# Addressing Abortion Provider Stigma: A Pilot Implementation of the Providers Share Workshop in Sub-Saharan Africa and Latin America

***CONTEXT:*** *In much of Sub-Saharan Africa and Latin America, abortion is legally restricted, and abortion providers experience stigma and legal jeopardy. The Providers Share Workshop group intervention has been shown to reduce provider stigma in the United States, but has not been evaluated in other settings.*

***METHODS:*** *In 2014–2015, the Providers Share Workshop was adapted and piloted among 59 abortion caregivers from three Sub-Saharan African countries and 93 caregivers from seven Latin American countries. Survey data collected before, directly following and six months after each workshop measured stigma, attitudes, and legal safety and advocacy engagement, using original items and adapted scales. Univariate analyses and baseline pairwise correlations were used to measure changes in outcomes over time, and between demographic characteristics and outcomes. Mixed-effects linear regressions and multivariable models controlling for demographics were used to assess changes in outcomes over time.*

***RESULTS:*** *Six months after workshop participation, total abortion stigma had decreased among caregivers in Sub-Saharan Africa and in Latin America (beta coefficients, −0.2 and −0.4, respectively). Unfavorable attitudes had decreased in Africa (−0.2) but not in Latin America, where attitudes were favorable to start; emotional exhaustion and depersonalization also had decreased in Africa (−2.9 and −1.2), and legal safety had increased (0.8). Increased total abortion stigma was negatively associated with legal safety, in both Africa and Latin America (−1.9 and −0.6), and with legal advocacy in Africa (−1.5).*

***CONCLUSIONS:*** *The Providers Share Workshop is a promising intervention to support the abortion care workforce in Sub-Saharan African and Latin American settings.*

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Access to safe abortion is a critical component of international human rights.[1–6] Still, unsafe abortion persists, sometimes with dire consequences. Globally, best estimates are that at least 22,000 women die each year from unsafe abortion;[7] the vast majority of these deaths occur in developing countries, and in countries with restrictive abortion laws. Many facets contribute to the incidence of unsafe abortion, including legal restrictions on abortion and the stigma associated with the procedure.[8,9] Legal restrictions on abortion vary worldwide. In Africa and Latin America, most countries allow abortion only in limited circumstances, and some forbid it altogether.[10,11] When access to abortion within the formal medical sector is restricted, some women seek clandestine or self-managed care, which sometimes can be considered less safe or least safe, in terms of the World Health Organization's abortion safety classification framework.[9] Some organizations try to reduce the consequences of unsafe abortion by offering postabortion care (PAC), which includes treatment for incomplete abortion or other complications. Even with systems of PAC in place, however, evidence shows that restricting the availability of services provided by well-trained caregivers increases abortion-related morbidity and mortality.[12,13] In addition, legal restrictions, as well as religious prohibitions, increase abortion stigma, such that even when safe and legal care is available, some women may seek unsafe care to preserve their privacy.[14] First defined by Erving Goffman in 1963, stigma is "an attribute that is deeply discrediting," which transforms someone from being seen as "a whole and usual person" to a "tainted" one, in the eyes of those around them.[15] Abortion stigma can affect anyone associated with the procedure–from the individuals who seek abortion care to the caregivers who help them.[14]

Legal restrictions and stigma can profoundly affect the experiences of abortion caregivers.[16,17] Physicians, nurses and support staff working in regions in which abortion is legally restricted describe fears of being harassed, entrapped or arrested by law enforcement agents.[18,19] Even caregivers providing licit abortion care and PAC services can encounter threats, harassment and stigma[20]–the latter experienced as internalized negative social messages, anxiety around disclosing their professional identity, social isolation, judgment, discrimination and violence.[17,21] Experiencing stigma can diminish professional quality of life and increase compassion fatigue, job dissatisfaction and "burnout," defined as a sense of emotional exhaustion, depersonalization of clients and reduced feeling of personal accomplishment as a result of one's work–all

of which threaten the abortion workforce and the accessibility of high-quality sexual and reproductive health care services.[21] Our focus in this study is on strengthening and supporting the abortion- and PAC-providing workforce.

A range of stigma-reduction interventions for health care workers exists, including for caregivers of people with HIV or AIDS; however, many of these interventions focus primarily on caregivers' stigmatization of patients, rather than caregivers' personal experiences of stigma.[22–24] Few interventions exist that focus on the experiences of the abortion care workforce. The Values Clarification and Attitude Transformation intervention encourages health care providers, policymakers and other participants to identify and examine personal beliefs, attitudes and behaviors specifically related to abortion, and it may help surface and reduce stigmatizing attitudes;[25] however, its effects on experiences of stigma have not been studied.

The Providers Share Workshop was developed as both a supportive group intervention for abortion caregivers and as a research methodology.[16] Rather than prompting individual self-reflection on personally held beliefs, as Values Clarification and Attitude Transformation workshops do, the Providers Share Workshop encourages caregivers to share their lived experiences of stigma in a group setting. The intervention uses storytelling and arts-based methods to foster reflection, communication and sense of community. It draws on psychodynamic and humanistic group theories, which maintain that through the group process, participants can increase their sense of self-worth and connection to peers.[26,27] In qualitative and quantitative evaluations in the United States, where it was developed, the workshop has been shown to reduce experiences of stigma; strengthen connection to patients, self and work; and improve team cohesion and communication.[17,21,28] In addition, participants have described the workshop as meaningful and important.

Given these documented positive effects and the global phenomenon of abortion stigma, we wanted to evaluate the Providers Share Workshop in settings outside of the United States. We partnered with nongovernmental organizations to adapt, pilot-test and evaluate the workshop with abortion caregivers from three Sub-Saharan African and seven Latin American countries where abortion is legally restricted and abortion stigma is pervasive. Because of the contested nature of abortion in these regions, we refrain from identifying the specific countries in which our study partners and participants are working. Two of the African countries allow abortion to save a woman's life; the other also allows abortion to protect a woman's health.[10] Four of the Latin American countries allow abortion to protect a woman's health; three allow abortion to save a woman's life.

Although the effects of abortion stigma and legal restriction on women are well documented in both regions, there is a dearth of literature on caregiver experiences of stigma and legal restriction. And though stigma is a global phenomenon, sociologists have noted that the particular manifestations of stigma are locally produced.[14,29] We sought to understand and document the ways in which these legally and socially restrictive environments shape the experiences of providers of abortion and PAC, including experiences of stigma and burnout. Furthermore, because stigmatized groups can also stigmatize others, we sought to understand providers' attitudes toward and treatment of women seeking abortion. And because health care providers can play important roles in legal advocacy for abortion,[30] we assessed providers' willingness to engage in or support such advocacy and their perceptions of the legal risks of doing their work, which we call "legal safety." A robust abortion-providing workforce is required to ensure access to high-quality care and reduce the incidence of unsafe abortion; our work aims to strengthen and support this workforce by deepening our understanding of the complex relationships among abortion stigma, abortion attitudes, burnout and legal environments.

## METHODS

To adapt the Providers Share Workshop content, structure and evaluation tools for this pilot study in Sub-Saharan Africa and Latin America, we partnered with Planned Parenthood Global and Marie Stopes International. These organizations provide or support comprehensive sexual and reproductive health care, including contraception, safe abortion and PAC, in the selected African and Latin American countries, according to local legal frameworks.

### Adaptation of Workshop Content and Structure

Over an eight-month period beginning in 2014, we revised the original workshop content and structure—which consisted of five 90-to-120–minute facilitated group sessions, each centered on a specific theme—through an iterative, collaborative, multistep process with our partners. First, partner organizations selected representatives to evaluate workshop material and receive training as facilitators. Individuals were chosen because they had prior experience in group work and did not have day-to-day supervisory relationships with potential workshop participants, which could adversely affect group dynamics. Next, those selected to become facilitators participated in a two-day prepilot Providers Share Workshop in Ann Arbor, Michigan, USA, during which they participated in each workshop session and received training on group dynamics and managing difficult conversations. Afterward, the newly trained facilitators and other representatives from our partner organizations provided feedback on how each session should be adapted for their local context.

After considering partner feedback, we made some logistical changes to the implementation of the workshop, while maintaining its overall aims and emotional structure. In the original Providers Share Workshop model, the five sessions were each conducted 1–2 weeks apart, with 10–20 staff members from one abortion-providing site participating. Previous evaluation of an abbreviated workshop model—consisting of only 2–3 sessions, held on a single

day—showed no significant changes in stigma or other outcomes of interest.[28] Thus, we felt it important to retain all sessions because they had proven efficacy in both qualitative and quantitative assessments.[16,21,28] However, provider sites in our selected Latin American and African countries often had fewer employees, so to facilitate participation, we adapted the workshop as a two-day retreat featuring all sessions and involving participants from multiple sites.

