

# Economic Precarity, Financial Strain, and Job-Related Stress Among Philadelphia's Public Mental Health Clinicians

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**Objective:** Efforts to improve mental health treatment delivery come at a time of rising inequality and cuts or insufficient increases to mental health funding. Public mental health clinicians face increased demands, experience economic stress, and treat underresourced patients disproportionately burdened by trauma. The authors sought to understand clinicians' current economic and psychological conditions and the relationship of these conditions to the delivery of an evidence-based intervention (EBI) designed to treat posttraumatic stress disorder among youths.

**Methods:** In July 2020, 49 public mental health clinicians from 16 Philadelphia clinics who were trained in an EBI, trauma-focused cognitive-behavioral therapy (TF-CBT), were surveyed by e-mail. Respondents reported on their economic precarity, financial strain, burnout, secondary traumatic stress (i.e., the stress response associated with caring for people exposed to trauma), and TF-CBT use. Associations between clinicians' job-related stressors and their

use of TF-CBT were examined with mixed models. Content coding was used to organize clinicians' open-ended responses to questions regarding financial strain related to the COVID-19 pandemic.

**Results:** Clinicians' economic precarity, financial strain, and job-related stress were high; 37% of clinicians were independent contractors, 44% of whom wanted a salaried position. Of 37 clinicians with education debt, 38% reported owing  $\geq \$100,000$ . In the past year, 29% of clinicians reported lack of personal mental health care because of cost, and 22% met the cutoff for experiencing secondary traumatic stress symptoms. Education debt was negatively associated with use of TF-CBT ( $p < 0.001$ ).

**Conclusions:** The stress of providing care in underresourced clinical settings may interfere with efforts to integrate scientific evidence into mental health care.

*Psychiatric Services* 2022; 73:774–786; doi: 10.1176/appi.ps.202100276

Efforts in the United States to increase the implementation of evidence-based interventions (EBIs) come at a time of worsening inequality, wage stagnation, and the hollowing out of the welfare state (1–4). As policy makers and practitioners attempt to integrate scientific evidence into mental health service delivery, this task has become more challenging (5, 6). More demands are placed on public mental health clinics to deliver EBIs, while broader economic decline, funding cuts, and underfunding of public mental health care undermine agencies' ability to meet these high standards (5, 7–12). The Great Recession and the COVID-19 pandemic saw demand for mental health services outpace their shrinking supply (13–17). These twin economic recessions had cascading effects on city and state mental health budgets, clinic administrators, clinicians, and patients (9, 18–22).

In the wake of the Great Recession, revenue shortfalls and public austerity compelled mental health clinics to cut

## HIGHLIGHTS

- This article provides a detailed account of the economic and psychological realities of clinicians delivering an evidence-based intervention, trauma-focused cognitive-behavioral therapy, in Philadelphia's public mental health system.
- A survey of 49 clinicians in Philadelphia's public mental health system found that clinicians had high levels of economic precarity, financial strain, burnout, and secondary traumatic stress.
- Clinicians' financial strain was associated with their use of trauma-focused cognitive-behavioral therapy.
- The findings underscore the importance of increased financial investment in and support of the public mental health care workforce.

staff, support hours, and employer-provided benefits by hiring more fee-for-service independent contractors, shifting the risk of missed sessions to clinicians who get paid only for face-to-face hours (23, 24). This leaves clinicians with more responsibilities and economic precarity—or income unpredictability, flexible labor contracts, and scarce professional advancement opportunities (25). Such factors are associated with clinicians' lower job satisfaction, increased burnout, higher turnover, and lower perceived quality of care (26–29). In a 2016 cross-sectional study of clinicians working in Philadelphia's public mental health clinics, independent contractors endorsed fewer positive attitudes toward EBIs and had less EBI knowledge, compared with salaried clinicians (23). The fiscal landscape also leaves clinicians financially strained; their wages have remained stagnant over the past few decades and have not kept pace with rising postsecondary education costs (30, 31). The Council on Social Work Education has reported that the average student debt of a master's-level social worker—the plurality of the public mental health workforce—is \$46,591, >50% higher than it was just 10 years ago (32, 33).

Furthermore, community clinics see patients with more psychosocially complex conditions who have been exposed to significant trauma (34). Although public mental health clinics have always served populations with high needs, a growing share of the populace now experiences economic and psychological despair (35–43). The Great Recession witnessed increased trauma exposure for both children and adults, including child abuse (44–47), gun violence (48), and domestic violence (49, 50). According to national data from 1.7 million youths, rates of posttraumatic stress disorder (PTSD) almost doubled for Medicaid patients between 2013 and 2017 (51). During the COVID-19 pandemic, trauma incidence also increased (52–54).

Community clinicians have not been spared by these trends. Burnout, characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, is a well-documented occupational hazard in the mental health workforce (28). One review suggested that 21%–67% of mental health clinicians experience high levels of burnout (55). Clinicians also experience secondary traumatic stress (STS), the stress response associated with caring for people exposed to trauma (56). Across several national samples, 11%–21% of mental health clinicians met cutoffs for clinically significant STS symptoms (57–60). Compared with private practice clinicians, public mental health clinicians have reported higher burnout and STS (61, 62). Debt is associated with poor mental and general medical health and worse decision making; one experimental study found that student debt can cause poor cognitive functioning (63–65). No study has examined the specific relationship between clinicians' education debt and EBI use, although education debt likely imposes a “mental bandwidth tax” on clinicians, impeding their ability to deliver the best care they can (66).

The public mental health workforce has thus felt the impact of these economic shifts both directly and indirectly.

First, their employment conditions have been negatively affected by declines in public funding. Second, they see underresourced patients with more psychosocial complexity and trauma exposure. Our preliminary investigation sought to document the new economic realities and stressors of the public mental health workforce.

We comprehensively surveyed clinicians in Philadelphia's public mental health clinics trained in trauma-focused cognitive-behavioral therapy (TF-CBT), a trauma-based EBI designed to treat youths with PTSD. In this exploratory analysis, we extensively documented clinicians' economic precarity and financial strain by using a federal economic survey, measured clinicians' burnout and STS, and investigated how these occupational hazards were related to TF-CBT use. We also asked clinicians to describe their economic and financial stressors before and after the COVID-19 pandemic began.

## METHODS

### Context

This study was conducted with clinicians working in Philadelphia's public mental health system. Philadelphia is a diverse, economically unequal, and violent postindustrial city, with 24% of Philadelphians living below the poverty line, a growing share of whom are children—68% of youths are covered by Medicaid (67, 68). Overall, 41% of adult Philadelphians witnessed community violence (e.g., seeing someone stabbed, beat up, or shot) in their childhood, and 27% reported that their childhood neighborhood was not safe (69, 70). On the basis of trauma statistics, up to 30,000 Philadelphia youths would benefit from trauma-informed treatment (71).

The Department of Behavioral Health and Intellectual disability Services (DBHIDS) administers public mental health funding. DBHIDS has its own managed care organization, Community Behavioral Health (CBH), the sole payer for Medicaid mental health services. During the Great Recession, Pennsylvania reduced funding to mental health services (72–74). Although the budget for these services rose in subsequent years, funding has not returned to pre-recession levels (see figure in the online supplement to this article). To insulate Philadelphia from the budget cuts' worst effects and maintain service quality, CBH invested in EBI implementation through several initiatives, with a focus on addressing the high rates of trauma exposure among treatment-seeking youths. CBH pursued external revenue sources through federal grants to establish a trauma-informed public mental health system, which included increasing the implementation of TF-CBT, shown to be efficacious and effective in treating youths with PTSD in >20 randomized controlled trials (71, 75–77). CBH has trained 368 clinicians in its TF-CBT initiative in 24 clinics (71, 78).

