Raising Awareness on Clinician Burnout: A Quality Improvement Project

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NURS 703B: DNP Project

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Abstract

Background & Literature Review: More than half of U.S. healthcare providers and trainees across specialties report symptoms of professional burnout. Burnout has numerous deleterious effects on clinicians, patients, and the healthcare system.

Purpose: This project's aims are twofold: the first is to examine the state of burnout among psychiatric providers at an urban psychiatric hospital. The second is to educate and encourage advocacy at the organizational level through the creation and delivery of an evidence-based presentation for hospital providers and senior leadership team (SLT).

Methods: Providers employed by the hospital will be surveyed before and after the delivery of an evidence-based educational seminar led by a doctoral nurse practitioner (DNP) student. Included in the survey is a psychometrically validated burnout measurement tool, as well as knowledge-based questions about providers' understanding of burnout etiology, presentation, and mitigation at the individual and organizational levels. Data on participants' readiness to collaborate and advocate for burnout-related quality improvement following the presentation will also be collected.

Implementation Plan: Project planning and production of a written proposal will begin in March of 2021. Implementation of this project will commence in November 2021, and PDSA cycles will run through the end of January 2022. Data will be analyzed and interpreted during February 2022, and a final paper and presentation will be delivered March 8th, 2022.

Implications & Conclusion: It is our hope that educating providers on burnout risk as well as evidence-based mitigation efforts will empower them to collaborate with each other and their institutions to reduce burnout, which may help prevent future clinician turnover.

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Problem Description

The delivery of safe, effective, valuable, patient-centered healthcare depends on a healthy workforce. The wellbeing of U.S. clinicians is eroding due to an increasing imbalance between job demands and support. In 2019, more than 50% of U.S. physicians and as many as 60% of medical trainees reported appreciable burnout symptoms (National Academies of Sciences, Engineering, and Medicine [NASEM], 2019).

Burnout describes a syndrome of emotional exhaustion, cynicism, and diminished satisfaction from one's work (Maslach & Leiter, 2016). Among clinicians, burnout can lead to poor performance, occupational injury, and a variety of physical and mental health problems (Maslach & Leiter, 2016). Patient outcomes and public health are also negatively affected by clinician burnout (NASEM, 2019). Furthermore, burnout leads to increases in staff turnover, reduced revenue, malpractice litigation, and higher costs for healthcare organizations. For example, clinicians experiencing burnout are twice as likely to leave their jobs, and five times more likely to leave healthcare altogether (NASEM, 2019).

[This paragraph was removed to maintain the implementation site's anonymity.]

Discussions with the hospital's clinicians and senior leadership team (SLT) indicate that burnout remains a major barrier to retaining an adequate workforce. There are currently no formal interventions in place at the hospital to address provider burnout or employee turnover.

Available Knowledge

In 2020, voluntary separation accounted for 93.9% of U.S. clinician turnover (NSI, 2021). Clinicians who resign often cite excessive workload, long hours, inability to take breaks, strained relationships with management, and unsafe staffing ratios as their impetus for leaving (NSI,

2021). These same factors are known causes of burnout (NASEM, 2019). Thus, it is posited that interventions to reduce burnout could also reduce clinician-turnover.

Two systematic reviews with meta-analyses demonstrated meaningful reductions in provider burnout following both clinician-focused and organizational interventions (Panagioti et al., 2017; West et al., 2017). Most studies used the psychometrically validated Maslach Burnout Inventory (MBI) and Oldenburg Burnout Inventory (OLBI) tools to track changes in burnout. Clinician-focused interventions consisted of facilitated small-group discussions and training in stress management, self-care, and communication skills. Organizational interventions were significantly more effective, and involved changes to work environments, clock hours, and workload. Despite their efficacy, organizational interventions were less common due to implementation barriers (Panagioti et al., 2017; West et al., 2017). The authors of these studies concluded that both types of interventions held merit and that improvements as small as a 1-point change in MBI or OLBI score were associated with meaningful differences in burnout-related adverse outcomes (West et al., 2016; Panagioti et al., 2017).