We also changed some session themes on the basis of local needs. For example, one session on doing politically charged work was changed to focus on the meaning and importance of abortion work at a community level. In addition, because our partners noted that high morbidity and mortality associated with reproductive events shaped their work profoundly, we shifted the session on memorable patients to include content on difficult complications. Ultimately, the themes of the adapted workshop sessions were "What abortion work means to me," "Managing stigma: the decision to disclose," "What abortion work means to my community," "Memorable cases and difficult complications" and "Looking toward the future."

#### Adaptation of Evaluation Tools

Partner organizations reviewed a range of survey tools used to evaluate the original Providers Share Workshop and suggested new or adapted items relevant to the provider sites in their setting. This process resulted in our revising existing survey measures on abortion provider stigma, provider burnout and abortion attitudes, and developing new measures for legal safety and support for legal advocacy. Because we designed all study instruments to meet our partner organizations' needs, not all measures, items or response categories were identical across both study regions (see Appendix 1 for full details). For example, we included burnout measures in Africa but not in Latin America, because our Latin America partners were concerned about literacy levels and survey fatigue among participants, and wished to reduce the burden of the survey. Partners assessed the meaning and face validity of all item phrasing, which we adjusted to accommodate literacy and comprehension needs. A minimum of four people per region reviewed item phrasing and reached consensus on the final wording of adaptations. On the advice of our partners, we had all study instruments intended for use in Latin America translated into Spanish and, for one country in Africa, into local languages; we retained the English-language version of the instruments for use in the other two African countries. (Questions about translation of survey tools can be directed to the authors.)

• *Abortion provider stigma.* In both regions, we measured abortion provider stigma using our adapted versions of the 35-item Abortion Provider Stigma Scale,[28] which assesses experiences of stigma across five domains: disclosure management, internalized states, judgment, social isolation and discrimination. To avoid reinforcing stigma, the word "stigma" is not included in any scale item, and both positively and negatively framed items are included. In the version used for the original Provider Share Workshop model, items refer to a respondent's "working in abortion care" or being "an abortion worker"; in our adapted versions, phrasings varied by provider site but generally refer to a respondent's involvement in ending a pregnancy, to reflect that participants were involved in a range of abortion-related services, including PAC. Phrasings reflect our partners' choice of terminology, to ensure understanding among participants at each location, regardless of their personal level of involvement in abortion care.

For Africa, we removed one item, "I am scared of how people will react if they find out about my work in abortion care," from the disclosure management stigma subscale because our partners felt it was not relevant. The resulting scale included 44 items. For Latin America, we removed items from every subscale, because of relevance, resulting in a scale consisting of 30 items. Response options for Africa were never, rarely, sometimes, often and all the time (coded 1–5), while for Latin America, they were never, often and all the time (coded 1–3); options differed because of literacy and resonance issues. We reverse-coded certain items, so that higher scores always indicated higher levels of stigma. We calculated subscale scores as the sum of all items in a given subscale and the total abortion stigma score as the sum of all subscales. Reliability was acceptable for all subscale measures (Cronbach's alphas, 0.7–0.9 in Africa; 0.5–0.7 in Latin America).

• *Abortion attitudes.* To measure participants' level of negative attitudes about abortion, we started with the 18-item Stigmatizing Attitudes, Beliefs and Actions Scale, created in Ghana and Zambia,[31] and then developed additional, original abortion attitude items suggested by our partners. We recoded items, as needed, so that higher scores indicate more-negative abortion attitudes. Because these were novel measures in both regions, we conducted exploratory factor analysis to identify subscales, Kaiser-Meyer-Olkin tests for sampling adequacy and Bartlett's test of sphericity to determine whether items were suitable for use as scales (see Appendix 1).

We tested the factorability of 21 items in Africa on a four-point agreement scale (1=strongly agree, 2=agree, 3=disagree and 4=strongly disagree; reverse-coded as needed so higher scores indicate more-negative attitudes). Exploratory factor analysis identified 17 items across three factors: lack of support for women seeking abortion, disapproval of women having more than one abortion and shaming of women seeking an abortion. These were interrelated and therefore summed to create a single measure of abortion attitudes. In Latin America, we tested the factorability of 26 items on a three-point agreement scale (1=agree, 2=somewhat agree and 3=disagree; reverse-coded as needed so higher scores indicate more-negative attitudes). Exploratory factor analysis identified 14 items across three factors: lack of support for women seeking abortion; disapproval of women having more than one, later or adolescent abortion; and fear of entrapment by clients. These were

interrelated, so we summed factors to create a single measure (Cronbach's alpha, 0.9 in both regions).

• *Legal safety and engaging in advocacy.* We examined caregivers' experiences and perceptions of the legal climate for abortion in their region using 19 items for Africa and 13 items for Latin America; response options for both were agree, indifferent or no opinion, and disagree (coded 1–3). Items were recoded so that higher scores indicate higher legal safety and greater support for legal advocacy. We conducted exploratory factor analysis to identify latent factors using the same protocol described above, and calculated scores as the sum of all items on a given latent factor. In Africa and Latin America, we identified two factors: legal safety (i.e., caregivers being in legal jeopardy because of their work) and willingness to engage in or support abortion advocacy. In both regions, these two factors were not related at a bivariate level, so we did not combine them into a single measure (Cronbach's alphas, 0.9 and 0.7, respectively, in Africa; 0.6 and 0.7, respectively, in Latin America).

• *Provider burnout.* We measured professional burnout in Africa only, using the Maslach Burnout Inventory, which was developed in the United States and has been validated with health workers in Africa.[32,33] It includes 22 items measured on a seven-point scale (from 0=never to 6=every day) across three domains: emotional exhaustion, personal accomplishment and depersonalization. Emotional exhaustion captures the experience of being emotionally overextended and exhausted by work; personal accomplishment assesses feelings of achievement and meaning in the workplace; and depersonalization assesses "unfeeling" and impersonal responses to patients. These three domains represent distinct aspects of burnout, and scale authors advise that subscale scores should not be combined for a total score.[32] We replaced the word "recipients" with "clients" throughout the index, but made no other modifications. However, we recoded and reverse-coded items on subscales, as needed, so that higher scores indicate greater burnout and higher perceived personal accomplishment, and calculated scores as a sum of all items in a given subscale. Reliability was acceptable for all subscale measures (Cronbach's alphas, 0.56–0.71).

### Workshop Implementation and Data Collection

Partner organizations selected workshop sites and recruited participants for the workshops using procedures that varied by site and partner preference, including email, telephone and word of mouth. All employees who participated—directly or indirectly—in abortion or PAC were eligible, including reception staff, laboratory and ultrasound technicians, counselors, nurses, midwives and physicians. Participation in the workshop was optional, and participants did not receive additional compensation for attending. We conducted nine separate workshops between September 2014 and June 2015—one in each of three Sub-Saharan African countries, and two in each of three Latin American countries. Each workshop involved 15–20 participants; all participants completed every session in each workshop. In total, 152 abortion caregivers participated in the workshops—59 in Africa and 93 in Latin America. All participants in Africa lived and worked in the three countries where the workshops were held; in Latin America, however, some participants traveled from other countries, so a total of seven countries in the region were represented.

After providing informed consent, participants completed a self-administered paper survey immediately before the workshop and a follow-up survey immediately after the workshop. Participants completed another follow-up self-administered paper survey six months after completion of the workshop. Six-month follow-up data were collected by workshop facilitators or liaisons. Both follow-up surveys included all items from the preworkshop survey and additional items evaluating the workshop experience. The trained facilitators or clinic liaisons provided in-person survey assistance, as needed, and collected confidential data. Because surveys did not collect identifying personal information, participants were assigned a study identification number, used by the research team to link each participant's responses across surveys. Data collection procedures were approved by Chesapeake IRB (now Advarra) and the Marie Stopes International Ethics Review Committee; the Institutional Review Boards of the University of Michigan Medical School reviewed data analysis procedures and deemed them exempt from oversight because they involved deidentified data.

In addition to the adapted Provider Share Workshop scales described above, the baseline survey asked participants about their demographic characteristics: gender, completed level of education (primary, secondary, associate's, bachelor's, or graduate or professional), age (18–24, 25–34, 35–44, 45–54 or ≥55), religious service attendance (once a year or less, several times a year, once a month, 2–3 times per month, weekly or several times a week) and religious denomination (none, Catholic, Protestant or Evangelical, or other). It also asked participants about their level of experience in abortion care; response options were different in Africa (≤2 years, 3–5 years or ≥6 years) and Latin America (<1 year, 1–2 years or ≥3 years), on the basis of partner advice. Baseline surveys also measured job type, but a majority of participants selected "other," which limited our ability to analyze data based on that measure. Thus, we excluded the measure from our analyses.