### Participants and Procedure

In July 2020, clinicians (N=198) trained in TF-CBT through CBH and still delivering TF-CBT in the CBH clinic network

were invited by e-mail to complete a survey. Per CBH records at the time the survey was initiated, of the 368 clinicians trained in the TF-CBT initiative, only these 198 clinicians were still actively delivering TF-CBT in their clinic network. To capture the full range of the public mental health workforce's responsibilities, we sampled data from all clinicians (i.e., exclusively patient-facing clinicians and supervisors and administrators). Survey recruitment used a modified tailored design method, which in our study included involving CBH leaders, clinic administrators, and supervisors in survey recruitment and motivating the research by explaining that survey data would be used to support patients and clinicians (79).

In total, 67 clinicians (34%) responded to the survey. Surveys with <50% of complete items ( $N=18$ , 27%) were discarded. The final sample included 49 clinicians (25% completion rate), representing 16 (67%) of the 24 clinics. Participating clinicians provided informed consent, took approximately 1 hour to complete the survey, and received a \$25 gift card. The Philadelphia Department of Public Health and the University of Pennsylvania Institutional Review Boards approved the study.

## Measures

The survey comprised several psychometrically validated questionnaires that included questions about demographic, employment, and financial characteristics; STS; burnout; and self-reported TF-CBT use. Respondents were asked to answer most survey questions about their experiences before the COVID-19 pandemic. Both close- and open-ended questions also asked about the pandemic's financial impact (see online supplement for survey details).

*Demographic characteristics.* Respondents completed a demographic questionnaire that included questions about age, gender, race-ethnicity, education level, clinic position, licensure status, years of experience, current caseload, and years working at their current clinic.

*Employment and finance questions.* Clinicians answered questions about their economic precarity and financial strain from the Federal Reserve's Survey of Household Economics and Decisionmaking (SHED) (80). The SHED is collected annually from a representative sample of U.S. households to examine their economic characteristics. To avoid respondent fatigue, only SHED questions that were most applicable to the public mental health workforce were selected. All questions related to employment and finances asked clinicians to respond on the basis of the past 12 months but excluding the time since the pandemic began.

*Burnout.* Clinicians responded to a question about burnout from the Therapist Background Questionnaire: "How often, if ever, do you experience a feeling of professional burnout?" with possible responses ranging from 0, never, to 10, constantly (81). Although not as comprehensive as the Maslach

Burnout Inventory (82), this single item has demonstrated reliability with the inventory's three subscales (83).

*Pandemic financial impact.* Clinicians were asked four questions about the pandemic's financial impact. Two closed-ended questions were borrowed from the SHED, and one question was open ended.

*STS.* Clinicians completed the 17-item Secondary Traumatic Stress Scale (STSS), which measures indirect traumatic stress in helping professionals working with individuals exposed to trauma (57, 84–88). STS symptoms align with *DSM-IV* PTSD symptoms (89). Respondents indicate how frequently each STSS item was true for them in the past 7 days by using a rating scale ranging from 1, never, to 5, very often.

Scores for the STSS (all items) and each subscale were obtained by summing the scores for the items. To mirror *DSM-IV* PTSD symptom criteria, a PTSD clinical cutoff score was derived if clinicians endorsed a score of  $\geq 3$  on one or more items on the intrusion subscale, three or more items on the avoidance subscale, and two or more items on the arousal subscale (57). The STSS evaluates *DSM-IV* criteria B, C, and D symptoms of PTSD but not the exposure and response (A), duration (E), or impairment (F) criteria. Therefore, it cannot be used to make a clinical diagnosis. In our sample, STSS reliability was excellent (Cronbach's  $\alpha=0.94$ , 95% confidence interval [CI]=0.90–0.96, based on 1,000 bootstrapped samples).

*Self-reported use of TF-CBT.* TF-CBT use was measured with the Therapy Process Observation Coding Scale Self-Reported Therapist Intervention Fidelity in Youth (TPOCS-SeRTIFY) (90). The TPOCS-SeRTIFY is a pragmatic self-report measure developed in partnership with Philadelphia's public mental health clinicians. This 17-item questionnaire asks respondents to self-rate their use of 12 discrete CBT techniques by using a rating scale ranging from 1, not at all, to 7, extensively. The TPOCS-SeRTIFY includes questions about TF-CBT clinical techniques. In our study, respondents rated TPOCS-SeRTIFY items for a representative TF-CBT patient (i.e., a youth between the age of 3 and 21 years) with whom they were currently working and had seen for at least four sessions. We examined clinicians' responses to one item considered to be a core component of TF-CBT—clinicians' use of the trauma narrative or exposure techniques (91, 92). The trauma narrative is typically introduced in the fifth session of TF-CBT or later (93). In our sample, reliability of the first 12 questions on the TPOCS-SeRTIFY was very good (Cronbach's  $\alpha=0.89$ , 95% CI=0.84–0.93, based on 1,000 bootstrapped samples).

## Analysis Plan

*Quantitative data.* We characterized the sample with descriptive statistics. We evaluated whether selected economic measures, burnout, and STS were associated with self-

reported use of trauma narrative or exposure techniques. We selected one economic precarity measure (whether clinicians were independent contractors) and one financial strain question (clinicians' education debt) to test associations. We included clinicians' independent contractor status, given the rise of independent contractors in public mental health settings. We selected education debt on the basis of research examining clinicians' financial strain due to rising education costs, the influence of financial strain on clinician turnover, and the relationship between debt and decision making (23, 26, 31, 66, 83). Analyses were conducted by using mixed models with random intercepts to account for clustering by clinic. Three respondents did not report their clinic; the final sample size for the mixed models was 46 clinicians (94). Continuous predictors and covariates were converted to z scores to facilitate model interpretation. We visually inspected the data to identify patterns in missingness by using margin plots with the R package VIM, indicating that missingness was completely random. Analyses were run with the R package lme4, which incorporates restricted maximum likelihood estimation (95).

**Qualitative data.** Open-ended responses regarding the financial impact of COVID-19 were analyzed with a content-coding approach (96, 97). Two authors (B.S.L. and S.H.S.) analyzed the qualitative responses through consensus and resolved differences through discussion. Open-ended responses that overlapped substantially in content were organized into categories labeled "repeating ideas." Repeating ideas were then grouped into broad themes. Frequencies were calculated for each repeating idea and theme.

## RESULTS

### Demographic Characteristics

Table 1 summarizes the demographic characteristics of the 49 clinicians who worked at 16 Philadelphia clinics; one independent contractor indicated working at "any" of the clinics. For each clinic, an average of 2.8 clinicians responded (range 1–7).

### Employment and Financial Characteristics

Table 2 presents employment and financial characteristics of the 49 clinicians. Clinician employment categories included independent or fee-for-service contractor (37%), salaried or full-time (61%), other ("paid on a 10-month schedule, fee for service in summer," 2%). Most clinicians (51%) had another job in addition to the job where they received most of their income, with three reporting another full-time job and 22 reporting another part-time job. Almost half of the 18 independent or fee-for-service contractors (44%) reported wanting to work full-time. Seven clinicians worked in private practice, working a mean of 23.7 hours per month. One-third of clinicians engaged in nonclinical side-job work (such as babysitting, housecleaning, selling goods online, or driving for Uber or Lyft). Clinicians had side jobs largely to earn

**TABLE 1. Demographic characteristics of the clinicians in the study sample (N=49)<sup>a</sup>**

Characteristic	N	%
Gender		
Female	40	82
Male	6	12
Race-ethnicity		
Asian	2	4
White	37	76
Black	5	10
Latinx or Hispanic	5	10
Other	2	4
Prefer not to disclose	3	6
Clinic position		
Primarily a provider of direct services to clients	31	63
Primarily a supervisor of those who provide direct services	14	29
Upper management or administrator	2	4
Position type		
Marriage and family therapist	2	4
Master's-level therapist	27	55
Psychologist	2	4
Social worker	8	16
Other	9	18
Licensed		
Yes	23	47
No	15	31
In process	10	20
Level of education		
Doctoral degree	4	8
Master's degree	44	90
Age (M±SD years)	36.4±10.6	
Experience in human services work (M±SD years)	10.0±7.4	
Experience at present clinic (M±SD years)	4.7±3.7	
Experience as a clinician (M±SD years)	8.8±7.6	

<sup>a</sup> Respondents were informed that the demographic questions were optional. Not all respondents completed all questions, so numbers and percentages may not sum to 49 and 100%, respectively.

extra money (69%), which somewhat made up for economic losses in the year before COVID-19 (mean score of 2.1 on a scale from 1, very much, to 3, not at all).