In 2018, the American Psychiatric Association (APA) reviewed a variety of interventions to reduce physician burnout. Most (73.1%) focused on building clinician resilience through stress management and mindfulness practices; 42.1% of these demonstrated a significant reduction in burnout symptoms (APA, 2018). The remaining 26.9% of studies evaluated organizational interventions, such as reduced workload, increased scheduling autonomy, and improved team communication. Of these, 71.4% led to significant reductions in burnout (APA, 2018). The APA (2018) concluded that while organizational interventions are more effective, they are also more difficult to implement. Conversely, clinician-focused interventions are most useful in assessing burnout rates, raising awareness of burnout risk, recognition, and prevention, and have fewer implementation barriers. However, a major drawback to clinician-focused interventions is the implication that burnout is a primarily individual problem rather than an organizational one.

Rationale

The Model for Improvement (MFI) informs this quality improvement (QI) project's design. The MFI employs a process known as Plan, Do, Study, Act (PDSA) cycles. PDSA cycles employ both deductive and inductive learning strategies, allowing for iterative revisions to the intervention (Langley et al., 2009, p. 82). A PDSA cycle begins by identifying a problem and developing a hypothesis to address the root causes. The hypothesis is then tested in a controlled environment, and results of the intervention are analyzed before another test cycle is conducted. Additional cycles often test the hypothesis in a different or larger population, making the MFI an ideal tool for eliciting changes in a macrosystem (e.g., a hospital) by targeting its microsystems (e.g., individual hospital units). See Appendix E for a visual diagram of the MFI.

Specific Aims

By the end of the intervention, 50% of hospital providers will participate in the presentation and complete the OLBI and knowledge acquisition surveys, and 100% of SLT members will participate in the presentation and debriefing session. 100% of participants will report improved understanding in at least one of the four burnout domains, which are defined in the methods section below. At least 25% of providers will rate themselves as more likely to advocate for organizational changes to reduce burnout following the presentation.

Methods

Context

The greatest drivers of provider burnout are structural (see Appendix A for a cause-and-effect diagram on provider burnout). While optimal solutions target the root causes, enacting change at the organizational and systems levels generally involves costly barriers. Individual interventions, while somewhat less effective, are cheaper and easier to employ. The literature recommends that institutions employ both types of intervention concurrently (West et al., 2018).

According to the APA (2018), burnout prevention starts with raising awareness about the issue, facilitating group discussions, enhancing teamwork, and transforming institutional culture. To assist organizations with these feats, the APA offers a free evidence-based toolkit on provider well-being and burnout that will be tailored to our clinical setting's attributes and needs.

There are currently no interventions in place to address provider burnout at this hospital. The organization also faces budgetary constraints and staffing issues. It is hypothesized that a brief educational intervention is the ideal method to begin targeting burnout at this institution.

Intervention

This project sought to raise awareness among psychiatric providers and hospital senior leadership on burnout etiology, manifestations, and evidence-based interventions through the development, implementation, and evaluation of an educational program. The current state of burnout among hospital providers was also evaluated at the request of hospital leadership. A project timeline can be viewed in Appendix B.

Our intervention was delivered in three PDSA cycles, beginning with Child and Adolescent Psychiatry (CAP) providers, followed by adult inpatient and psychiatric emergency (PES) providers, and ending with a presentation to the hospital's SLT. During the first two PDSA cycles, providers' baseline burnout scores were collected using the OLBI (see Appendix C for the OLBI screening tool), and their knowledge of burnout etiology, manifestations, and individual and organizational interventions (hereto designated as *the four domains of burnout,* or simply, *the four domains*) was assessed. Next, providers received a 25-minute PowerPoint presentation on the four domains. Following the presentation, providers completed a post-test survey to assess the presentation's impact on their knowledge, garner feedback about the positive and negative attributes of their work environment, and to help determine the imminent risk of provider turnover at this site. A copy of the pre-test/post-test survey is included in Appendix F.

The third PDSA cycle involved a presentation to the hospital's SLT. Content for the third presentation was modified based on provider data and feedback from the two prior cycles, as well as input from the hospital's Chief Medical Officer (CMO).

Study of the Intervention

Adequate engagement among the hospital's fifty psychiatric providers and four SLT members was needed to raise awareness on burnout, gather meaningful data on the intervention's efficacy, and to assess the state of burnout within the institution. Surveys were administered during the time allotted for the presentation to avoid issues of non-response and to maintain the credibility of data. Debrief sessions with participants at the end of cycles 1 and 2 informed adjustments to subsequent PDSA cycles and elicited additional ideas on burnout mitigation efforts. In PDSA cycle 3, all data from cycles 1 and 2 was de-identified and shared with the SLT.