### Analysis

The study team received deidentified data for analysis. Using data collected at the three time points described above, we measured changes in outcomes over time, and bivariate correlations between demographics and outcomes; we used longitudinal (mixed-effects) linear regression models to assess which measures correlated with changes in the outcomes over time. Given the small sample sizes of these pilot interventions, we first addressed missing data using person-mean imputation if an individual had 80% complete data on a particular subscale.

We calculated total abortion stigma and total negative abortion attitudes as a sum of the person-mean imputed subscale data, while participants with less than 80% complete data were excluded from analyses. Of the original 59 African and 93 Latin American participants, we retained and analyzed longitudinal, multivariable data on 52 (88%) and 75 (81%), respectively.

Next, we conducted univariate analyses of all variables, except demographic characteristics, in their original scales of measurement at each time point. For each outcome of interest, we then calculated unadjusted, unstandardized beta coefficients for the bivariate relationships with time and the linear trend over time, using mixed-effects linear regression models with random effects at the person level, which allowed us to test for group-level changes before and after the intervention.

Finally, we constructed multivariable mixed-effects linear regression models—with random effects on the person level—controlling for demographic characteristics to assess mechanisms of change within the intervention; this enabled us to calculate adjusted, unstandardized beta coefficients. These show how a one-unit increase in our variables of interest was associated with changes in outcomes over time—from baseline to six months after the Providers Share Workshop—while controlling for other factors. Such analyses are more rigorous than cross-sectional analyses and can more accurately depict potential causal pathways because longitudinal designs establish temporal sequence and control for confounding factors in addition to identifying significant correlations. We also conducted multivariable analyses using mixed-effects linear regression models focusing on the relationships between stigma and abortion attitudes, controlling for a range of demographic measures, including education, religious attendance and work experience. We conducted all analyses using Stata 14.

## RESULTS

### Sample Characteristics

Participants worked in a range of settings, including outpatient clinics, private hospitals and health offices, as well as their homes. The majority (51–56%) of African workshop participants were female and aged 25–34, had a secondary education and attended religious service 2–3 times per a month (Table 1); nearly half belonged to a Protestant or Evangelical Christian denomination and described their level of experience in abortion care as high (47%, for each). Most participants from Latin America were female, had a bachelor's degree, were aged 25–34, were Catholic and attended religious service several times a year (41–85%); a similar proportion of participants noted low, medium and high levels of experience in abortion care (25–31%).

***TABLE 1. Selected baseline characteristics of abortion caregivers participating in pilot implementations of the Providers Share Workshop, by region, 2015***

| Characteristic | Sub-Saharan Africa | | Latin America | |
|---|---|---|---|---|
| | N | % | N | % |
| **Gender** | | | | |
| Male | 23 | 39 | 12 | 13 |
| Female | 33 | 56 | 79 | 85 |
| Missing | 3 | 5 | 2 | 2 |
| **Education†** | | | | |
| Primary | 2 | 3 | 7 | 8 |
| Secondary | 30 | 51 | 8 | 9 |
| Associate's | 5 | 8 | 18 | 19 |
| Bachelor's | 10 | 17 | 38 | 41 |
| Graduate/professional | 7 | 12 | 21 | 23 |
| Missing | 5 | 8 | 1 | 1 |
| **Age** | | | | |
| 18–24 | 6 | 10 | 3 | 3 |
| 25–34 | 30 | 51 | 27 | 29 |
| 35–44 | 17 | 29 | 25 | 27 |
| 45–54 | 4 | 7 | 19 | 20 |
| ≥55 | 0 | 0 | 15 | 16 |
| Missing | 2 | 3 | 4 | 5 |
| **Religious service attendance** | | | | |
| ≤once a year | 4 | 7 | 17 | 18 |
| Several times a year | 12 | 20 | 35 | 38 |
| Once a month | 5 | 8 | 9 | 10 |
| 2–3 times a month | 32 | 54 | 14 | 15 |
| Weekly | 4 | 7 | 11 | 12 |
| Several times a week | 0 | 0 | 2 | 2 |
| Missing | 2 | 4 | 5 | 5 |
| **Religion** | | | | |
| None | 4 | 7 | 11 | 12 |
| Catholic | 18 | 31 | 69 | 74 |
| Protestant/Evangelical | 28 | 47 | 7 | 8 |
| Other | 7 | 12 | 5 | 5 |
| Missing | 2 | 3 | 1 | 1 |
| **Experience in abortion care‡** | | | | |
| Low | 10 | 17 | 25 | 27 |
| Medium | 21 | 36 | 31 | 33 |
| High | 28 | 47 | 29 | 31 |
| Missing | 0 | 0 | 8 | 9 |
| Total | 59 | 100 | 93 | 100 |

†Indicates level of education completed. ‡For Africa, low=≤2 years, medium=3–5 years and high=≥6 years; for Latin America, low=<1 year, medium=1–2 years and high=≥3 years. *Note:* Percentages may not add to 100 because of rounding.

### Changes in Provider Outcomes

• *Abortion provider stigma.* In both regions, baseline scores were roughly midway through the possible range of scores. In Africa, caregivers' total abortion stigma was stable from before to immediately after the workshop (mean score, 103.5 vs. 98.1; Table 2), but decreased by six months after the intervention (96.2), showing an overall negative trend (beta coefficient, −0.2). In Latin America, total abortion stigma decreased from a mean score of 49.6 at baseline to 44.7 immediately after the workshop and 44.4 six months after, with an overall negative trend (−0.4).

In both Africa and Latin America, the abortion caregivers' mean subscale score for disclosure management was lower at each postintervention time point than at baseline, and the overall trend for the outcome was negative (beta coefficient, −0.2 for each). The internalized states score also decreased between each time point in both regions, and the overall trends were negative (−0.2 and −0.6). Both regions showed a negative overall trend in judgment

***TABLE 2. Mean scale and subscale scores indicating abortion caregivers' levels of abortion provider stigma, abortion attitudes, legal safety and advocacy, and (in Africa only) provider burnout, by survey time; and beta coefficients from bivariate mixed-effects regression models assessing changes in outcomes over time***

| Scale/subscale | Range | Time 1 | Time 2 | Time 3 | Linear trend |
|---|---|---|---|---|---|
| SUB-SAHARAN AFRICA (N=59) | | | | | |
| **Total abortion provider stigma‡** | 41–205 | 103.50 | 98.13 | 96.23* | –0.18† |
| Disclosure management | 9–45 | 21.88 | 19.09* | 18.89** | –0.20†† |
| Internalized states | 12–60 | 28.34 | 24.94** | 25.75* | –0.23†† |
| Judgment | 13–65 | 33.06 | 30.76 | 29.55* | –0.19† |
| Social isolation | 5–25 | 16.69 | 16.42 | 16.11 | –0.05 |
| Discrimination | 2–10 | 6.59 | 6.67 | 6.02 | –0.07 |
| **Total abortion attitudes** | 17–68 | 31.49 | 29.37 | 28.57* | –0.20† |
| Lack of support for abortion clients | 5–20 | 9.18 | 8.29* | 7.74** | –0.24†† |
| Disapproval of more than one abortion | 2–8 | 5.21 | 5.38 | 4.93 | –0.09 |
| Shaming of abortion clients | 10–40 | 17.03 | 15.77 | 15.89 | –0.13 |
| **Legal safety and engaging in advocacy** | | | | | |
| Legal safety | 7–21 | 14.69 | 14.26 | 16.28** | 0.76†† |
| Willingness to engage in or support advocacy‡ | 6–18 | 14.90 | 16.41** | 15.67 | 0.47 |
| **Provider burnout** | | | | | |
| Emotional exhaustion | 0–54 | 16.12 | 11.43*** | 10.19*** | –2.92††† |
| Personal accomplishment | 0–48 | 40.68 | 41.29 | 40.15 | –0.11 |
| Depersonalization | 0–30 | 7.44 | 7.32 | 4.50** | –1.21†† |
| LATIN AMERICA (N=93) | | | | | |
| **Total abortion provider stigma§** | 29–87 | 49.63 | 44.69*** | 44.41*** | –0.38††† |
| Disclosure management | 4–12 | 7.55 | 7.08* | 6.63*** | –0.22††† |
| Internalized states | 8–24 | 12.62 | 10.14* | 10.22*** | –0.56††† |
| Judgment | 10–30 | 17.84 | 16.92** | 16.66*** | –0.19††† |
| Social isolation | 4–12 | 7.83 | 7.37 | 7.62 | –0.04 |
| Discrimination | 3–9 | 3.17 | 3.15 | 3.22 | –0.05 |
| **Total abortion attitudes‡‡** | 14–42 | 18.60 | 17.95 | 18.49 | –0.02 |
| Lack of support for abortion clients | 7–21 | 8.13 | 7.9 | 8.31 | 0.05 |
| Disapproval of more than one, later or adolescent abortion§ | 5–15 | 6.90 | 6.47 | 6.65 | –0.07 |
| Fear of entrapment by clients | 2–6 | 3.62 | 3.71 | 3.51 | –0.05 |
| **Legal safety and engaging in advocacy** | | | | | |
| Legal safety | 5–15 | 8.04 | 8.03 | 8.68* | 0.31 |
| Willingness to engage in or support advocacy | 3–9 | 8.53 | 8.43 | 8.50 | –0.02 |