The most frequently endorsed employer-provided benefits were paid sick leave (71%), paid vacation (71%), and health insurance (71%). Seven clinicians (14%) had no health insurance. Clinicians' mean caseload was 14.3 patients, and they averaged 38.7 work hours per week for all paid jobs. Clinicians were neither satisfied nor dissatisfied with their benefits (mean=2.7) or wages from their main job (mean= 3.0) (scale from 1, very satisfied, to 5, very dissatisfied).

Many clinicians (45%) reported going without medical care because of their inability to afford it, with 29% reporting

**TABLE 2. Employment and financial strain among the clinicians in the study sample (N=49)<sup>a</sup>**

Characteristic	N	%
Employment status		
Independent or fee-for-service contractor	18	37
Salaried or full-time	30	61
Other (10-month salaried, summer fee for service)	1	2
Second job (in addition to main source of income)		
Full-time	3	6
Part-time	22	45
Works in private practice	7	14
Wants to work full-time (among independent contractors)	8	44
Side jobs (e.g., babysitting, house cleaning, or gig work)	16	33
Reasons for part-time work or side jobs		
To earn money as a primary source of income <sup>b</sup>	1	6
To earn extra money on top of pay or other regular sources of income	11	69
To earn extra money to help family members	0	—
To maintain new job-related skills	5	31
To acquire new job-related skills	4	25
To network or meet people	4	25
Just for fun (as a hobby)	4	25
Employer-provided benefits		
Paid sick leave	35	71
Paid vacation or personal leave	35	71
Maternity or paternity leave	20	41
Health insurance	35	71
Tuition assistance for education or training	18	37
Life insurance	30	61
Retirement benefits	31	63
Ability to work from home	29	59
Health insurance coverage	42	86
Chose to forgo medical care because of cost in the past year	22	45
Forgone medical care because of cost		
Prescription medication	5	10
Seeing a physician or specialist	14	29
Mental health care or counseling	14	29
Dental care	16	33
Follow-up care	5	10
Unexpected major out-of-pocket medical expenses in the past year	9	18
Outstanding education loans	37	76
Education debt in \$		
<10,000	1	3
10,000–24,999	5	14
25,000–49,999	8	22
50,000–99,999	9	24
≥100,000	14	38
Retirement savings or pension plan	37	76
Retirement savings amount in \$		
<10,000	18	49
10,000–24,999	8	22
25,000–49,999	3	8
50,000–99,999	4	11
100,000–249,999	1	3
250,000–499,999	4	11
Don't know	9	24
Retirement savings are on track	6	12
Borrowed or cashed out from retirement savings in past year	2	5
Emergency savings		
Have rainy day funds for 3 months in case of emergency	24	49
Could pay 3 months expenses if lost main source of income	30	61
Able to pay bills in full each month	40	82
Could pay bills in full if faced with a \$400 emergency expense	34	69
Caseload (N of patients per week, M±SD)	14.3±8.8	

*continued*

that they went without mental health care because of cost. Nine clinicians (18%) reported having unexpected major medical expenses not covered by insurance. For those clinicians, unexpected out-of-pocket medical expenses averaged \$1,617. Most clinicians (76%) reported having education debt. Of those with education debt, 29 (78%) had debt >\$40,000, with 14 owing ≥\$100,00. Most clinicians (76%) had retirement savings or a pension plan, and for most (49%) these savings accounts had <\$10,000. Only six clinicians with retirement accounts indicated that their savings were “on track”; two clinicians had to borrow from or cash out their savings in the past year.

In response to questions about emergency savings, about half of the clinicians (49%) had rainy day funds for 3 months in case of an emergency, 61% could pay 3 months of expenses if they lost their main source of income, 82% were able to pay their bills in full each month, and 69% could pay their bills in full if faced with a \$400 emergency expense. Clinicians sometimes had money at month's end (mean score=3.1) and sometimes felt their finances controlled their lives (mean score=3.0) (scale from 1, never, to 5, always). On a scale of 1, not at all, to 5, completely, clinicians tended to score about 3 (somewhat) in response to the financial strain statements, including “Because of my money situation, I feel like I will never have the things I want in life” (mean score=2.6), “I am just getting by financially” (mean score=3.0), and “I am concerned that the money I have or will save won't last” (mean score=3.1). Clinicians reported that at least once



in the past year they either had carried an unpaid credit card balance (mean score=1.7) or had paid only the minimum payment (mean score=1.4) (scale from 0, never, to 3, most or all of the time). When asked how they were managing financially before the pandemic, clinicians reported they were “doing okay” (mean score=3.0) (scale from 1, finding it difficult to get by, to 4, living comfortably). On a scale of 0, never, to 10, constantly, clinicians’ burnout averaged 5.0.

### STS

Clinicians’ total STSS score averaged  $30.8 \pm 12.5$  (possible scores range from 17 to 85, with higher scores indicating more STS). Many clinicians ( $N=36$ , 73%) endorsed one STS symptom in the past week, and 43% ( $N=21$ ) endorsed at least one core symptom cluster. Eleven clinicians (22%) met the PTSD symptom cutoff. Notably, of these 11 respondents, three (27%) reported forgoing mental health care because they could not afford it (see online supplement).

### Predicting Self-Reported TF-CBT Use

Table 3 displays the associations between economic precarity, financial strain, burnout, and STS score and use of a core component of TF-CBT—the trauma narrative or exposure techniques. Across the first four models, we controlled for job tenure (years as a clinician), given research indicating an inverse relationship between years of clinical experience and use of exposure techniques (98); whether clinicians were primarily therapists or supervisors or administrators, because leaders play an important role in implementation efforts and may be more aligned with clinic goals to increase EBI use (99); and whether clinicians had seen their representative patient for at least five sessions, given that the fifth session is when the trauma narrative is typically introduced. All but two clinicians rated the TPOCS-SeRTIFY with a patient they had seen for five sessions or more. Other covariates were not included, given the small sample size. In the fifth model, being a supervisor overlapped substantially with being salaried; therefore, supervisory role was excluded as a covariate.

Clinicians’ education debt was inversely related to use of the trauma narrative or exposure techniques ( $B=-0.54$ ,  $p<0.001$ ). That is, after adjustment for covariates (i.e., job tenure, reaching the trauma narrative stage, and whether

clinicians had supervisory or administrative roles), an increase of 1 standard deviation (SD) in education debt was associated with a 0.54 SD decrease in trauma narrative or exposure use. In this model, job tenure was also inversely related to use of the trauma narrative or exposure techniques ( $B=-0.37$ ,  $p=0.015$ ), and being a supervisor or administrator was positively associated with use ( $B=0.72$ ,  $p=0.013$ ).

### COVID-19 Pandemic Financial Impact

Table 4 displays clinicians’ responses to closed-ended questions about the pandemic’s financial impact. None of the clinicians had lost their jobs during the pandemic; however, 10 had their hours or pay reduced, four spouses or partners had lost a job, eight spouses or partners had their hours or pay reduced, and three clinicians reported other financial hardships. On a scale from 1, a little, to 3, a lot, clinicians’ average rating of the financial strain of having hours or pay reduced was 2.67, and their average rating of the financial strain of their spouse or partner losing a job was 2.00. On a scale from 1, not at all, to 3, somewhat, to 5, a lot, clinicians’ report of the pandemic’s financial impact averaged 1.94.