Measures

The impacts of this intervention were studied in terms of outcome, process, and balancing measures. Outcome measures included: 1) Improvements in providers' understanding of the four burnout domains; 2) Improvements in providers' readiness to advocate for burnout-related organizational change; 3) Feedback about the providers' perceptions of their work environment; 4) Providers' likelihood of resigning in the next 3 years; and 5) The percentage of providers from each unit (CAP, adult inpatient, and PES) whose OLBI responses placed them in the high-burnout category. While the OLBI manual does not designate a cutoff score for burnout risk, research indicates that 98% of psychiatrists with an OLBI score ≥ 35 will have a Patient Health Questionnaire-9 (PHQ-9) score greater than 10, suggesting a diagnosis of major depression (Summers et al., 2020). Providers who scored above 35 on the OLBI were placed in the high-burnout category. Of note, SLT members did not complete the OLBI due to their administrative (rather than provider) roles.

Process measures included 1) Engagement, reflected by the percentage of providers and SLT members in attendance; and 2) Feedback from each cycle about ways to improve.

Balancing measures included 1) The cost of presentation delivery and survey tools, which was $0; and 2) Feedback from the SLT about the quality of the intervention.

Project Evolution

Each PDSA cycle yielded data pertaining to the measures of inquiry listed above. Unfortunately, engagement was lower than anticipated. Small sample sizes and heterogeneity between groups in each PDSA cycle precluded complex statistical analysis. The project evolved based on feedback from previous PDSA cycles. The final debrief session with SLT in cycle 3 shed light on the applicability of this intervention and potential next steps.

Ethical Considerations

This QI project was approved as non-human research by Institutional Review Board (IRB) committees at the project lead's university and at the site of implementation. It was also approved by the hospital's SLT. Providers were informed of the voluntary nature of this training. Survey data was de-identified, with narrative responses categorized thematically.

Results

Comprehensive results from this intervention can be viewed in Appendix D. Many specific aims were met. For example, 100% of SLT members participated in the intervention, and 100% of all participants reported knowledge improvement in at least one of the four burnout domains. 50% of CAP providers, 62.5% of surveyed adult inpatient and PES providers, and 75% of the SLT endorsed increased readiness to advocate for organizational change following the intervention.

The goal of engaging ≥ 50% of the hospital's 50 providers was unmet. Although 100% (n=4) of CAP providers and 100% of the SLT (n=4) participated, only 24% of adult inpatient and PES providers (n=12 out of 50 total) participated. Excellent engagement among CAP providers and SLT may have been due to these clinicians' existing professional relationships with the

project lead. Conversely, adult inpatient and PES providers were unfamiliar with the researcher and learned of the project via a mass email sent by the CMO one week prior to the intervention. Furthermore, PDSA cycle 2 was scheduled during an all-provider meeting the week of the 2021 Christmas Holiday, potentially affecting attendance. Additionally, several of the participating providers in PDSA cycle 2 did not complete the survey question indicating their practice location. As a result, the two provider groups were combined during data analysis (i.e., adult inpatient *and* PES providers), instead of compared separately as originally planned. Ideas for mitigating these issues during future projects will be discussed in the summary section below.

The OLBI scores collected from participants (n=16) provided preliminary evidence on the state of burnout among providers at the hospital. 75% of those surveyed scored within the high burnout range (i.e., ≥ 35). Average OLBI scores among adult inpatient/PES and CAP providers were 36.1 and 40, respectively. CAP providers' higher average may have been due to the smaller sample size, making comparison with the adult inpatient and PES providers difficult.

Only one of sixteen providers surveyed endorsed certainty about remaining in their role for the next three years. 25% of CAP and adult inpatient/PES providers endorsed certainty that they would during this time frame. Again, discrepancies in sample sizes across PDSA cycles complicated comparisons between groups, and incomplete surveys in PDSA cycle 2 hindered our ability to identify nuanced differences among all adult-service providers.

Each PDSA cycle elicited useful information about burnout-related risk and protective factors in the hospital work environment. Participants' responses were categorized thematically; concepts mentioned more than once were included in the data set. A strong sense of teamwork was the most frequently cited protective factor. The most frequently cited risk factor for adult inpatient and PES providers was workflow interruptions; for CAP providers, poor work/life balance and scheduling issues were the most common risk factors.

The purpose of the project evolved from gathering statistical data to eliciting meaningful conversations about burnout among and between the project committee, hospital providers, and SLT. This will be discussed in greater detail below.

