith leaders and/or health providers. The preconference instrument was administered at registration, and the post-conference instrument was administered just as the conference concluded, at the conference site. In addition, members of the research team observed group discussions and breakout sessions to assess, in more depth, the most pressing concerns of attendees and emerging ideas on how to address these concerns. (However, that qualitative data was not included in this article.) The research team requested that one person from each breakout group note the content of the round table discussions and nonverbal expressions, in order to develop a holistic understanding of the interactions.[27] The participants were consented and given identifiers according to protocol approved by the Michigan State University Institutional Review Board.

RESULTS

Quantitative Findings

Of the 66 conference attendees, 16 individuals (24.2%) completed both the pre- and post-conference instruments; they represent the study sample. As shown in

For each of the statements below indicate the degree of agreement or disagreement by circling the one number that most closely represents your response.

0--------1---------2---------3---------4---------5-------6--------7--------8--------9---------10

Totally Disagree Neutral Agree Totally Disagree Agree

1. **Overall I have a good understanding of PTSD, its symptoms, and its impact on trauma/PTSD survivors and their support networks.**
2. **I am confident in my ability to accurately determine if a trauma/PTSD survivor's reported symptoms (e.g. nightmares) are a response to a traumatic event.**
3. **I feel I can identify the degree to which reported symptoms are disruptive to the trauma/PTSD survivor's life and determine if they need further evaluation.**
4. **I am comfortable with my current experience and skills in dealing with PTSD across the various cultures and ages of the people I serve.**
5. **I have a clear understanding of the various treatment options available for PTSD depending on a trauma/PTSD survivor's symptoms, extent of support network, and their cultural/social environment.**
6. **I am comfortable co llaborating with and receiving input from the following people religious/spiritual leaders or colleagues during the course of clinical treatment for trauma/ PTSD survivors.**

   ◊ **Faith leaders (a)**
   1 2 3 4 5 6 7 8 9 10

   ◊ **Physician (b)**
   1 2 3 4 5 6 7 8 9 10

   ◊ **Psychologist or other mental health professional (c)**
   1 2 3 4 5 6 7 8 9 10

   ◊ **Other (please specify:_____). (d)**
   1 2 3 4 5 6 7 8 9 10

7. **I have a clear understanding of how faith leaders and religious/spiritual communities can influence the healing of trauma survivors and/or individuals with PTSD symptoms.**
8. **I feel confident in my ability to sort out if a trauma/PTSD survivors' trauma symptoms or responses are the result of spiritual crisis versus psychopathology.**
9. **I am willing to make referrals to health providers or faith leaders and to work together collaboratively to treat trauma survivors.**

(Likert-type scales 10 being the highest form of agreement**)**

Figure 3. *Subjective* knowledge about trauma/PTSD and comfort participating in interdisciplinary collaborations between faith and health professionals.

Table 1, there were 10 females and 6 males; most (13) were over the age of 46 years, and 7 were over the age of 61 years. All participants had completed high school, and 12 had a master's or doctorate degree. Most participants were Christian (14). There was a mix of occupations between health providers (5) and faith, religious, or spiritual leaders (7) – in addition to these two occupation choices participants were provided the following three options: veteran or active military, student, and other. The remaining respondents (4) indicated 'other'. Most participants (9) had some direct contact with PTSD. Two indicated they were diagnosed with PTSD, six of the study participants *treated* individuals with PTSD, and one served as *caregiver* to someone with PTSD. Five participants indicated they had not been significantly exposed to PTSD.

Analysis of the pre- and post-conference instruments revealed difference in PTSD attitudes resulting from conference attendance. We used a paired two-sample *t*-test to test for difference between pre- and post-attendance (see Table 2 and Fig. 4, for the corresponding questions). There was a significant difference for Question 6a in the

Table 3. Curriculum design and phases.