Table 5 lists some of the clinicians’ open-ended descriptions of the pandemic’s financial impact. Forty-one respondents (84%) provided brief descriptions (one to three sentences) that were sorted into repeating ideas and then

TABLE 2, continued

Characteristic	N	%
Hours worked per week at all paid jobs (M±SD)	38.7±11.0	
Hours worked per month by those working in a private practice (M±SD)	23.7±17.0	
Side jobs make up for losses in past year (M±SD) <sup>c</sup>	2.1±1.1	
Job satisfaction (M±SD) <sup>d</sup>		
Satisfaction with benefits from main job	2.7±1.5	
Satisfaction with salary or wages from main job	3.0±1.2	
Total unexpected out-of-pocket medical expenses (M±SD)	\$1,617±\$1,179	
Monthly finance balance statements (M±SD) <sup>e</sup>		
I have money left over at the end of the month	3.1±1.2	
My finances control my life	3.0±1.1	
Financial strain statements (M±SD) <sup>f</sup>		
Because of my money situation, I feel like I will never have the things I want in life	2.6±1.1	
I am just getting by financially	3.0±1.4	
I am concerned that the money I have or will save won’t last	3.1±1.2	
Credit card balance (M±SD) <sup>g</sup>		
Carried an unpaid balance in the past year	1.7±1.3	
Paid only the minimum credit card payment in past year	1.4±1.2	
Managing financially before the pandemic (M±SD) <sup>h</sup>	3.0±.8	
Burnout (M±SD) <sup>i</sup>	5.0±2.4	

a For many items, respondents could endorse multiple options, and percentages may exceed 100%.

b The other job is the primary source of income.

c Response scale: 1, very much; 2, somewhat; and 3, not at all.

d Response scale: 1, very satisfied; 3, neither satisfied nor dissatisfied; and 5, very dissatisfied.

e Response scale: 1, never; 3, sometimes; and 5, always.

f Response scale: 1, not at all; 3, somewhat; and 5, completely.

g Response scale: 0, never; 1, once; 2, some of the time; and 3, most or all of the time.

h Response scale: 1, finding it difficult to get by; 2, just getting by; 3, doing okay; and 4, living comfortably.

i Response scale: 0, never, to 10, constantly.

**TABLE 3. Employment, financial strain, and stress characteristics associated with clinicians' use of trauma narrative or exposure techniques<sup>a</sup>**

Techniques										R <sup>2</sup>	
Model and variable	Estimate	95% CI	p	σ <sup>2</sup>	τ <sub>00</sub>	Intraclass correlation	N	Observations	Marginal	Conditional	
Model 1											
Fixed effects											
Intercept	−.82	−2.21 to .58	.254								
Years as a clinician	−.16	−.47 to .16	.322								
Had ≥5 sessions with the patient	.61	−.83 to 2.05	.409								
Supervisor or administrator	.40	−.24 to 1.04	.216								
Secondary Traumatic Stress Scale score	−.15	−.44 to .14	.321								
Random effects				.82	.21	.20	17	46	.082	.270	
Model 2											
Fixed effects											
Intercept	−1.19	−2.71 to .32	.122								
Years as a clinician	−.14	−.45 to .17	.365								
Had ≥5 sessions with the patient	.61	−.79 to 2.02	.394								
Supervisor or administrator	.36	−.28 to 1.00	.267								
Met PTSD cutoff score	.50	−.18 to 1.17	.147								
Random effects				.79	.23	.23	17	46	.100	.304	
Model 3											
Fixed effects											
Intercept	−.34	−1.55 to .88	.585								
Years as a clinician	−.37	−.66 to −.07	.015								
Had ≥5 sessions with the patient	.01	−1.24 to 1.27	.982								
Supervisor or administrator	.72	.15 to 1.29	.013								
Education debt	−.54	−.82 to −.26	<.001								
Random effects				.61	.18	.23	17	46	.276	.441	
Model 4											
Fixed effects											
Intercept	−.80	−2.19 to .59	.259								
Years as a clinician	−.14	−.46 to .17	.373								
Had ≥5 sessions with the patient	.62	−.81 to 2.05	.395								
Supervisor or administrator	.34	−.33 to 1.00	.319								
Burnout score	−.17	−.47 to .14	.280								
Random effects				.81	.23	.22	17	46	.084	.288	
Model 5											
Fixed effects											
Intercept	−.99	−2.44 to .45	.178								
Years as a clinician	−.08	−.37 to .21	.593								
Had ≥5 sessions with the patient	.66	−.73 to 2.06	.352								
Salaried	.42	−.25 to 1.09	.216								
Random effects				.83	.21	.20	17	46	.068	.259	

<sup>a</sup> Five separate mixed models are shown, with job tenure (years as a clinician), supervisory role (therapist vs. supervisor or administrator), and whether the clinician had seen the patient for at least five sessions as covariates across the first four models. Model 5 does not include supervisory role as a covariate, given its collinearity with whether the clinician was designated as an independent contractor or fee-for-service employee in the sample.

synthesized into four broad themes: expenses increased or lost money (N=20), no change (N=9), expenses decreased or saved money (N=9), and losses were likely to come or uncertainty about the future (N=3).

Clinicians reporting that the pandemic had a negative impact on their finances noted that these changes were due to increased child care costs, fewer work hours, and delays in professional advancement, such as licensure exam cancellations, hiring freezes, or forestalling the opening of a private

practice. Clinicians who reported no financial change described strategies to save money during the pandemic. Those who reported decreased expenses or increased savings benefited from student loan freezes, reduced transportation costs, and fewer living expenses. Several clinicians anticipated the pandemic's future negative financial impact. Some unlicensed clinicians reported decreased supervised hours, which had implications for licensure, and others reported the threat of not making billable-hour requirements.

## DISCUSSION

Our exploratory study characterized the significant economic precarity, financial strain, and job-related stressors of clinicians working with youths experiencing trauma in Philadelphia's public mental health clinics. In our sample of 49 clinicians, economic precarity was high, with more than a third (37%) working as independent contractors, 44% of whom desired a stable, full-time, salaried position. Clinicians in the sample experienced financial strain—76% had outstanding education loans, and the debt for 38% of those clinicians was  $\geq \$100,000$ . Eleven clinicians met the PTSD symptom cutoff, three of whom reported forgoing mental health care because they could not afford it. The more education debt clinicians had, the less likely they were to report using the trauma narrative or exposure techniques—essential ingredients of TF-CBT.

In this model, supervisors were more likely to report using the trauma narrative, suggesting that supervisors at Philadelphia's public mental health clinics participating in CBH initiatives may be promoted because of their alignment with clinic goals to increase EBI use. In the model, job tenure (i.e., years as a clinician) was inversely related to trauma narrative use, confirming the exposure literature on the relationship between these constructs. Clinicians tend to implement techniques they learn early in training, and CBH initiatives are relatively new for more experienced clinicians (98, 100). Most clinicians reported that the pandemic had a negative impact on their financial situation, citing declining caseloads, loss of part-time work, hiring freezes, postponed licensure exams, and increased expenses. Collectively, these exploratory findings suggest that clinicians delivering care to the city's most vulnerable populations themselves experience considerable psychological and economic distress and that such distress is negatively associated with their EBI use.

Although previous work has hinted at the worsening labor conditions of clinicians in public mental health settings, our study offers the first systematic examination of these trends. The STS and burnout findings indicated that clinicians who treat patients with psychosocially complex conditions were bearing the brunt of economic insecurity and the growing needs of a vulnerable population (23, 24, 26, 101, 102). Clinicians in our sample endorsed high rates of STS, with 22% of the sample meeting an STS clinical cutoff (57–60), significantly higher than the STS rate in a recent large nationally representative study of clinicians (60) (see online supplement). Compared with the sample in a previous study of Philadelphia's community clinicians, our sample reported more burnout (83). A previous meta-analysis found that training clinicians in exposure therapy had small effects on behavior ( $d=0.35$ ) (103, 104), and our work found a medium effect size in the association between education debt and use of the trauma narrative or exposure techniques. Considering the magnitude of these effects, EBI implementation initiatives appear to be working against much larger economic forces that obstruct the improvement of

**TABLE 4. Responses of 49 clinicians to closed-ended questions about the financial impact of the COVID-19 pandemic**

Characteristic	N	%
Experienced financial hardship because of COVID-19 pandemic	20	41
I lost my job	0	—
I had my work hours or pay reduced	10	20
My spouse or partner lost a job	4	8
My spouse or partner had work hours or pay reduced	8	16
Other <sup>a</sup>	3	6
Experienced financial strain from the above events (M±SD) <sup>b</sup>		
I lost my job	0.0±.0	
I had my work hours or pay reduced	2.7±.8	
My spouse or partner lost a job	2.0±1.0	
My spouse or partner had work hours or pay reduced	1.3±.5	
COVID-19 pandemic negative financial impact (M±SD) <sup>c</sup>	1.9±1.2	

<sup>a</sup> "Partner used family medical leave," "family member lost a job," or "I had to work from home with my child and stay home full-time."