*Significantly different from Time 1 at p<.05. **Significantly different from Time 1 at p<.01. ***Significantly different from Time 1 at p<.001. †Change from Time 1 to Time 3 significant at p<.05. ††Change from Time 1 to Time 3 significant at p<.01. †††Change from Time 1 to Time 3 significant at p<.001. ‡N=58. §N=90. ‡‡N=92. *Notes:* Time 1, Time 2 and Time 3 represent baseline, immediately after and six months after the workshop, respectively. Beta coefficients are unstandardized and unadjusted. Models do not control for other covariates.

scores as well (−0.2 each), although the decline in Africa became significant at the six-month follow-up, while the decline in Latin America became significant immediately after the workshop.

• *Abortion attitudes.* Total abortion attitudes in Latin America were largely favorable at baseline and remained stable over time. In Africa, baseline attitude scores fell roughly midway through the possible range of scores and decreased over time. Total abortion attitudes among African caregivers were stable from before to immediately after the workshop (mean scores, 31.5 vs. 29.4), but decreased six months after (28.6); the overall trend for the outcome was negative (beta coefficient, −0.2). Scores assessing unsupportive attitudes toward clients decreased immediately after the workshop and showed an overall negative trend (−0.2), indicating that attitudes became more supportive over the study period. The other two subscales remained stable throughout the study period.

• *Perceptions of legal safety and engaging in advocacy.* In Africa, abortion caregivers' sense of legal safety increased overall after the workshop (beta coefficient, 0.8), with the baseline score differing from the six-month score (mean scores, 14.7 vs. 16.3), but not the immediate postintervention score. In contrast, their willingness to engage in or support legal advocacy increased only immediately after the intervention (14.9 vs. 16.4), which did not result in a change over the whole study period. In Latin America, caregivers' perceptions of legal safety increased by six months postintervention (8.0 vs. 8.7), which again did not result in an overall change.

• *Provider burnout.* Burnout was measured only in Africa. Baseline levels indicated moderate levels of emotional exhaustion, moderate depersonalization and high personal accomplishment, according to standard guidelines recommended by the Maslach Burnout Inventory tool. Emotional exhaustion scores decreased from 16.1 at baseline to 11.4 immediately after the workshop and 10.2 after six months; the overall trend was negative (beta coefficient, −2.9) and signified a shift from moderate to low levels of emotional exhaustion. Depersonalization decreased at six months (mean scores, 7.4 vs. 4.5), and the overall trend was negative (−1.2), indicating a shift from moderate to low depersonalization. Personal accomplishment remained high and stable during the follow-up data-collection period.

### Relationships Between Outcome Measures over Time

Our longitudinal results are presented in Table 3, in which a one-unit increase in a given measure predicts change in the outcome variable from baseline to six months postintervention. In other words, we are able to see how changes in a given variable correlate with changes in outcomes over time. We highlight the most important findings here.

In Africa, we observed a number of inverse bidirectional relationships. For example, for each one-unit increase in a caregiver's total abortion provider stigma between baseline and six months after the workshop, their sense of legal safety decreased by 1.9 units over the period (beta coefficient, −1.9); at the same time, for each one-unit increase in a caregiver's sense of legal safety, their total abortion provider stigma decreased by 0.1 units (−0.1). Such bidirectional relationships were also found between total abortion provider stigma and willingness to engage in or support legal advocacy (−1.5 and −0.2, respectively), emotional exhaustion and legal safety (−0.1 and −0.7), and abortion attitudes and willingness to engage in or support legal advocacy (−1.1 and −0.1). Put another way, as stigma and emotional

***TABLE 3. Beta coefficients from linear regression analyses assessing the relationship between outcome measures from baseline to six months after Providers Share Workshop***

| Measure | Total abortion provider stigma | Total abortion attitudes | Legal safety | Willingness to engage in advocacy | Emotional exhaustion | Depersonalization |
|---|---|---|---|---|---|---|
| SUB-SAHARAN AFRICA (N=52) | | | | | | |
| **Scale measure** | | | | | | |
| Total abortion provider stigma | na | 0.07 | –1.93*** | –1.47*** | –1.36 | 0.33 |
| Total abortion attitudes | 0.10 | na | –0.23 | –1.12*** | 1.23 | 1.12 |
| Legal safety | –0.12*** | –0.02 | na | –0.24** | –0.65** | –0.13 |
| Willingness to engage in or support advocacy | –0.15*** | –0.12*** | –0.42** | na | –0.58 | –0.01 |
| Emotional exhaustion | –0.02 | 0.01 | –0.13** | –0.06* | na | 0.19** |
| Personal accomplishment | –0.02 | 0.00 | –0.06 | –0.01 | –0.09 | –0.03 |
| Depersonalization | 0.01 | 0.02 | –0.03 | –0.01 | 0.39** | na |
| **Demographic characteristics** | | | | | | |
| Age | –0.07 | –0.10 | –0.40 | –0.29 | 0.49 | 0.48 |
| Female | –0.04 | –0.10 | 0.84 | –0.52 | –0.34 | 1.01 |
| Education | 0.24*** | –0.07 | 0.50 | 0.12 | 1.17 | –0.60 |
| Religious service attendance | –0.01 | 0.15* | –0.45 | –0.10 | –0.95 | –0.83 |
| Experience in abortion care† | | | | | | |
| Low | ref | ref | ref | ref | ref | ref |
| Medium | –0.20 | –0.05 | –1.27 | 0.05 | 2.86 | –4.24** |
| High | –0.19 | –0.34 | –0.86 | –0.60 | 3.73 | –3.87 |
| LATIN AMERICA (N=75) | | | | | | |
| **Scale measure** | | | | | | |
| Total abortion provider stigma | na | 0.15 | –0.61** | –0.01 | na | na |
| Total abortion attitudes | 0.14 | na | –0.40 | –0.22*** | na | na |
| Legal safety | –0.07** | –0.05* | na | 0.01 | na | na |
| Willingness to engage in or support advocacy | –0.04 | –0.33*** | 0.10 | na | na | na |
| **Demographic characteristics** | | | | | | |
| Age | –0.01 | 0.00 | 0.03 | 0.01 | na | na |
| Female | 0.47 | –0.15 | 0.08 | 0.29 | na | na |
| Education | –0.21** | 0.02 | –0.49* | –0.09 | na | na |
| Religious service attendance | 0.00 | –0.04 | 0.51** | 0.09 | na | na |
| Experience in abortion care† | | | | | | |
| Low | ref | ref | ref | ref | na | na |
| Medium | –0.16 | –0.23 | 0.04 | –0.28 | na | na |
| High | –0.03 | –0.01 | 0.40 | 0.16 | na | na |

*p<.05. **p<.01. ***p<.001. †For Africa, low=≤2 years, medium=3–5 years and high=≥6 years; for Latin America, low=<1 year, medium=1–2 years and high=≥3 years. *Notes:* Beta coefficients are unstandardized and unadjusted. A one-unit increase in a given measure predicts the indicated change in the outcome variable. ref=reference group. na=not applicable.

exhaustion decreased after the workshop, support for legal advocacy and sense of legal safety increased; and as negative abortion attitudes decreased after the workshop, support for legal advocacy increased.

In addition, we observed a positive bidirectional relationship between emotional exhaustion and depersonalization (beta coefficients, 0.2 and 0.4, respectively). Furthermore, analyses of stigma and attitude subscales showed that unsupportive abortion attitudes were associated with increased internalized abortion provider stigma (not shown). Finally, regarding demographic differences in outcomes over time, we found positive associations between education and abortion stigma (0.2), and between religious service attendance and negative abortion attitudes (0.2), and we found a negative association between having a medium level of experience in abortion care (relative to a low level) and depersonalization (−4.2).