Discussion

Summary

This project was successful in raising awareness among hospital providers and leadership about the causes, manifestations, and evidence-based interventions pertaining to provider burnout. It was also effective in motivating participants to advocate for further interventions at the organizational level. Additionally, our OLBI results provided preliminary quantitative data on the state of burnout within the institution, and qualitative feedback from providers shed light on working conditions within the hospital, as well as the risk of provider turnover in the next three years. The project did not achieve its goal of garnering at least 50% engagement from providers, though it is difficult to qualify our engagement rate of 24% due to a lack of data on usual attendance at all-provider meetings. In the future, we recommend identifying a baseline attendance rate prior to implementing this type of intervention. We also recommend efforts to enhance buy-in as a means of collecting a more robust data set, such as advertising the presentation earlier and more often, and offering refreshments or other small tokens of appreciation for participation. Additionally, distributing a virtual recording of the presentation to those unable to attend, along with an incentive for survey completion, may be beneficial.

Positive feedback from each PDSA cycle suggested that the intervention was needed at the implementation site. The final debrief session with hospital leadership revealed this group's interest in developing a healthy workplace environment. It also highlighted the systemic issues that hospital administrators face in addressing burnout.

Interpretation & Limitations

Although our engagement goal was not achieved, all participants endorsed significant learning from this intervention. Providers' OLBI scores indicate that burnout is a genuine problem at this institution and validates the need for our intervention. The SLT appreciated feedback from providers regarding their work environment, as well as their likelihood of resigning in the next three years given that turnover has been an ongoing problem. It was to our benefit that the hospital's new CMO, formerly a provider, took a keen interest in this project. The hospital also received a financial grant during the final month of project implementation, some of which may be allocated to burnout-reduction efforts inspired by this project.

Where this educational intervention fell short was in identifying and addressing its target audience. In hindsight, the content used to design our intervention may pertain to larger institutions with the resources to fund costly organizational interventions. There remains a paucity of scientific evidence on low-cost organizational interventions for burnout beyond raising awareness. The literature suggests that lack of national consensus on the definition of burnout is partially to blame for this, in addition to the fact that other conceptual terms related this phenomenon may be used instead (e.g., *compassion fatigue*).

Conversations with hospital leadership in PDSA cycle 3 also highlighted the fact that burnout prevention cannot be delegated to organizations alone, regardless of administrators' desire to address the issue. Clinician burnout begins at the systems level and should be targeted at its source in addition to intervening at the organizational and individual levels. Our nation's for-profit model of healthcare prioritizes bottom lines over the wellbeing of people—patients and clinicians alike. Collaboration and advocacy at the policy level is desperately needed to address this national problem. Individuals and organizations are encouraged to form a united front in addressing systemwide problems.

Conclusion

Raising awareness on burnout through education, facilitated discussions, and provider feedback is a fiscally responsible and effective way to begin addressing this problem within

healthcare organizations. Burnout-related interventions should be tailored to their organizations and their financial resources. Changes are needed at the systems-level to address this growing epidemic among healthcare workers and advocacy is recommended. Future interventions at this hospital should incentivize engagement to elicit a more substantial data set. They should also prioritize meeting with hospital leadership during project's planning to determine the site's most pertinent needs and determine the financial resources it can allocate toward addressing burnout.