<sup>b</sup> N=18 respondents; response scale: 1, a little; 2, some; and 3, a lot.

<sup>c</sup> N=49 respondents; response scale: 1, not at all; 3, somewhat; and 5, a lot.

mental health services. Significant financial investment in and support of the mental health workforce is needed to ensure the well-being of both clinicians and patients (105, 106).

The negative association between education debt and EBI use provides a key target for future policy interventions. Many recently graduated master's-level clinicians in the United States work in public mental health settings to receive supervised clinical hours in order to obtain licensure and participate in the Public Service Loan Forgiveness program, which forgives workers' federal loans after 10 years of service. After obtaining their license or after 10 years of service, some clinicians leave the public mental health system to pursue private practice, given the financial strain of working in public mental health settings. One study found that 35% of Philadelphia's clinicians left the public system for the private sector (83). The public mental health system then loses the significant investments it makes in EBI training and incurs turnover costs (107). For clinicians, this arrangement means enduring a stint of debt peonage and financial strain—and probably significant delays in life course milestones (108). Loan forgiveness programs, therefore, cannot contain rising postsecondary education costs, improve public mental health clinicians' labor conditions, or increase workforce retention.

Rather than footing the bill and relying on a patchwork of private entities—from universities to nonprofit clinics—to



**TABLE 5. Responses of 41 clinicians to an open-ended question about the financial impact of the COVID-19 pandemic<sup>a</sup>**

Repeating idea	Count	Representative quote
Expenses increased or lost money	20	
Reduced outside (second job) hours		"Less time for the part-time job due to teaching children at home and more expenses for them since they were home—food and activities. More gas was used for trips to keep them engaged."
Need to save to support other family members		"Rent increased due to not being able to find another roommate, so more money spent on living. Also, helping family members more with their loss of income."
Decreased income because of decreased private practice hours		"Affected private practice hours, seeing fewer clients and less income."
Lost money on investments		"Investment losses due to market volatility."
Incentives have been cut off for trauma work		"Incentives have been cut for my trauma work and also my outpatient position."
Canceled licensure exam, causing lost income		"Inability to open private practice due to canceled licensure exam."
Increased expenses to care for and entertain children		"Higher cost for food delivery, etc., early in quarantine due to at-risk family."
Unable to save money		"I have been unable to save money as intended."
Lost clients during the switch to telehealth		"I have had increasingly fewer hours at my second (part-time) job as the pandemic continues."
Hiring freezes, wanted to apply for full-time positions but could not		"I would like to apply for a full-time therapist position but am unable because of COVID."
No change	9	
Leverage other resources to ensure financial stability		"COVID-19 has led to both of my college student [dependents] coming home and living at home, and they have not had access to their usual summer jobs or programs to make money. We have provided them with some funds and hired them to support child care for our child with disabilities. My husband and I have been able to work full-time from home during this time, so our income has not been affected at this time. Impact has been fairly low, overall."
No change in salary		"It hasn't been too bad, as we are still working, so my salary hasn't changed. I've just had some worries because my mom was temporarily unemployed and got sick with COVID. Luckily, she recovered after a month, but I was aware of saving at that time just to make sure I could send her money if she needed. She doesn't have anybody else in her life."
Expenses decreased or saved money	9	
Student loans on hold		"Not having to pay student loans for 6 months has helped my situation."
Daily life costs reduced		"Saved money on gas (remote work, no commute), spent less on social and entertaining; student loans have been on hold until September, which was been a big help."
Reduced day care costs		"I have fewer expenses due to working from home, not commuting, and paying less for child care."
Saved money on transportation		"Due to still being able to work from home and being paid regularly, I am saving money each month on less gas expenses (work related, as I drove 50 minutes to and from work each day when in the office), as well as from my daughter's day care not charging us since late March."
Losses likely to come and uncertainty about the future	3	
Decreased clinical supervision in private practice		"Decreased frequency of clinical supervision group meetings in my private practice."
Uncertainty about the future		"There is a lot of uncertainty. There is a constant threat that I will not be able to make billables."

<sup>a</sup> Responses were analyzed with a content-coding approach.

train and retain the public mental health workforce, governments could develop job training programs that would attract potential clinicians with the following benefits: free public university graduate tuition conditional on pursuing public mental health system employment, compensated ongoing consultation in EBIs on the job, competitive wages that incentivize EBI use (109), stable employment, attractive hours and benefits, peer and supervisory support to reduce stress and burnout (110), and integrated case management

and care to allow clinicians to focus on their clinical responsibilities and experience higher personal accomplishment (111). State governments also will need to significantly increase Medicaid provider reimbursements (reversing recent cuts) (10) and eliminate fee-for-service reimbursement models to reduce inequities between clinicians.

Governments can look to policies undertaken by New York's public school system in the early 2000s to improve educational outcomes. New York increased starting teacher

salaries and developed the New York City Teaching Fellows program, which provides subsidized graduate training in the city's public universities and ongoing training to new teachers choosing to teach in high-poverty schools. The program attracted a competitive workforce and improved poor students' achievement (112). Innovative pilot programs like these are necessary, because the mental health system faces a clinician shortage as treatment seeking has increased (17, 113).

Our study had several limitations. First, the survey response (34%) and completion (25%) rates were low, but they were comparable to those of most online survey studies (114, 115). Clinicians from 67% of clinics participating in the CBH training initiative responded to the survey, and clinicians in our sample did not differ markedly in demographic characteristics from the entire Philadelphia public mental health workforce (116). Low response rates may be attributable to the fact that Philadelphia's clinicians are overburdened, particularly during the pandemic, and are frequently asked to participate in research studies and quality improvement efforts—one study found that over a 5-year period, 171 (50% of the study sample) had participated in at least one initiative (116). Research examining survey participation has found that lower-income, part-time workers who do not have managerial or supervisory responsibilities have lower response rates than more affluent professionals with full-time employment, suggesting that our study results may have underestimated the degree of economic precarity and financial strain experienced by the public mental health workforce (117). Second, our sample was small and representative of only a single system, Philadelphia's single-payer public mental health system, which serves a diverse urban population (71, 118). Despite these constraints, our study extends the work on public mental health services, suggesting commonalities across the United States, although work from a larger sample of clinicians from different mental health systems is needed.

## CONCLUSIONS

Our findings highlight the state of the public mental health workforce and the challenges of implementing EBIs in a time of inequality. Clinicians are squeezed from both ends. On one end, patients in the public mental health system are underresourced, and their conditions are often clinically severe, with all indicators suggesting that demand for services by this population is increasing as economic downturns compound stressors. Clinicians vicariously experience patients' challenges and trauma, leading to STS and burnout. On the other end, clinicians face growing job demands and economic precarity. Clinicians face more economic precarity and financial strain as more clinical professionals are being designated as independent contractors and as postsecondary education costs rise. The COVID-19 pandemic has strained an already stressed system, and public mental health systems may witness an outflux of EBI-trained clinicians as service

needs peak. Policies to support and retain the public mental health workforce are therefore needed (105, 106).

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Funding for this study was provided by grant SM063192 (Dr. Beidas, subaward principal investigator) from the Substance Abuse and Mental Health Services Administration. Ms. Last was also supported by grant DGE-1321851 from the National Science Foundation Graduate Research Fellowship Program.

The authors are grateful for the suggestions and guidance of Christina Johnson, B.A., and Steven Marcus, Ph.D. They also thank all the leaders, clinicians, and staff in Philadelphia's public mental health system who made this work possible.