Phases	Introductory	Thematic	Integrative kernel
Purpose	Provide basic and introductory knowledge of PTSD: o History o DSM criteria o Epidemiology o Neurobiology o Neuroanatomy	Discuss common and important congregational and clinical difficulties that faith and health professionals may encounter (i.e., sexual abuse by clergy) as well as the wider base of knowledge, skills, attitudes, behaviors required to support survivors of extreme trauma. Explore support of trauma survivors in various relational settings: o Clergy to health provider o Health provider to clergy o Health provider to patient o Clergy to parishioner o Clergy to congregation	Reinforce the key concepts of traumatology, as well as the historical context of PTSD.
Format	Interactive Power Point presentation by PTSD expert: Frank Ochberg, MD	Live testimonies of those dealing with PTSD from the group Michigan Victim Alliance, followed by panel discussants of trauma survivors, faith, and medical and mental health professionals.	Seven subject-specific breakout groups: (1) Pastoral care and compassion fatigue (2) Spousal support for traumatized loved ones (3) Caring for child abuse survivors (4) Religious themes in therapy (5) Using humor in ministerial and medical roles (6) Exploring interfaith approaches to healing (7) Trauma and healing in the urban context

pretest (M = 7.38, SD = 2.36) and post-conference (M = 8.08, SD = 1.12) responses; $t(12) = 1.39$, $p = 0.05$. There was a significant difference for Question 6b in pre-conference (M = 7.31, SD = 1.97) and post-conference (M = 8.23, SD = 1.42) responses; $t(12) = 1.95$, $p = 0.05$. There was a significant difference for Question 6d in pre-test (M = 8.75, SD = 1.89) and post-conference (M = 9.00, SD = 0.82) responses; $t(3) = 0.40$, $p = 0.05$. There was a significant difference for Question 9 in preconference (M = 7.92, SD = 2.29) and post-conference (M = 8.77, SD = 1.17) responses; $t(12) = 1.34$, $p = 0.05$.

As shown in Fig. 1, participants' self-confidence for engaging in interdisciplinary collaborations between faith leaders and/or health providers increased (see Fig. 4, for the corresponding questions). Participants reported that they were more willing to make referrals to health providers or faith leaders and to engage in interdisciplinary collaborations to treat trauma survivors. All answers to questions assessing self-confidence in participating in interdisciplinary collaborations increased.

Participants reported an improvement in their *subjective* knowledge of trauma and PTSD and their self-confidence with participating in interdisciplinary collaboration (see Fig. 4, for the corresponding questions). Participants improved their *subjective* knowledge as suggested by indicating that they feel better equipped to understand the symptoms and risk factors of PTSD and provide care for trauma survivors. All questions assessing *subjective* knowledge showed improvements: 1 (pretest 6.1 and posttest 8.4), 2 (pretest 4.9 and posttest 7.8), 3 (pretest 5.9 and posttest 8.2), 4 (pretest 4.7 and posttest 7.0), 5(pretest 4.7 and posttest 7.3), 7 (pretest 4.8 and posttest 8.0), and 8 (pretest 4.6 and posttest 7.1).

Objective knowledge of PTSD symptoms also increased (see Fig. 2 and Fig. 4 for the corresponding questions). Awareness that PTSD symptoms must be present for at least 1 month for a possible diagnosis showed a sizable

1. **1. For a diagnosis of PTSD to be made, symptoms associated with it must be present for at <u>least</u>:**
   a. one week
   b. two weeks
   ***c. one month**
   d. two months
2. **2. Survivor guilt refers to:**
   a. the concentration and insomnia symptoms of PTSD
   ***b. a condition outside of the PTSD diagnosis, often seen in combat veterans**
   c. guilt for killing the enemy in war
   d. numbing and avoidance after trauma

   3. Whenever a diagnosis of PTSD has been made caregivers, family, friends, and others should pay special attention to indications of:
   a. substance abuse
   b. additional anxiety disorder
   c. depression
   ***d. all of the above**
3. **4. PTSD includes:**
   a. feeling numb
   b. being overly anxious
   c. having unwanted memories of trauma
   ***d. all of the above**