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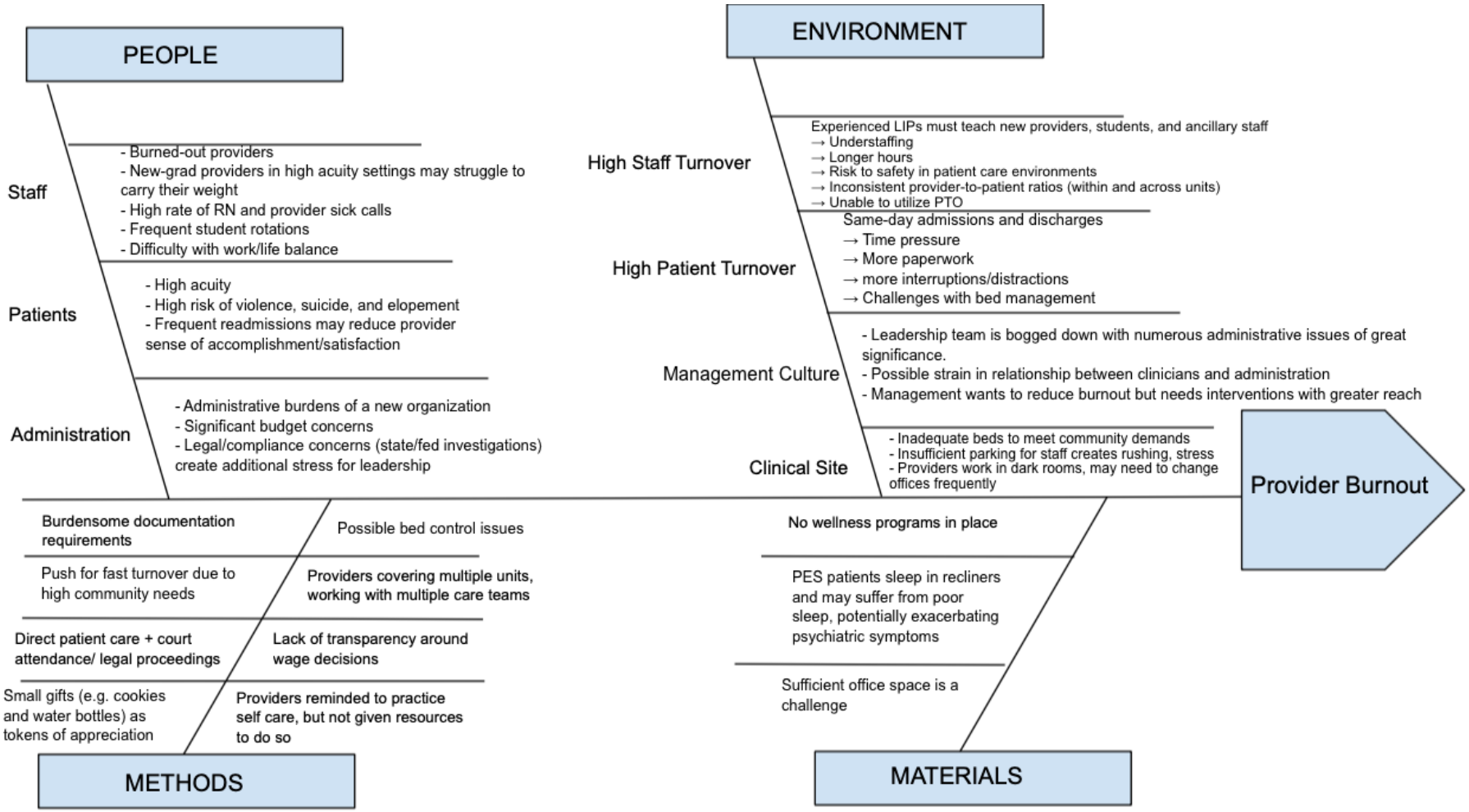
[Reference redacted.]

Appendix A: Clinician Burnout Cause & Effect Diagram



Appendix B: Project Timeline

DNP Project Timeline (Final Presentation Date: June 2022)

	May '21	Jun '21	Jul '21	Aug '21	Sept 21	Oct '21	Nov '21	Dec-Mar '21-'22
Finalize project design and approach (703A)				x				
Complete IRB determination or approval (703A)					x			
PDSA Cycle 1 (703B)						x		
PDSA Cycle 2 (703B)						x		
PDSA Cycle 3 (703B)							x	
Final data analysis (703B)								x
Write sections 13-17 of final paper (703B)								x
Prepare for project dissemination (703B)								x

Appendix C: Oldenburg Burnout Inventory (OLBI)

Instructions: Below you find a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement by selecting the number that corresponds with each statement.