Dr. Beidas reports royalties from Oxford University Press, consultation for United Behavioral Health, and service on the scientific advisory committee for Optum Behavioral Health. The other authors report no financial relationships with commercial interests.

Received May 11, 2021; revision received September 6, 2021; accepted October 8, 2021; published online November 29, 2021.

## REFERENCES

1. Coffey C, Revollo PE, Harvey R, et al: Time to Care: Unpaid and Underpaid Care Work and the Global Inequality Crisis. Oxford, United Kingdom, Oxfam, 2020
2. Piketty T: Capital in the Twenty-First Century. Cambridge, MA, Belknap Press, 2014
3. Western B, Rosenfeld J: Unions, norms, and the rise in US wage inequality. *Am Sociol Rev* 2011; 76:513–537
4. Wisman JD: Wage stagnation, rising inequality and the financial crisis of 2008. *Camb J Econ* 2013; 37:921–945
5. Stewart RE, Adams DR, Mandell DS, et al: The perfect storm: collision of the business of mental health and the implementation of evidence-based practices. *Psychiatr Serv* 2016; 67:159–161
6. Pegg SL, Walsh LM, Becker-Haimes EM, et al: Money makes the world go 'round: a qualitative examination of the role funding plays in large-scale implementation and sustainment of youth evidence-based practice. *Psychol Serv* 2021; 18:265–274
7. Larrison CR, Hack-Ritzo S, Koerner BD, et al: State budget cuts, health care reform, and a crisis in rural community mental health agencies. *Psychiatr Serv* 2011; 62:1255–1257
8. Stewart RE, Mandell DS, Beidas RS: Lessons from Maslow: prioritizing funding to improve the quality of community mental health and substance use services. *Psychiatr Serv* 2021; 72: 1219–1221
9. Honberg R, Diehl S, Kimball A, et al: State Mental Health Cuts: A National Crisis. Arlington, VA, National Alliance on Mental Illness, 2011. <https://www.nami.org/getattachment/About-NAMI/Publications/Reports/NAMISateBudgetCrisis2011.pdf>
10. Aron-Dine A, Hayes K, Broaddus M: With Need Rising, Medicaid Is at Risk for Cuts. Washington, DC, Center on Budget and Policy Priorities, 2020. <https://www.cbpp.org/sites/default/files/atoms/files/7-22-20health.pdf>
11. Lutterman T: The Impact of the State Fiscal Crisis on State Mental Health Systems. Alexandria, VA, National Association of State Mental Health Program Directors Research Institute, 2012.

- <http://www.nri-inc.org/media/1102/2012-the-impact-of-the-state-fiscal-crisis-on-state-mental-health-systems-lutterman.pdf>
12. Williams E, Leachman M, Johnson N: State Budget Cuts in the New Fiscal Year Are Unnecessarily Harmful: Cuts Are Hitting Hard at Education, Health Care, and State Economies. Washington, DC, Center on Budget and Policy Priorities, 2011. <https://www.cbpp.org/sites/default/files/atoms/files/7-26-11sfp.pdf>
  13. Auerbach J, Miller BF: COVID-19 exposes the cracks in our already fragile mental health system. *Am J Public Health* 2020; 110: e1–e2
  14. Danziger S: Evaluating the effects of the Great Recession. *Ann Am Acad Pol Soc Sci* 2013; 650:6–24
  15. Evans-Lacko S, Knapp M, McCrone P, et al: The mental health consequences of the recession: economic hardship and employment of people with mental health problems in 27 European countries. *PLoS One* 2013; 8:e69792
  16. Forbes MK, Krueger RF: The Great Recession and mental health in the United States. *Clin Psychol Sci* 2019; 7:900–913
  17. Thomas KC, Ellis AR, Konrad TR, et al: County-level estimates of mental health professional shortage in the United States. *Psychiatr Serv* 2009; 60:1323–1328
  18. Frasilheiro D, Matos MG, Salonna F, et al: Mental health outcomes in times of economic recession: a systematic literature review. *BMC Public Health* 2016; 16:115
  19. Kim J-H, Desai E, Cole MB: How the rapid shift to telehealth leaves many community health centers behind during the COVID-19 pandemic. *Health Aff Blog*, June 2, 2020
  20. Pfefferbaum B, North CS: Mental health and the Covid-19 pandemic. *N Engl J Med* 2020; 383:510–512
  21. Rajmil L, Fernandez de Sanmamed MJ, Choonara I, et al: Impact of the 2008 economic and financial crisis on child health: a systematic review. *Int J Environ Res Public Health* 2014; 11: 6528–6546
  22. Rothstein J: The Lost Generation? Labor Market Outcomes for Post Great Recession Entrants. Cambridge, MA, National Bureau of Economic Research, 2020. <https://www.nber.org/papers/w27516>
  23. Beidas RS, Stewart RE, Benjamin Wolk C, et al: Independent contractors in public mental health clinics: implications for use of evidence-based practices. *Psychiatr Serv* 2016; 67:710–717
  24. Hatchett GT, Coaston SC: Surviving fee-for-service and productivity standards. *J Ment Health Couns* 2018; 40:199–210
  25. Arnold D, Bongiovi JR: Precarious, informalizing, and flexible work: transforming concepts and understandings. *Am Behav Sci* 2013; 57:289–308
  26. Adams DR, Williams NJ, Becker-Haimes EM, et al: Therapist financial strain and turnover: interactions with system-level implementation of evidence-based practices. *Adm Policy Ment Health Ment Health Serv Res* 2019; 46:713–723
  27. Luther L, Gearhart T, Fukui S, et al: Working overtime in community mental health: associations with clinician burnout and perceived quality of care. *Psychiatr Rehabil J* 2017; 40:252–259
  28. Paris M Jr, Hoge MA: Burnout in the mental health workforce: a review. *J Behav Health Serv Res* 2010; 37:519–528
  29. Yang Y, Hayes JA: Causes and consequences of burnout among mental health professionals: a practice-oriented review of recent empirical literature. *Psychotherapy* 2020; 57:426–436
  30. Doran JM, Kraha A, Marks LR, et al: Graduate debt in psychology: a quantitative analysis. *Train Educ Prof Psychol* 2016; 10:3–13
  31. Yoon I: Debt burdens among MSW graduates: a national cross-sectional study. *J Soc Work Educ* 2012; 48:105–125
  32. 2019 Statistics on Social Work Education in the United States. Alexandria, VA, Council on Social Work Education, 2020. [https://cswe.org/getattachment/Research-Statistics/2019-Annual-Statistics-on-Social-Work-Education-in-the-United-States-Final-\(1\).pdf.aspx](https://cswe.org/getattachment/Research-Statistics/2019-Annual-Statistics-on-Social-Work-Education-in-the-United-States-Final-(1).pdf.aspx)
  33. Behavioral Health Workforce Projections, 2017–2030. Rockville, MD, Health Resources and Services Administration, 2020. <https://bhwh.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/bh-workforce-projections-fact-sheet.pdf>
  34. Zivin K, Paczkowski M, Galea S: Economic downturns and population mental health: research findings, gaps, challenges and priorities. *Psychol Med* 2011; 41:1343–1348
  35. Brignone E, George DR, Sinoway L, et al: Trends in the diagnosis of diseases of despair in the United States, 2009–2018: a retrospective cohort study. *BMJ Open* 2020; 10:e037679
  36. Collishaw S: Annual research review: secular trends in child and adolescent mental health. *J Child Psychol Psychiatry* 2015; 56: 370–393
  37. Druss BG, Bornemann T, Fry-Johnson YW, et al: Trends in mental health and substance abuse services at the nation's community health centers: 1998–2003. *Am J Public Health* 2008; 98(suppl 9):S126–S131
  38. Kilpatrick DG, Resnick HS, Milanak ME, et al: National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. *J Trauma Stress* 2013; 26: 537–547
  39. Mojtabai R, Olfson M, Han B: National trends in the prevalence and treatment of depression in adolescents and young adults. *Pediatrics* 2016; 138:e20161878
  40. Mojtabai R, Olfson M: National trends in mental health care for US adolescents. *JAMA Psychiatry* 2020; 77:703–714
  41. Olfson M, Wang S, Wall M, et al: Trends in serious psychological distress and outpatient mental health care of US adults. *JAMA Psychiatry* 2019; 76:152–161
  42. Pellegrini LC, Rodriguez-Monguio R: Unemployment, Medicaid provisions, the mental health industry, and suicide. *Soc Sci J* 2013; 50:482–490
  43. Venkataramani AS, Bair EF, O'Brien RL, et al: Association between automotive assembly plant closures and opioid overdose mortality in the United States: a difference-in-differences analysis. *JAMA Intern Med* 2020; 180:254–262
  44. Berger RP, Fromkin JB, Stutz H, et al: Abusive head trauma during a time of increased unemployment: a multicenter analysis. *Pediatrics* 2011; 128:637–643
  45. Lee D, Brooks-Gunn J, McLanahan SS, et al: The Great Recession, genetic sensitivity, and maternal harsh parenting. *Proc Natl Acad Sci USA* 2013; 110:13780–13784
  46. Schneider W, Waldfogel J, Brooks-Gunn J: The Great Recession and risk for child abuse and neglect. *Child Youth Serv Rev* 2017; 72:71–81
  47. Wood JN, French B, Fromkin J, et al: Association of pediatric abusive head trauma rates with macroeconomic indicators. *Acad Pediatr* 2016; 16:224–232
  48. Guzman A, Garcia-Rodriguez O, Ramos-Melendez E, et al: The impact of unemployment on the admission rate secondary to intentional penetrating trauma in Puerto Rico. *P R Health Sci J* 2017; 36:118–119
  49. Medel-Herrero A, Shumway M, Smiley-Jewell S, et al: The impact of the Great Recession on California domestic violence events, and related hospitalizations and emergency service visits. *Prev Med* 2020; 139:106186
  50. Schneider D, Harknett K, McLanahan S: Intimate partner violence in the great recession. *Demography* 2016; 53:471–505
  51. Pereto A: Pediatric PTSD as a Diagnosis—and an Opportunity. Watertown, MA, athenahealth, 2018. <https://www.athenahealth.com/knowledge-hub/clinical-trends/pediatric-ptsd-diagnosis-%E2%80%93-and-opportunity>
  52. Holland KM, Jones C, Vivolo-Kantor AM, et al: Trends in US emergency department visits for mental health, overdose, and violence outcomes before and during the COVID-19 pandemic. *JAMA Psychiatry* 2021; 78:372–379
  53. Horesh D, Brown AD: Traumatic stress in the age of COVID-19: a call to close critical gaps and adapt to new realities. *Psychol Trauma* 2020; 12:331–335