   5**. All of the following are signs of hyper-arousal found in PTSD, except:**
   ***a. hallucinations and delusions**
   b. frequently on the lookout for threats
   c. difficulty concentrating
   d. trouble falling asleep
4. 6. **When exposed to similar traumatic events:**
   ***a. PTSD appears twice as frequently among women**
   b. PTSD appears twice as frequently among men
   c. PTSD appears equally in men and women
   d. PTSD appears 5% more often in women

   7. **People with mental conditions, including PTSD, are most likely to first seek help from:**
   a. specialists in psychiatry and psychology
   ***b. general practitioners or clergy**
   c. teachers
   d. none of the above

   7. **Which represents the most important first step in the treatment of PTSD?**
   a. medication
   b. hospitalization
   ***c. establishing a sense of safety and separation from the trauma**
   d. brain imaging

   8. **Which of the following represents one of the most useful treatments of PTSD?**
   a. hypnosis
   b. focusing on childhood relationship to parents
   c. electroconvulsive therapy
   ***d. reinterpreting a traumatic event by adjusting one's thoughts, attitudes, and belief systems**

   9. **Identify the true statement**:
   a. only people having experienced a traumatic event will develop PTSD
   b. all people having experienced and or witnessed a traumatic event will develop PTSD
   ***c. having experienced and or witnessed a traumatic event does not guarantee that a person will have PTSD**
   d. all are false

*represents correct answer

Figure 4. Objective knowledge of trauma/PTSD (administered pre- and posttest).

improvement. Awareness that PTSD appears twice as frequently in women when compared to men when they are exposed to similar trauma showed a larger increase. Interestingly, the five participants who reported that they had not been significantly exposed to PTSD all answered this gender-based question (Question 6) incorrectly in the preconference instrument; however, *all five of them answered it correctly* on the post-conference

instrument. For the participants with little exposure to PTSD, similar increases appeared for two additional questions (Questions 1 and 10). For each of those questions, only one participant with little exposure to PTSD answered correctly in the preconference instrument; however, *all* of them answered those two questions correctly in the post-conference instrument.

DISCUSSION AND APPLICATIONS TO PRACTICE

To our knowledge this is the first study that incorporates interventional and experimental methods to measure the potential of an interdisciplinary training model to enhance the formation and efficacy of collaborations between faith leaders and health providers in the assessment and treatment of trauma survivors. Our intent was to assess and improve knowledge and attitudes. The results support our hypothesis that the HFBP conference format and curriculum offers a pragmatic collaborative care training model for faith leaders and health providers to increase comfort level for interdisciplinary collaborations between those two groups and increase their knowledge of trauma that can precipitate PTSD.

Participants showed an increase in knowledge about PTSD. There was an increase in *subjective* level of knowledge. Participants indicated that they gained confidence in understanding religious and spiritual aspects of trauma. On the whole, participants in our sample had a fairly high preconference level of knowledge of PTSD and confidence in developing interdisciplinary collaborations between faith leaders and health providers. Participants reported that they were willing to make referrals to health providers or faith leaders and were willing to collaborate to treat trauma survivors. This data suggests that participants increased their confidence in developing interdisciplinary collaborations between faith leaders and health providers. Those participants with a lower exposure to trauma and interdisciplinary collaborations between faith and medicine demonstrated larger pre- and posttest gains. Therefore, individuals with low knowledge of PTSD and low comfort with interdisciplinary collaborations could experience even higher differences as a result of attending a similar conference in the future.