In Latin America, we observed inverse bidirectional relationships between abortion stigma and legal safety (beta coefficients, −0.6 and −0.1), and between negative abortion attitudes and support for legal advocacy (−0.2 and −0.3); in addition, legal safety was negatively associated with negative abortion attitudes (−0.1). Analyses of stigma and attitude subscales showed that an increase in negative abortion attitudes overall, and negative attitudes about multiple abortions, were positively associated with stigma (not shown); increased internalized stigma was associated with increased negative abortion attitudes overall, unsupportive attitudes and negative attitudes about multiple abortions. Finally, we found negative associations between certain demographic differences in outcomes over time—education and abortion stigma (−0.2) and perceptions of legal safety (−0.5)—and a positive association between religious service attendance and legal safety (0.5).

## DISCUSSION

In our evaluation of a pilot adaptation of the Providers Share Workshop for abortion caregivers in Sub-Saharan Africa and Latin America, we observed that the intervention was associated with reductions in total abortion

stigma as well as such particular components of stigma as disclosure management, internalized stigma and judgment. We also found important relationships—not previously documented—between provider experiences of stigma and their own stigmatizing attitudes about women seeking abortion. Our results show that stigma is tied to feelings of legal jeopardy, as well as willingness to engage in abortion rights advocacy, which supports the expectation that stigma and legal restriction intersect, and that both deeply affect provider experiences.

With these findings, we were able to generate a new conceptual model of how the dynamics of stigma and legal restriction in abortion care and PAC operate (see Appendix Figure 1a). This model adds greater complexity to a conceptual model developed from research conducted in the United States.[17] It illustrates the ways in which stigma is generated in multiple socioecological spheres, including public discourse, law, such institutions as hospitals and churches, communities and the abortion clinic itself. Previous research on the Providers Share Workshop methodology has shown that stigma can influence multiple dimensions of abortion provider experiences—in particular, decisions about disclosure of abortion work, and perceptions of judgment, isolation and discrimination.[17,25] Our study echoes these findings; however, we were also able to show that some providers hold negative attitudes about women seeking abortion. It appears, then, that doing stigmatized work does not immunize caregivers from holding stigmatizing attitudes themselves. Moreover, we observed that providers' experiences of internalized stigma are related to their attitudes about women seeking abortion. In other words, how providers feel about their clients is tied to their own self-image. In Africa, we saw that workshop participants developed more favorable attitudes about abortion clients over time, which implies that the workshop may function similarly to other interventions aimed at improving health care workers' stigmatizing attitudes toward clients.[29]

Our findings suggest that legal restriction is not the sole predictor of feelings of legal jeopardy; abortion stigma also affects providers' sense of legal jeopardy, something not previously documented in prior Providers Share Workshop research. When stigma decreases—even when the legal climate does not change—feelings of legal jeopardy also decrease. So, although it might seem self-evident that working in a legally restricted climate creates a sense of legal jeopardy, the relationship may not be a simple, direct one; stigma plays a role, too.

Prior research conducted in the United States suggests that provider experiences of stigma are associated with a range of individual and health system burdens, including burnout, staff turnover and understaffed abortion care centers.[17] Our analysis shows similar dynamics and suggests an additional dimension: that the individual burden of stigma includes feeling relatively powerless to alter legal conditions (given inverse relationships between abortion stigma and support for legal advocacy). We label this phenomenon "legal disengagement" in our conceptual model of the dynamics of stigma and legal restriction. Such disengagement likely reflects well-grounded concerns about safety, criminal prosecution and other threats.

When abortion caregivers participate in the Providers Share Workshop, the dynamics of stigma and legal restriction potentially shift (see Appendix Figure 1b). Because the workshop is both a research tool to learn about provider experiences and an intervention to improve those experiences, we can use the changes we observe to suggest where and how the workshop is effective. The Providers Share Workshop enables participants to give voice to their experiences, connect with others and receive support. In doing so, the workshop seems to disrupt providers' stigma relationships—for at least up to six months following their participation. Consistent with findings from research conducted in the United States, our study suggests that participation in the workshop is associated with improvements in three domains of provider stigma experience: willingness to disclose abortion work, reduced internalized stigma and decreased perceived judgment from others.[17] Of note, the most substantial decreases in stigma were in the domain of internalized stigma. In this and previous investigations, the stigma domains of discrimination and social isolation did not change following the workshop, likely because the intervention does not address the external environments in which providers work, including the day-to-day interactions in which discrimination and isolation are generated. In Africa, Providers Share Workshop participation appears to increase supportive attitudes about women seeking abortion. This is particularly promising, given that stigmatizing abortion attitudes have been documented among abortion providers in Africa,[34] where they have been reported as major barriers to high-quality abortion care.[35] In contrast, when women in Africa receive abortion services from providers with welcoming and supportive attitudes, they perceive services to be high quality and satisfactory.[36] We did not see this shift in attitudes in Latin America, likely because attitudes were already favorable at baseline.

After workshops conducted in Africa, we observed improvements in burnout—emotional exhaustion, in particular—and depersonalized treatment of patients, which we interpret as increased professional engagement. We also found increased support for engaging in legal advocacy, which suggests that a sense of community among providers may be an important component of willingness to engage in advocacy work. Our findings point to a potential direct connection between the sense of legal jeopardy and burnout: In Africa, an improved perception of legal safety was associated with a decrease in emotional exhaustion and depersonalization up to six months after the workshop. This makes sense, given the high stress levels that likely accompany the threat of potential legal consequences for doing one's job. We observed that an improvement in either burnout indicator correlated with an improvement in the other; it appears that, even without changing external environments, the Providers Share

Workshop might be able to cultivate a sense of legal safety, reduce stigma, offer community and support, and subsequently reduce the burden of professional burnout. These findings carry important implications for resilience and care sustainability at the health system level, although further work should be done to determine whether changes persist beyond six months after the intervention.

### Limitations

Our investigation has some limitations. This is a pilot study with a small, nonrepresentative sample, which limits generalizability. Some of the effect sizes from the intervention are modest, and it remains unclear what constitutes a meaningful change in stigma, attitudes, legal climate or burnout. The small sample sizes limited our ability to detect effects in the multivariable mixed-effects models and factor analyses; the fact that we were able to document many changes in the directions we would hope to see, given this sample size limitation, is therefore encouraging and merits further investigation in larger samples.

Second, there were limitations of the measures themselves, including recall and social acceptability biases in survey responses. Not all survey measures were consistent across the two regions, which reduced the comparability and generalizability of our results. In particular, we did not measure burnout in Latin America and could not measure the intervention's relationship to burnout in that region. Our goal, however, was not to have identical measures but to assess outcomes prioritized by our partner collaborators. As mentioned earlier, there were differences in how partner sites translated certain phrases, including "abortion worker." Other organizations interested in using the Abortion Provider Stigma Scale or another measure should translate these and other phrasing in ways relevant for workshop participants in their specific settings.

In addition, this study was not focused on scale development, so the factor analyses presented have limitations—including subscales with fewer than three items—and did not test for heterogeneity of responses to items. Ideally, all participants would have completed all parts of the surveys at each time point, but we encountered item-specific missing data and addressed this using imputation methods. It was difficult for us to parse stigma experiences and burnout caused by legal restrictions to abortion from more general social stigma.

Finally, our pre-post intervention design without a control group makes it impossible to attribute observed changes in outcomes solely to the Providers Share Workshop. It is possible that other events may have affected our outcomes, particularly six months after the intervention. It is also possible that any group intervention that brought participants together—whether or not they included stigma-focused activities—could show improved outcomes; however, our longitudinal mixed-effects models showing the mechanisms of change support the idea that our results can be attributed to the specific content and methodology of the workshop itself.

### Conclusions

The results from this pilot study in Sub-Saharan Africa and Latin America, building on prior research in the United States, suggest that the Providers Share Workshop can be implemented in a range of settings to reduce stigma experienced by abortion and PAC providers. This is important, given that, to date, there are no other evidence-based interventions focused on helping providers manage the burdens of abortion stigma. By establishing a supportive space for providers to share and artistically represent their stories, the workshop enables participants to situate personal experiences in the broader sociopolitical contexts of abortion work, develop self-awareness about the mechanisms and consequences of stigma for themselves and their clients, and foster resilience and social cohesion.[16] Support for providers of abortion and PAC is essential in its own right; if stigma reduction were the only observed outcome of the workshop, we would consider it a successful intervention. However, by increasing provider connection, reducing their isolation and supporting their work in a stigmatized and legally restricted field, the workshop seems to foster caregiver resilience, which may lead to improved client treatment. This finding should be assessed directly in future work by examining patient experiences.