54. Sidpra J, Abomeli D, Hameed B, et al: Rise in the incidence of abusive head trauma during the COVID-19 pandemic. *Arch Dis Child* 2021; 106:e14
55. Morse G, Salyers MP, Rollins AL, et al: Burnout in mental health services: a review of the problem and its remediation. *Adm Policy Ment Health* 2012; 39:341–352
56. Hensel JM, Ruiz C, Finney C, et al: Meta-analysis of risk factors for secondary traumatic stress in therapeutic work with trauma victims. *J Trauma Stress* 2015; 28:83–91
57. Bride BE: Prevalence of secondary traumatic stress among social workers. *Soc Work* 2007; 52:63–70
58. Bride BE, Smith Hatcher S, Humble MN: Trauma training, trauma practices, and secondary traumatic stress among substance abuse counselors. *Traumatology* 2009; 15:96–105
59. Choi G-Y: Secondary traumatic stress of service providers who practice with survivors of family or sexual violence: a national survey of social workers. *Smith Coll Stud Soc Work* 2011; 81: 101–119
60. Lee JJ, Gottfried R, Bride BE: Exposure to client trauma, secondary traumatic stress, and the health of clinical social workers: a mediation analysis. *Clin Soc Work J* 2018; 46:228–235
61. Gaal N: Comparing burnout levels experienced by therapists working in a mental health organization versus therapists working in private practice. *J Psychol Issues Organ Cult* 2010; 1: 31–55
62. Rupert PA, Kent JS: Gender and work setting differences in career-sustaining behaviors and burnout among professional psychologists. *Prof Psychol Res Pr* 2007; 38:88
63. Richardson T, Elliott P, Roberts R: The relationship between personal unsecured debt and mental and physical health: a systematic review and meta-analysis. *Clin Psychol Rev* 2013; 33: 1148–1162
64. Ong Q, Theseira W, Ng IYH: Reducing debt improves psychological functioning and changes decision-making in the poor. *Proc Natl Acad Sci USA* 2019; 116:7244–7249
65. Destin M, Svoboda RC: Costs on the mind: the influence of the financial burden of college on academic performance and cognitive functioning. *Res High Educ* 2018; 59:302–324
66. Schilbach F, Schofield H, Mullainathan S: The psychological lives of the poor. *Am Econ Rev* 2016; 106:435–440
67. Philadelphia County, Pennsylvania: Population Estimates, July 1, 2019. Washington, DC, US Census Bureau, Quick Facts, 2019. <https://www.census.gov/quickfacts/fact/table/philadelphiacountypennsylvania#>
68. Philadelphia State of the Child County Profile. Harrisburg, Pennsylvania Partnership for Children, 2020. <https://www.papartnerships.org/wp-content/uploads/2020/09/Philadelphia-2020-State-of-the-Child.pdf>
69. Wade R Jr, Cronholm PF, Fein JA, et al: Household and community-level Adverse Childhood Experiences and adult health outcomes in a diverse urban population. *Child Abuse Negl* 2016; 52:135–145
70. Cronholm PF, Forke CM, Wade R, et al: Adverse childhood experiences: expanding the concept of adversity. *Am J Prev Med* 2015; 49:354–361
71. Beidas RS, Adams DR, Kratz HE, et al: Lessons learned while building a trauma-informed public behavioral health system in the City of Philadelphia. *Eval Program Plann* 2016; 59: 21–32
72. Department of Behavioral Health and Intellectual disability Services, Fiscal Year 2016 Budget Testimony, April 29, 2015. Philadelphia, Philadelphia City Council, 2015. <http://phlcouncil.com/wp-content/uploads/2015/12/FY2016-Department-of-Behavioral-Health-and-Intellectual-Disability-Services-Testimony.pdf>
73. Mahon E: Huge budget cuts could hurt people with mental illness, disabilities most, Pa providers fear. *Philadelphia Inquirer*, Sept 10, 2020. <https://www.inquirer.com/politics/pennsylvania/spl/pa-coronavirus-budget-human-services-mental-health-cuts-fear-20200910.html>
74. Oliff P, Mai C, Palacios V: States Continue to Feel Recession's Impact. Washington, DC, Center on Budget and Policy Priorities, 2012. <https://www.cbpp.org/sites/default/files/atoms/files/2-8-08sfp.pdf>
75. John-Baptiste Bastien R, Jongsma HE, Kabadayi M, et al: The effectiveness of psychological interventions for post-traumatic stress disorder in children, adolescents and young adults: a systematic review and meta-analysis. *Psychol Med* 2020; 50: 1598–1612
76. de Arellano MAR, Lyman DR, Jobe-Shields L, et al: Trauma-focused cognitive-behavioral therapy for children and adolescents: assessing the evidence. *Psychiatr Serv* 2014; 65:591–602
77. Morina N, Koerssen R, Pollet TV: Interventions for children and adolescents with posttraumatic stress disorder: a meta-analysis of comparative outcome studies. *Clin Psychol Rev* 2016; 47:41–54
78. Powell BJ, Beidas RS, Rubin RM, et al: Applying the policy ecology framework to Philadelphia's behavioral health transformation efforts. *Adm Policy Ment Health Ment Health Serv Res* 2016; 43:909–926
79. Dillman DA, Smyth JD, Christian LM: Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th ed. Hoboken, NJ, Wiley, 2014
80. Supplemental Appendixes to the Report on the Economic Well-Being of US Households in 2019–May 2020. Washington, DC, Federal Reserve, 2019. <https://www.federalreserve.gov/publications/2020-supplemental-appendixes-2019-Appendix-A-2019-Survey-Questionnaire.htm>
81. Weisz J: Therapist Background Questionnaire. Cambridge, MA, Harvard University, 2013. [https://weiszlabs.fas.harvard.edu/files/jweiszl/files/therapist\\_background-questionnaire\\_9\\_20\\_13.pdf](https://weiszlabs.fas.harvard.edu/files/jweiszl/files/therapist_background-questionnaire_9_20_13.pdf)
82. Maslach C, Jackson SE: Maslach Burnout Inventory Manual, 2nd ed. Palo Alto, CA, Consulting Psychologists Press, 1986
83. Beidas RS, Marcus S, Wolk CB, et al: A prospective examination of clinician and supervisor turnover within the context of implementation of evidence-based practices in a publicly-funded mental health system. *Adm Policy Ment Health* 2016; 43:640–649
84. Bride BE, Robinson MM, Yegidis B, et al: Development and validation of the secondary traumatic stress scale. *Res Soc Work Pract* 2004; 14:27–35
85. Benuto LT, Yang Y, Ahrendt A, et al: The Secondary Traumatic Stress Scale: confirmatory factor analyses with a national sample of victim advocates. *J Interpers Violence* 2021; 36:2572–2591
86. Kellogg MB, Knight M, Dowling JS, et al: Secondary traumatic stress in pediatric nurses. *J Pediatr Nurs* 2018; 43:97–103
87. Mehus CJ, Becher EH: Secondary traumatic stress, burnout, and compassion satisfaction in a sample of spoken-language interpreters. *Traumatology* 2016; 22:249–254
88. Ruglass LM, Hien DA, Hu M-C, et al: Associations between post-traumatic stress symptoms, stimulant use, and treatment outcomes: a secondary analysis of NIDA's Women and Trauma study. *Am J Addict* 2014; 23:90–95
89. Diagnostic and Statistical Manual of Mental Disorders, 4th ed, text revision. Washington, DC, American Psychiatric Association, 2000
90. Becker-Haimes EM, Klein MR, McLeod BD, et al: The TPOCS-self-reported Therapist Intervention Fidelity for Youth (TPOCS-SeRTIFY): a case study of pragmatic measure development. *Implement Res Pract*. 2021; 2:1–9
91. Deblinger E, Mannarino AP, Cohen JA, et al: Trauma-focused cognitive behavioral therapy for children: impact of the trauma narrative and treatment length. *Depress Anxiety* 2011; 28:67–75
92. Last BS, Schriger SH, Timon CE, et al: Using behavioral insights to design implementation strategies in public mental health settings: a qualitative study of clinical decision-making. *Implement Sci Commun*. 2021; 2:1–16