		strongly agree	*agree*	*disagree*	*strongly disagree*
1.	I always find new and interesting aspects in my work *(D)*	*1*	*2*	*3*	*4*
2.	There are days when I feel tired before I arrive at work *(E.R.)*	*1*	*2*	*3*	*4*
3.	It happens more and more often that I talk about my work in a negative way *(D.R)*	*1*	*2*	*3*	*4*
4.	After work, I tend to need more time than in the past in order to relax and feel better *(E.R)*	*1*	*2*	*3*	*4*
5.	I can tolerate the pressure of my work very well *(E)*	*1*	*2*	*3*	*4*
6.	Lately, I tend to think less at work and do my job almost mechanically *(D.R)*	*1*	*2*	*3*	*4*
7.	I find my work to be a positive challenge *(D)*	*1*	*2*	*3*	*4*
8.	During my work, I often feel emotionally drained *(E.R.)*	*1*	*2*	*3*	*4*
9.	Over time, one can become disconnected from this type of work *(D.R)*	*1*	*2*	*3*	*4*
10.	After working, I have enough energy for my leisure activities *(E)*	*1*	*2*	*3*	*4*
11.	Sometimes I feel sickened by my work tasks *(D.R)*	*1*	*2*	*3*	*4*
12.	After my work, I usually feel worn out and weary *(E.R)*	*1*	*2*	*3*	*4*
13.	This is the only type of work that I can imagine myself doing *(D)*	*1*	*2*	*3*	*4*
14.	Usually, I can manage the amount of my work well *(E)*	*1*	*2*	*3*	*4*
15.	I feel more and more engaged in my work *(D)*	*1*	*2*	*3*	*4*
16.	When I work, I usually feel energized *(E)*	*1*	*2*	*3*	*4*

Note: Disengagement items are 1, 3(R), 6(R), 7, 9(R), 11(R), 13, 15. Exhaustion items are 2(R), 4(R), 5, 8(R), 10, 12(R), 14, 16. (R) means reversed item when the scores should be such that higher scores indicate more burnout.

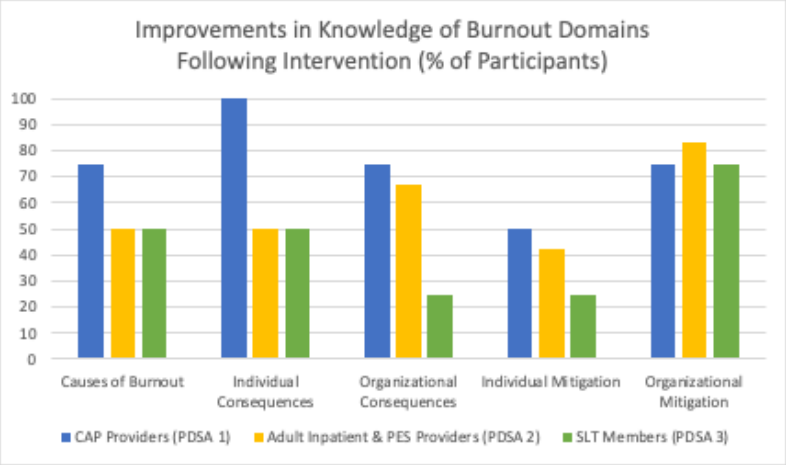
disengagement sub-total: ***exhaustion sub-total:*** ***full scale total:***

Delgadillo et al (2018) reported "Therapists are identified as having low, medium or high OLBI-D scores, based on scores above or below 1 standard deviation of the mean (M = 2.15, SD = 0.52; ≤1.62 = low, 1.63 to 2.67 = medium, ≥2.68 = high)."