We see opportunities to sustain the positive outcomes observed from the Providers Share Workshop through ongoing booster interventions. For example, internalized stigma in Africa increased slightly six months after the workshop, and negative abortion attitudes improved somewhat in Latin America immediately after the workshop but returned to baseline six months later. It is possible that these psychosocial factors—internalized stigma and negative abortion attitudes—are more sensitive to daily interactions in stigmatized environments and, therefore, require more ongoing support to sustain improvements. Organizations may benefit from building the Providers Share Workshop and potential follow-up sessions into broader quality-improvement efforts.

Finally, our investigation highlights that feelings of legal jeopardy stemming from abortion restrictions are associated with provider burnout and stigma. Our data also suggest that workshop participation may increase providers' willingness to advocate for abortion rights, potentially contributing to a cascade of social and legal changes that could break the cycle of stigma and restrictive law. Evidence-based abortion stigma interventions, such as the Providers Share Workshop, are critical to supporting the abortion care workforce and likely important for improving access to safe, high-quality abortion care.

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## RESUMEN

**Contexto:** *En gran parte del África subsahariana y América Latina, el aborto está legalmente restringido y los proveedores de servicios de aborto experimentan estigma y riesgo legal. Se ha demostrado que la intervención grupal del Taller de Proveedores para Compartir Experiencias reduce el estigma*

*del proveedor en los Estados Unidos, pero no se ha evaluado en otros entornos.*

**Métodos:** *Entre 2014 y 2015, el Taller de Proveedores para Compartir Experiencias fue adaptado y puesto a prueba entre 59 proveedores de servicios de aborto de tres países del África subsahariana y 93 proveedores de servicios de siete países latinoamericanos. Los datos de la encuesta recopilados antes, inmediatamente después y seis meses después de cada taller, mediante el uso de elementos originales y escalas adaptadas, midieron el estigma, las actitudes y la seguridad jurídica, así como el compromiso con la defensa y promoción del aborto. Se utilizaron análisis univariados y correlaciones de referencia por pares para medir los cambios en los resultados a través del tiempo y entre la demografía y los resultados. Se utilizaron regresiones lineales de efectos mixtos y modelos multivariables que controlan las variables demográficas para evaluar los cambios en los resultados a través del tiempo.*

**Resultados:** *Seis meses después de la participación en el taller, el estigma total del aborto había disminuido entre los proveedores en África y América Latina (coeficientes beta, −0.2 y −0.4, respectivamente). Las actitudes desfavorables habían disminuido en África (−0.2) pero no en América Latina, donde las actitudes eran favorables para el inicio; el desgste emocional y la despersonalización también habían disminuido en África (−2.9 y −1.2, respectivamente) y la seguridad legal había aumentado (0.8). El aumento del estigma total del aborto se asoció negativamente con la seguridad jurídica, tanto en África como en América Latina (coeficientes beta, −1.9 y −0.6, respectivamente) y con la defensa jurídica en África (−1.5).*

**Conclusiones:** *El Taller de Proveedores para Compartir Experiencias es una intervención prometedora para apoyar a la fuerza laboral de atención del aborto en entornos de África subsahariana y América Latina.*

## RÉSUMÉ

**Contexte:** *Dans une grande partie de l'Afrique subsaharienne et de l'Amérique latine, l'avortement est limité par la loi et ses prestataires sont en proie à la stigmatisation et au péril judiciaire. Comme l'indiquent les études, l'intervention du groupe Providers Share Workshop réduit cette stigmatisation aux États-Unis; elle n'a cependant pas été évaluée dans d'autres contextes.*

**Méthodes:** *En 2014–2015, l'atelier Providers Share Workshop a été adapté et piloté auprès de 59 membres du personnel de soins de l'avortement de trois pays d'Afrique subsaharienne et 93 soignants de sept pays d'Amérique latine. Les données d'enquête collectées avant, directement après et six mois après chaque atelier ont mesuré la stigmatisation, les attitudes et l'engagement de sécurité et de défense juridique sur la base des questions originales et d'échelles adaptées. Les changements de résultats au fil du temps, et entre les caractéristiques démographiques et les résultats, ont été mesurés par analyses univariées et par corrélations par paires de référence. Des régressions linéaires à effets mixtes et des modèles multivariés tenant compte des caractéristiques démographiques ont servi à évaluer les changements de résultats au fil du temps.*

**Résultats:** *Six mois après la participation à l'atelier, la stigmatisation totale de l'avortement s'était réduite parmi le personnel soignant d'Afrique et d'Amérique latine (coefficients bêta de −0,2 et −0,4, respectivement). Les attitudes défavorables étaient en baisse en Afrique (−0,2) mais pas en Amérique latine, où les attitudes étaient favorables dès le début; l'épuisement affectif et la dépersonnalisation étaient en baisse aussi en Afrique (−2,9 et −1,2, respectivement), tandis que la sécurité juridique était en hausse (0,8). Une stigmatisation totale supérieure de l'avortement s'est révélée associée négativement avec la sécurité juridique, en Afrique aussi bien qu'en Amérique latine (coefficients bêta de −1,9 et −0,6, respectivement), et avec la défense juridique en Afrique (−1,5).*

**Conclusions:** *L'atelier Providers Share Workshop est une intervention prometteuse de soutien du personnel de soins de l'avortement en Afrique subsaharienne et en Amérique latine.*

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## APPENDIX: EXPLORATORY FACTOR ANALYSIS PROCEDURES AND RESULTS

The measures assessing "Negative Abortion Attitudes" and "Legal Climate" included novel questions designed for this pilot study. We conducted exploratory factor analyses (EFA) on these items to assess their feasibility as scales and identify potential subscales. For each scale we conducted Kaiser-Meyer-Olkin measures of sampling adequacy and Bartlett's test of sphericity to determine whether items were suitable for use as scales. EFA analysis identified factors with Eigenvalues greater than 1.0. We then applied varimax rotation and used those results to construct subscales as the sum of all survey items that sufficiently loaded (>0.40) onto latent factors. Items were eliminated if they failed to meet a minimum criterion of having a primary factor loading of .4 or above and no cross-loading of 0.35 or above. After rotation, if items had cross-loadings they were inspected and could be retained if they had a high primary factor loading (i.e., above 0.5) and the cross-loading was below 0.3.

### Negative Abortion Attitudes

In sub-Saharan Africa we tested the factorability of 21 items. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .79, above the commonly recommended value of .6, and Bartlett's test of sphericity was significant ($\chi 2$ (210) = 934.3; $p < .001$). EFA analysis identified 3 factors—factor 1 (5 items): lack of support for women seeking abortion, factor 2 (2 items): negative attitudes toward multiple abortions, and factor 3 (10 items): shaming of women who have an abortion. After rotation, two items had cross-loadings, but each had a high primary loading and the cross-loading was below 0.3. After reviewing the items, they were retained as part of the shaming factor. In total, we retained 17 of the initial 21 items.

In Latin America we tested the factorability of 26 items. The KMO = .66, and Bartlett's test of sphericity was significant ($\chi 2$ (325) = 1124.9, $p < .001$). Ten items were eliminated because they failed to meet a minimum criterion of having a primary factor loading of .4 or above. No items demonstrated cross-loading. Exploratory factor analysis identified 14 items spread across three factors: lack of support for women seeking abortion; negative attitudes toward multiple, later, or adolescent abortions; and fear of entrapment by clients. These were inter-related, so we also summed the factors to create a single measure.

### Legal Safety & Advocacy

We also examined providers' experiences and perceptions of the legal climate for abortion in their region. In Sub-Saharan Africa, we collected data on 19 items and in Latin America collected data on 14 items. In factor analysis on data from SSA the KMO was 0.69 and Bartlett's test was significant ($\chi 2$ (153) = 603.1, $p < .001$). In the analysis of Latin American data, the KMO was 0.64 and Bartlett's test was significant ($\chi 2$ (91) = 405.9, $p < .001$). Six items from each sample were eliminated because they did not contribute to a simple factor structure and failed to meet a minimum criterion of having a primary factor loading of .4 or above and no cross-loading of .3 or above. After rotation, no items demonstrated cross-loadings above 0.3 in either sample. In both East Africa and Latin America there were two factors: perceived legal safety and willingness to engage in or support for abortion advocacy. In both regions, these two factors were not related at a bivariate level and, therefore, were not combined into a single measure.