LIMITATIONS

There are several limitations in this study, and we highlight three important considerations. First, the study was limited by selection bias. The small numbers of participants were already inclined to consider collaborations and PTSD, given the focus of the conference they decided to attend absent knowledge of the study. The absence of control groups representative of both faith leaders and health providers should be considered in evaluating replicability. The size and nature of our sample restricted our ability to utilize statistical modeling to evaluate specific outcomes by holding constant potential confounding characteristics. In addition, the small number of participants included in this study limits any overall conclusions that can be drawn from the effectiveness of the educational interventions involved in this study. Second, we are not clear to what degree the participants *applied* their improvement in attitude and increase in knowledge about PTSD and whether application translated into more effective care, for faith leaders and health providers. Third, we do not know if participants actually increased collaborations between faith leaders and health providers when supporting trauma survivors. Addressing these limitations would require a specific post-conference follow-up, as well as longitudinal assessments of larger, more representative samples to measure efficacy in practice. As stated, the potential for selection bias exists because only attendees of this conference were included in the sample; thus it may be biased toward those with an interest in faith and medicine collaborations.

CONCLUSION AND FUTURE DIRECTIONS

Notwithstanding these limitations, this study offers insights for educators, researchers, faith leaders, and health providers who are interested in studying and/or participating in collaborative medicine, specifically between faith leaders and mental health professionals, to better support trauma survivors. Participants increased their perceived and actual knowledge about PTSD, reported that they were more willing to make referrals to health providers or faith leaders, and were more comfortable in collaborating with each other to treat trauma survivors.

Insights from the HFBP conference could better facilitate health education interventions for psychological trauma, while advancing supplementary and complementary collaborations between faith leaders and health providers. Future investigators should consider using larger, representative numbers in similar educational interventions. A study with a larger sample size, and consequently greater power to measure differences across the sample, would enable researchers to investigate statistically significant outcomes for participants. A key consideration for future efforts is to identify and recruit a larger sample of religious and health providers with little or no prior knowledge of

PTSD and minimal exposure to collaborations between religious and health communities. Lastly, future longitudinal follow-up research is needed to determine to what degree the participants *applied* their improvement in knowledge about PTSD and increased in willingness to collaborate with faith leaders and/or health providers to support trauma survivors.

Acknowledgement: For his steadfast support and guidance we would like to thank Henry Barry, MD, MS, professor, Department of Family Medicine; and senior associate dean for Faculty Affairs and Development at Michigan State University.

Conflict of interest and funding

The authors have not received any funding or benefits from industry or elsewhere to conduct this study.