93. Cohen JA, Mannarino AP, Deblinger E: Trauma-focused cognitive-behavioral therapy for traumatized children. *Evid-Based Psychother Child Adolesc*. 2010; 2:295–311
94. Raudenbush SW, Bryk AS: *Hierarchical Linear Models: Applications and Data Analysis Methods*. vol 1. Thousand Oaks, CA, Sage, 2002
95. Bates D, Mächler M, Bolker B, et al: Fitting linear mixed-effects models using lme4. *J Stat Softw* 2015; 67: arXiv:1406.5823v1
96. Auerbach C, Silverstein LB: *Qualitative Data: An Introduction to Coding and Analysis*. New York, New York University Press, 2003
97. Woike BA: Content coding of open-ended responses; in *Handbook of Research Methods in Personality Psychology*. Edited by Robins RW, Fraley CR, Kreuger RF. New York, Guilford, 2007
98. Deacon BJ, Lickel JJ, Farrell NR, et al: Therapist perceptions and delivery of interoceptive exposure for panic disorder. *J Anxiety Disord* 2013; 27:259–264
99. Meza RD, Triplett NS, Woodard GS, et al: The relationship between first-level leadership and inner-context and implementation outcomes in behavioral health: a scoping review. *Implement Sci* 2021; 16:69
100. Cook JM, Schnurr PP, Biyanova T, et al: Apples don't fall far from the tree: influences on psychotherapists' adoption and sustained use of new therapies. *Psychiatr Serv* 2009; 60:671–676
101. Hill M: *Examining Burnout in Community Mental Health Clinicians From a Job Demands-Resource Perspective*. Doctoral dissertation. Minneapolis, Walden University, College of Counselor Education and Supervision, 2020. <https://scholarworks.waldenu.edu/dissertations/8392>
102. Willging CE, Waitzkin H, Lamphere L: Transforming administrative and clinical practice in a public behavioral health system: an ethnographic assessment of the context of change. *J Health Care Poor Underserved* 2009; 20:866–883
103. Trivasse H, Webb TL, Waller G: A meta-analysis of the effects of training clinicians in exposure therapy on knowledge, attitudes, intentions, and behavior. *Clin Psychol Rev* 2020; 80:101887
104. Acock AC: *A Gentle Introduction to Stata*, 4th ed. College Station, TX, Stata Press, 2014
105. Dreison KC, Luther L, Bonfils KA, et al: Job burnout in mental health providers: a meta-analysis of 35 years of intervention research. *J Occup Health Psychol* 2018; 23:18–30
106. Hoge MA, Stuart GW, Morris J, et al: Mental health and addiction workforce development: federal leadership is needed to address the growing crisis. *Health Aff* 2013; 32:2005–2012
107. Selden DR: The effects of staff turnover on psychiatric rehabilitation programs. *Psychiatr Rehabil J* 2010; 34:71–73
108. Lien H-M, Wang P: The timing of childbearing: the role of human capital and personal preferences. *J Macroecon* 2016; 49:247–264
109. Beidas RS, Becker-Haimes EM, Adams DR, et al: Feasibility and acceptability of two incentive-based implementation strategies for mental health therapists implementing cognitive-behavioral therapy: a pilot study to inform a randomized controlled trial. *Implement Sci* 2017; 12:148
110. Peterson U, Bergström G, Samuelsson M, et al: Reflecting peer-support groups in the prevention of stress and burnout: randomized controlled trial. *J Adv Nurs* 2008; 63:506–516
111. Zubatsky M, Pettinelli D, Salas J, et al: Associations between integrated care practice and burnout factors of primary care physicians. *Fam Med* 2018; 50:770–774
112. Boyd D, Lankford H, Loeb S, et al: The narrowing gap in New York City teacher qualifications and its implications for student achievement in high-poverty schools. *J Policy Anal Manage* 2008; 27:793–818
113. Pennsylvania Mental Health Care Workforce Shortage: Challenges and Solutions: A Staff Study. Harrisburg, General Assembly of the Commonwealth of Pennsylvania, Joint State Government Commission, 2020. [http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2020-06-04%20HR193\\_Mental%20Health%20Workforce.pdf](http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2020-06-04%20HR193_Mental%20Health%20Workforce.pdf)
114. Manfreda KL, Bosnjak M, Berzelak J, et al: Web surveys versus other survey modes: a meta-analysis comparing response rates. *Int J Mark Res* 2008; 50:79–104
115. Shih T-H, Fan X: Comparing response rates in e-mail and paper surveys: a meta-analysis. *Educ Res Rev* 2009; 4:26–40
116. Beidas RS, Williams NJ, Becker-Haimes EM, et al: A repeated cross-sectional study of clinicians' use of psychotherapy techniques during 5 years of a system-wide effort to implement evidence-based practices in Philadelphia. *Implement Sci* 2019; 14: 1–13
117. Lallukka T, Pietiläinen O, Jäppinen S, et al: Factors associated with health survey response among young employees: a register-based study using online, mailed and telephone interview data collection methods. *BMC Public Health* 2020; 20:184
118. Last BS, Rudd BN, Gregor CA, et al: Sociodemographic characteristics of youth in a trauma focused-cognitive behavioral therapy effectiveness trial in the city of Philadelphia. *J Community Psychol* 2020; 48:1273–1293