***APPENDIX TABLE 1: Items, response categories, and factor loadings (where applicable) for stigma, burnout, abortion attitudes, and legal safety and advocacy variables used in the Global Providers Share Workshop in Sub-Saharan Africa and Latin America***

ABORTION PROVIDER STIGMA

| Scale/item | Region | Subscale | Cronbach's alpha |
|---|---|---|---|
| People's reactions to my being an abortion worker make me keep to myself | SSA | Disclosure issues | SSA (9 items) = 0.91 |
| I feel that disclosing my abortion work is not worth the potential hassle that could result | SSA | | LA (4 items) = 0.72 |
| I feel the need to hide my work in abortion care from my friends | SSA, LA | | |
| I find it hard to tell people I work in abortion | SSA | | |
| I feel like if I tell people about my work they will ONLY see me as an abortion worker | SSA, LA | | |
| I worry about telling people I work in abortion care | SSA, LA | | |
| It bothers me if people in my neighborhood know that I work in abortion care | SSA | | |
| I avoid telling people what I do for a living | SSA | | |
| I am afraid that if I tell people I work in abortion care I could put myself, or my loved ones, at risk for violence | SSA, LA | | |
| I have been verbally threatened or attacked as a result of working in abortion care | SSA, LA | Discrimination | SSA (4 items) = 0.83 |
| I have been physically threatened or attacked as a result of working in abortion care | SSA, LA | | LA (3 items) = 0.60 |
| My family has been harassed or discriminated against by others who find out about my work in abortion care | SSA | | |
| People treat my family members different if they know about my work in abortion care | SSA, LA | | |
| I am proud that I work in abortion care* | SSA, LA | Internalized states | SSA (12 items) = 0.70 |
| I feel connected to others who do this work* | SSA, LA | | LA (8 items) = 0.53 |
| By providing abortions, I am making a positive contribution to society* | SSA, LA | | |
| I find it important to share with people that I work in abortion care* | SSA | | |
| I feel that my work is targeted by restrictive legislation more than other types of health care | SSA | | |
| I feel good about my work in abortion care* | SSA, LA | | |
| I feel regret over not telling people about my work in abortion care | SSA | | |
| I feel ashamed of the work I do | SSA, LA | | |
| I feel guilty about the work I do | SSA, LA | | |
| I question whether providing abortion care is a good thing to do | SSA, LA | | |
| I feel embarrassed about my work in abortion care | SSA, LA | | |
| I feel out of place among people who don't work in abortion care | SSA | | |
| I feel that other health workers look down on me because of my decision to work in abortion care | SSA | Judgment | SSA (14 items) = 0.88 |
| I feel like society (the general public) does not value me as an abortion worker | SSA, LA | | LA (11 items) = 0.72 |
| Other people have made me feel ashamed of my work in abortion care | SSA, LA | | |
| The way people have treated me when they find out I work in abortion care upsets me | SSA, LA | | |
| I feel alone because of my work in abortion care | SSA, LA | | |
| I am angry at the way people have reacted to me when they learned that I work in abortion care | SSA, LA | | |
| I have had negative experiences after disclosing my abortion work to others. | SSA, LA | | |
| People have insulted me because of my work in abortion care | SSA, LA | | |
| When I see or read something about abortion in the papers or on television, it makes me feel bad about myself | SSA | | |
| I feel other health care workers question my professional skills when they learn that I work in abortion care. | SSA | | |
| I feel other health care workers question my morals when they learn I work in abortion care | SSA, LA | | |
| I feel that friends and family who do not work in abortion care don't understand my work | SSA, LA | | |
| I worry that my friends and family will think less of me if I talk about the upsetting or difficult parts of my work | SSA, LA | | |
| I feel the most comfortable in social settings when others know I work in abortion care | SSA, LA | | |
| I feel that when I disclose my abortion work to strangers, they are supportive of me* | SSA | Social Isolation | SSA (5 items) = 0.79 |
| I feel that when I disclose my abortion work to family and friends, they are supportive of me* | SSA, LA | | LA (4 items) = 0.69 |
| I talk openly with my family about my work in abortion care* | SSA, LA | | |
| I talk openly with my friends about my work in abortion care* | SSA, LA | | |
| I can talk to friends and family about a hard day at work* | SSA, LA | | |

*Indicates that an item has been reverse-coded. *Notes:* For Sub-Saharan Africa, response categories were 1=never, 2=rarely, 3=sometimes, 4=often and 5=all of the time; for Latin America, response categories were 1=never, 2=sometimes and 3=all of the time. SSA=Sub-Saharan Africa. LA=Latin America.

HEALTH CARE PROVIDER BURNOUT

| Items† | Region | Subscale | Cronbach's alpha |
|---|---|---|---|
| I feel drained from my work<br>I feel frustrated by my job | SSA | Emotional Exhaustion | SSA (9 items) = 0.71 |
| I don't really care what happens to some clients<br>I feel I treat some clients as if they were impersonal objects | SSA | Depersonalization | SSA (5 items) = 0.61 |
| I have accomplished many worthwhile things in this job*<br>I feel I am positively influencing other people's lives through my work* | SSA | Personal Accomplishment | SSA (8 items) = 0.56 |

*Indicates that an item has been reverse-coded. †As the Maslach Burnout Inventory tool is copyrighted, we have included two example items for each subscale, as opposed to the full scale. *Notes:* Response categories were 0=never, 1=a few times a year or less, 2=once a year a month or less, 3=a few times a month, 4=once a week, 5=a few times a week and 6=every day.

NEGATIVE ABORTION ATTITUDES

| **Africa** | |
|---|---|
| *KMO* | *0.79* |
| *Bartlett's χ2 (210)* | *934.3, p<.001* |
| *Overall alpha* | *0.87* |
| Item | Factor loading |
| Factor 1: Lack of support (alpha=0.77) | |
| I could support a woman who had an abortion even if I didn't agree with her decision* | 0.70 |
| Women who have abortions usually have good reasons* | 0.62 |
| Abortion is a woman's right* | 0.73 |
| It is okay for a woman to feel relieved after an abortion* | 0.53 |
| I would support a woman in her decision to have an abortion, regardless of the reason* | 0.49 |
| Factor 2: Multiple abortions (alpha=0.56) | |
| Women should not use abortion as a form of birth control | 0.65 |
| I get angry with patients who have more than one abortion | 0.58 |
| Factor 3: Shaming women (alpha=0.85) | |
| A woman who has an abortion is committing a sin | 0.56 |
| A woman who has an abortion is a bad mother | 0.61 |
| A woman who has an abortion should be treated the same as everyone else* | 0.46 |
| I am uncomfortable assisting with abortions past the first trimester | 0.46 |
| I have less respect for women who have abortions | 0.40 |
| A woman who has an abortion brings shame to her family | 0.58 |
| A woman who has had an abortion should be counseled by religious leaders so that she does not do it again | 0.59 |
| A woman who has an abortion brings shame to her community. | 0.76 |
| I would continue to be friends with someone if I found out they had an abortion* | 0.50 |
| I would feel ashamed if a member of my family had an abortion | 0.52 |

**Did not load:**
- Abortion is the easy way out of an unplanned pregnancy
- A woman who has an abortion should keep it a secret
- Women who seek abortion past the first trimester are irresponsible
- It is a good idea for a woman who has an abortion to talk about her experience

| **Latin America** | |
|---|---|
| *KMO* | *0.66* |
| *Bartlett's χ2 (325)* | *1124.9, p<0.001* |
| *Overall alpha* | *0.87* |
| Item | Factor loading |
| Factor 1: Lack of support (alpha=0.66) | |
| I could support a woman who had an abortion even if I didn't agree with her decision* | 0.50 |
| Women who have abortions usually have good reasons* | 0.41 |
| Abortion is a woman's right* | 0.46 |
| A woman who has an abortion should be treated the same as everyone else* | 0.52 |
| It is okay for a woman to feel relieved after an abortion* | 0.52 |
| I would support a woman in her decision to have an abortion, regardless of the reason* | 0.47 |
| I would continue to be friends with someone if I found out they had an abortion* | 0.57 |
| Factor 2: Multiple, later term or adolescent abortions (alpha=0.67) | |
| I get angry with patients who have more than one TAI | 0.56 |
| I am uncomfortable assisting with TAI past 10 weeks. | 0.50 |
| I am uncomfortable assisting with TAI for girls who are younger than 16. | 0.73 |
| I think that girls who are younger than 16 should have their parents' permission before having a TAI. | 0.50 |
| I get angry assisting with girls who are younger than 16 who seek TAI services. | 0.68 |
| Factor 3: Fear of entrapment by patients (alpha=0.59) | |
| I have been suspicious about whether a patient is a real patient, or is posing as a fake patient who is trying to trap me | –0.56 |
| I'm afraid that I will be recorded while at work | –0.43 |