REFERENCES

1. https://www.ptsd.va.gov/ (accessed on 12/01/16)
2. Falsetti SA, Resick PA, Davis JL. Changes in religious beliefs following trauma. J Traum Stress. 2003; 16(4): 391–8. doi: 10.1023/A:1024422220163
3. Weaver AJ, Koenig HG, Ochberg FM. Posttraumatic stress, mental health professionals, and the clergy: a need for collaboration, training, and research. J Traum Stress. 1996; 9(4): 847–56. doi: 10.1002/jts.2490090412
4. Hunsinger DvD. Bearing the unbearable: trauma, gospel and pastoral care. Theol Today. 2011; 68(1): 8–25. doi: 10.1177/0040573610394922
5. McMinn MR, Meek KR, Canning SS, Pozzi CF. Training psychologists to work with religious organizations: the center for church–psychology collaboration. Prof Psychol: Res Pract. 2001; 32(3): 324. doi: 10.1037/0735-7028.32.3.324
6. Dokecki PR, Newbrough J, O'Gorman RT. Toward a community–oriented action research framework for spirituality: community psychological and theological perspectives. J Commun Psychol. 2001; 29(5): 497–518. doi: 10.1002/jcop.1033
7. Benes KM, Walsh JM, McMinn MR, Dominguez AW, Aikins DC. Psychology and the church: an exemplar of psychologist–clergy collaboration. Prof Psychol: Res Pract. 2000; 31(5): 515. doi: 10.1037/0735-7028.31.5.515
8. North CS, Hong BA. Project CREST: a new model for mental health intervention after a community disaster. Am J Public Health. 2000; 90(7): 1057. doi: 10.2105/AJPH.90.7.1057
9. Voss SL. The church as an agent in rural mental health. J Psychol Theol. 1996 June; 24 (2):114–23.
10. Ar E. The healing Church: practical programs for health. Cleveland, OH: Ministries United Church Press; 2000.
11. Puchalski CM. Spirituality in geriatric palliative care. Clin Geriatr Med. 2015; 31(2): 245–5. doi: 10.1016/j.cger.2015.01.011
12. Zimmermann E, Peschl MF, Römmer-Nossek B. Constructivist Curriculum Design for the Interdisciplinary Study Programme MEi: CogSci--A Case Study. Constructivist Foundations. 2010; 5(3): 144–57.
13. Archer J, Bower P, Gilbody S, et al. Cochrane database of systematic reviews. Collaborative Care Depress Anxiety Probl. 2012; 10(10.1002): 14651858.
14. Thiel MM, Robinson MR. Physicians' collaboration with chaplains: difficulties and benefits. J Clin Ethics. 1997; 8: 94–103.
15. Hg K, De K, Ve C. Handbook of religion and health. 2nd ed. Oxford University Press; 2012. New York.
16. Chen YY. Written emotional expression and religion: effects on PTSD symptoms. Int J Psychiatr Med. 2005; 35(3): 273–86. doi: 10.2190/2X0U-0CTB-Y877-5DRQ
17. Zehnder D, Prchal A, Vollrath M, Landolt MA. Prospective study of the effectiveness of coping in pediatric patients. Child Psychiatr Human Dev. 2006; 36(3): 351. doi: 10.1007/s10578-005-0007-0
18. Bormann JE, Thorp S, Wetherell JL, Golshan S. A spiritually based group intervention for combat veterans with posttraumatic stress disorder: feasibility study. J Holistic Nurs. 2008; 26(2): 109–16. doi: 10.1177/0898010107311276
19. Je O, Jk F, Wa A. Comparative analysis of the psychological literiature on collaboration between clergy and mental-Health profesionals-prespectives from secular and religious journals: 1970–1999. Pastoral Psychol. 2004; 53(2): 153–62. doi: 10.1023/B:PASP.0000046826.29719.8d
20. Weaver AJ, Flannelly KJ, Flannelly LT, Oppenheimer JE. Collaboration between clergy and mental health professionals: a review of professional health care journals from 1980 through 1999. Counsel Values. 2003; 47(3): 162–71. doi: 10.1002/j.2161-007X.2003.tb00263.x
21. McCabe OL, Lating JM, Everly G, Mosley AM, Teague PJ, Links JM. Psychological first aid training for the faith community: a model curriculum. Int J Emerg Ment Health. 2008; 9(3): 181–92.
22. Edwards LC, Lim BR, McMinn MR, Dominguez AW. Examples of collaboration between psychologists and clergy. Prof Psychol: Res Pract. 1999; 30(6): 547. doi: 10.1037/0735-7028.30.6.547
23. Stanford M, Philpott D. Baptist senior pastors' knowledge and perceptions of mental illness. Mental Health, Religion Cult. 2011; 14(3): 281–90. doi: 10.1080/13674670903511135
24. Sigmund JA. Spirituality and trauma: the role of clergy in the treatment of posttraumatic stress disorder. J Religion Health. 2003; 42(3): 221–9. doi: 10.1023/A:1024839601896
25. Hage SM. A closer look at the role of spirituality in psychology training programs. Prof Psychol: Res Pract. 2006; 37(3): 303. doi: 10.1037/0735-7028.37.3.303
26. Russell SR, Yarhouse MA. Training in religion/spirituality within APA-accredited psychology predoctoral internships. Prof Psychol: Res Pract. 2006; 37(4): 430. doi: 10.1037/0735-7028.37.4.430
27. Kawulich BB. Participant observation as a data collection method. InForum Qualitative Sozialforschung/Forum: Qualitative Social Research 2005; 6(2): 1–19.