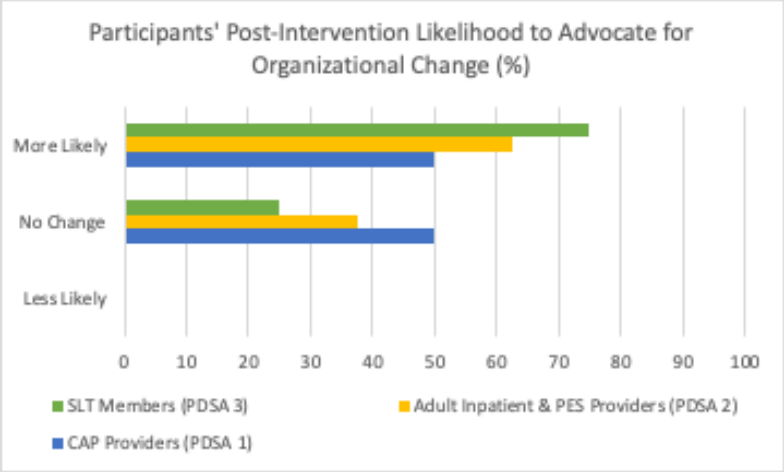
Appendix D: Results

Outcome Measures

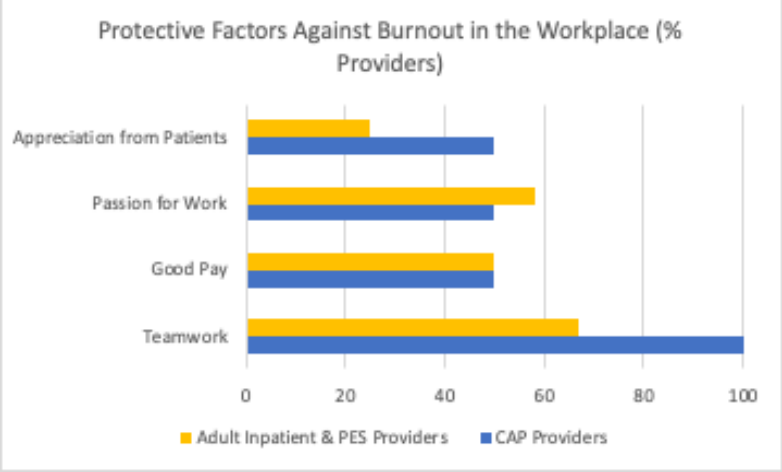
Improvements in knowledge of the four burnout domains following the intervention:



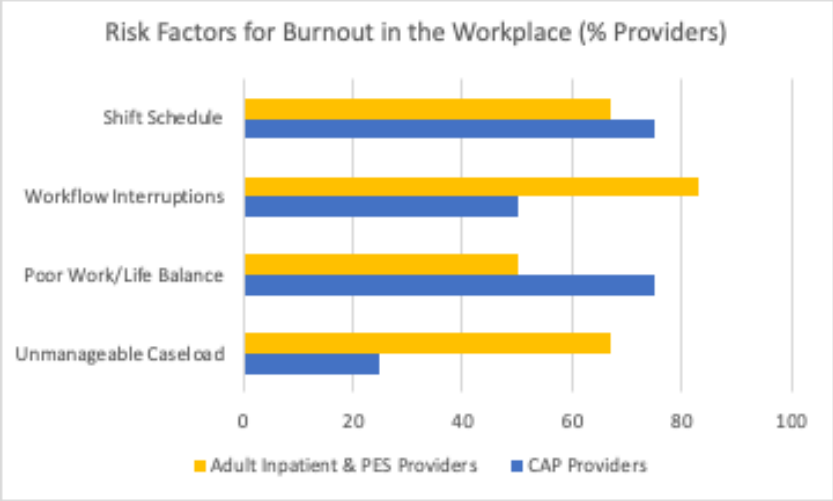
Changes in participants' likelihood to advocate for organizational change following the intervention:



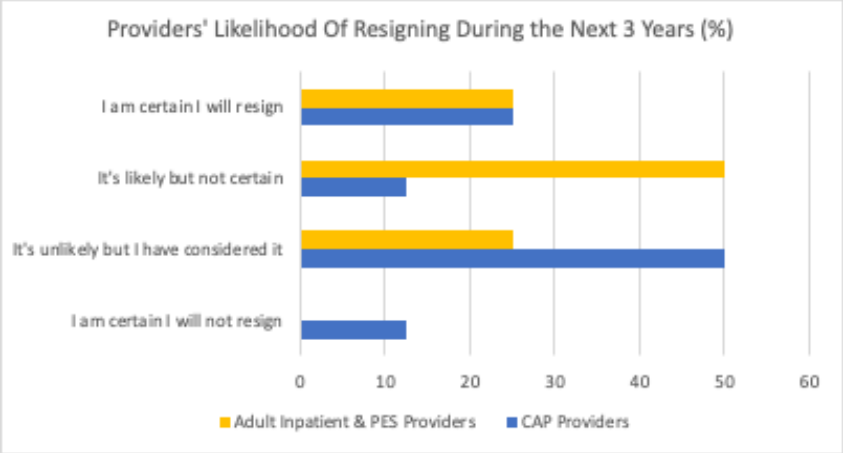
Work-related protective factors against burnout (themes in providers' descriptive responses):



Work-related risk factors for burnout (themes in providers' descriptive responses):



Providers' likelihood of resigning from their jobs in the next 3 years:

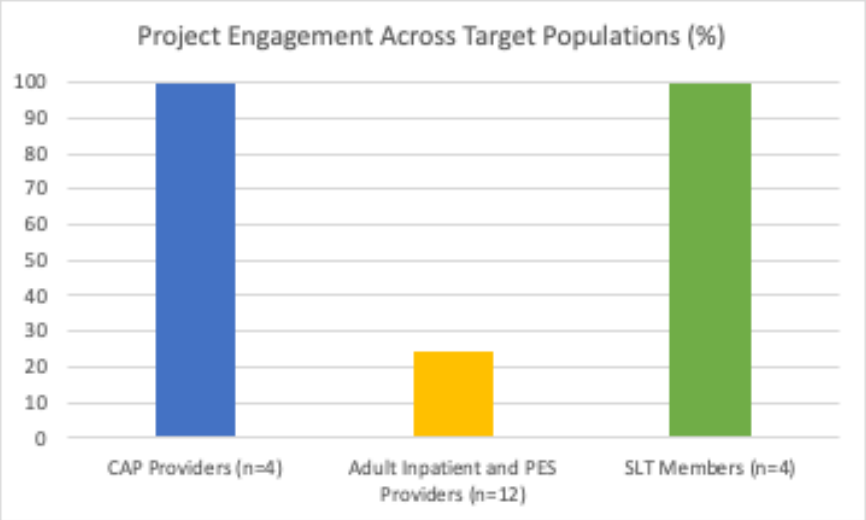


Providers' OLBI Scores and Averages:

Participant Data	Adult Inpatient & PES Providers	CAP Providers
Participant 1	42	44
Participant 2	41	39
Participant 3	43	41
Participant 4	22	36
Participant 5	44	
Participant 6	39	
Participant 7	34	
Participant 8	33	

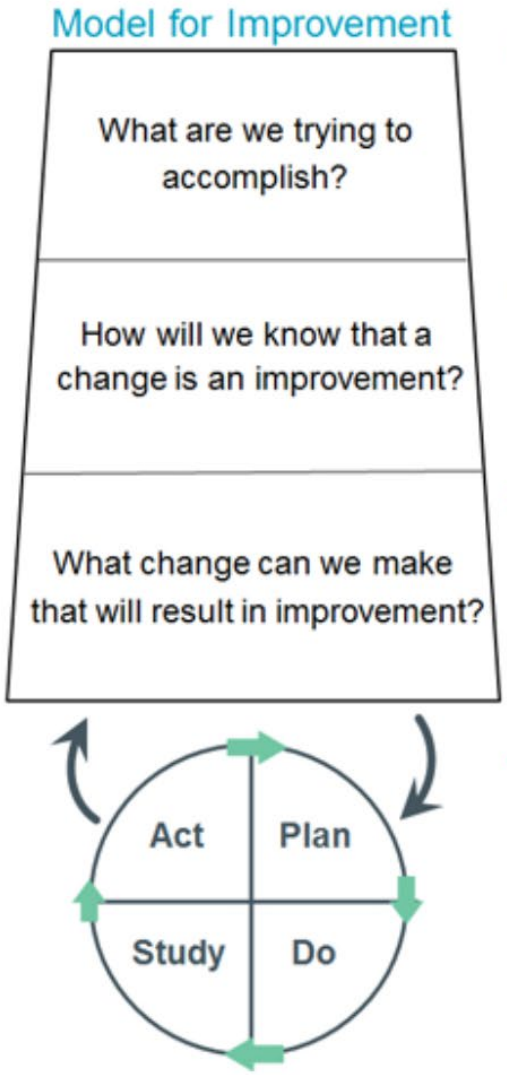
Participant 9	28	
Participant 10	31	
Participant 11	40	
Participant 12	36	
Average OLBI Score	**36.08333333**	**40**

Process Measures
Percentage of team members from each group who attended the presentation and completed the surveys (i.e., engagement/buy-in)



Balancing Measures
Please see the Discussion section of this paper.

Appendix E: Model for Improvement (MFI)



Setting Aims

The aim should be time-specific and measurable; it should also define the specific population of patients or other system that will be affected.

Establishing Measures

Teams use quantitative measures to determine if a specific change actually leads to an improvement.

Selecting Changes

Ideas for change may come from those who work in the system or from the experience of others who have successfully improved.

Testing Changes

The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change in the real work setting — by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method adapted for action-oriented learning.

Implementing Changes

After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the team may implement the change on a broader scale — for example, for an entire pilot population or on an entire unit.

Spreading Changes

After successful implementation of a change or package of changes for a pilot population or an entire unit, the team can spread the changes to other parts of the organization or in other organizations.

Institute for Healthcare Improvement [IHI], 2022.

Appendix F: Pre-Test/Post-Test Survey

Please see attached document titled Pre-Test/Post-Test Survey