**Did not load:**
- Abortion is the easy way out of an unplanned pregnancy
- A woman who has an abortion should keep it a secret
- A woman who has an abortion is committing a sin
- A woman who has an abortion is a bad mother
- Women should not use abortion as a form of birth control
- Women who seek abortions past the first trimester are irresponsible
- I have less respect for women who have abortions
- A woman who has an abortion brings shame to her family
- A woman who has an abortion should be counseled by religious leaders so that she does not do it again
- A woman who has an abortion brings shame to her community
- I would feel ashamed if a member of my family had an abortion
- Women should consult their husband/partner before they have an abortion
- I would know what to do and who to talk to if I encountered a fake patient

*Indicates that an item has been reverse-coded. *Notes:* For Sub-Saharan Africa, response categories were 1=strongly disagree, 2=disagree, 3=agree and 4=strongly agree; for Latin America, response categories were1=agree, 2=somewhat agree and 3=disagree. Items were reverse-coded as needed, so higher scores indicate more-negative attitudes. TAI=tratamiento de aborto incompleto.

LEGAL SAFETY and ADVOCACY

| **Africa** | |
|---|---|
| *KMO* | *0.69* |
| *Bartlett's χ2 (153)* | *603.1, p<0.001* |
| Item | Factor loading |
| Factor 1: Willingness to engage in or support legal advocacy (alpha=0.86) | |
| I would vote for a candidate who wanted to make abortion laws more liberal* | 0.71 |
| I would publicly participate in a demonstration or rally supporting greater access to abortion for women in my country* | 0.7 |
| It is a good idea for the government to allow abortions to be legal* | 0.69 |
| I think the laws in my country should be changed to make abortion more accessible* | 0.69 |
| I believe that people who provide abortion services should participate in trying to change the legal situation in my country | 0.8 |
| I am hopeful that the legal restrictions on abortion will be relaxed in the next 5 years | 0.44 |
| Factor 2: Legal safety (alpha=0.70) | |
| The current legal status of abortion makes it dangerous to do my job | 0.49 |
| I worry that my patients will be arrested or harassed by the police | 0.58 |
| I worry that I will be harassed by the police | 0.63 |
| I have been harassed by the police because of my work in abortion services | 0.6 |
| I have been blackmailed or the target of extortion because of my work in abortion services | 0.62 |
| I have been threatened by a patient or patient's family that they will turn my name over to authorities unless I pay them money | 0.43 |
| I worry that I will lose my job because of the legal status of abortion | 0.45 |

**Did not load:**

- It is too dangerous for someone who provides abortion to participate in trying to change the legal situation in my country
- I feel that my former abortion care patients avoid me in public places
- Generally, my religious community spurns people who work in abortion care
- I feel my clients would support me if I were being persecuted
- I can trust the people I am close to with information about my abortion work
- Personally, I feel accepted in my religious community even though they know I provide abortion care

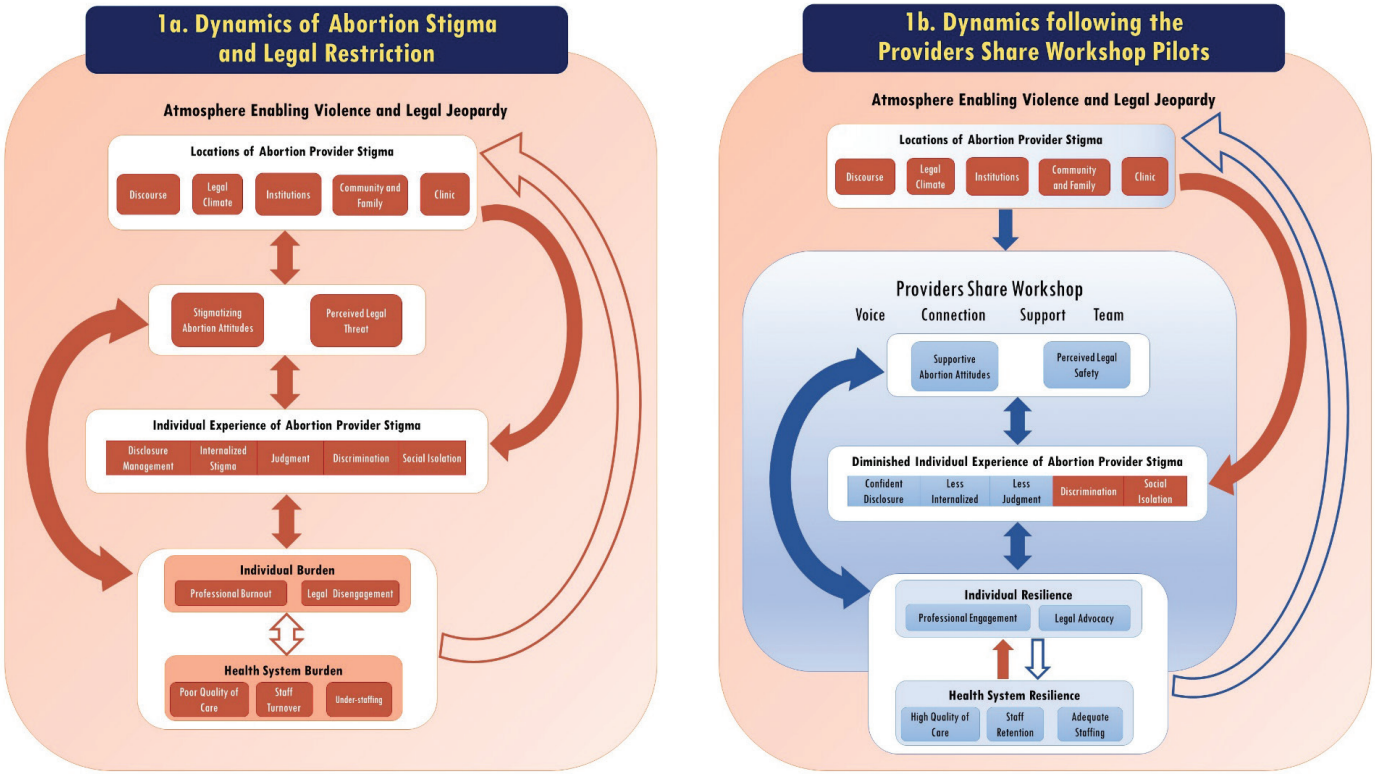
| **Latin America** | |
|---|---|
| *KMO* | *0.64* |
| *Bartlett's χ2 (91)* | *405.9, p<0.001* |
| Item | Factor loading |
| Factor 1: Willingness to engage in or support legal advocacy (alpha=0.60) | |
| I would vote for a candidate who wanted to make abortion laws more liberal | 0.44 |
| I would publicly participate in a demonstration or rally supporting greater access to abortion for women in my country | 0.49 |
| It is a good idea for the government to allow abortions to be legal | 0.67 |
| Factor 2: Legal safety (alpha=0.69) | |
| The current legal status of abortion makes it dangerous to do my job | 0.45 |
| I worry that my patients will be arrested or harassed by the police | 0.54 |
| It is too dangerous for someone who provides abortion to participate in trying to change the legal situation in my country | 0.43 |
| I worry that I will be harassed by the police | 0.67 |
| I worry that my patients will turn me into the authorities | 0.51 |

**Did not load:**

- I think the laws in my country should be changed to make abortion more accessible
- I believe that people who provide abortion services should participate in trying to change the legal situation in my country
- I am hopeful that the legal restrictions on abortion will be relaxed in the next 5 years
- I feel that my former abortion care patients avoid me in public places
- Generally, my religious community spurns people who work in abortion care

*Indicates that an item has been reverse-coded. *Note:* For Sub-Saharan Africa, response categories were 1=agree, 2=indifferent and 3=disagree; for Latin America, response categories were 1=agree, 2=no opinion and 3=disagree.

***APPENDIX FIGURE 1. Conceptual models of the dynamics of stigma and restrictive legislation in abortion work before and after the Providers Share Workshops in Sub-Saharan Africa and Latin America***




Key: Solid arrows represent relationships documented statistically in the current work. Open arrows represent potential or hypothesized relationships suggested by this or other research, but not measured in our study. The color red represents increased burden on abortion and PAC providers; blue represents reduced burdens on providers.