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Examining Assessment Tools to Predict Burnout Among Healthcare Practitioners and Students

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Examining Assessment Tools to Predict Burnout Among Healthcare Practitioners and Students

Abstract

The U.S. health system is stretched thin by pressures to expand service delivery and improve outcomes while reducing costs. This pressure is intensified by global health crises and other factors, resulting in further reductions in the healthcare workforce due to burnout. The strain leaves healthcare practitioners at risk of experiencing negative consequences of burnout, even death [1]. This study explored the correlations between three validated assessment tools to determine if early signs of burnout in healthcare practitioners and students can be identified succinctly, thus expanding the current body of evidence on the strengths of environments supporting career retention and healthcare practitioners' long-term well-being. Results found a statistically significant ($\alpha = 0.05$), strongly positive correlation (.621) between compassion satisfaction, a subscale of the Professional Quality Of Life (ProQOL), and the Satisfaction With Life Scale (SWLS), along with a statistically significant ($\alpha = 0.05$), strongly negative (-.552) correlation between the compassion satisfaction and burnout subscales of the ProQOL. Organizational changes toward practitioner and student thriving can prevent and substantially reduce burnout, fostering academic and workplace environments conducive to practitioner thriving, leading to better overall patient care.

Keywords

Compassion satisfaction, Burnout prevention, Well-being, Healthcare practitioners, Healthcare students, Occupational stress

Introduction

The U.S. healthcare system is under pressure to expand service delivery, improve health outcomes, and reduce costs [2]. This puts healthcare practitioners at increased risk of burnout syndrome due to societal, cultural, structural, and organizational factors [3], given that healthcare careers, by nature, prioritize the well-being of others. The World Health Organization defines burnout syndrome as prolonged emotional exhaustion from work-related stress that affects mental and physical health [4]. After more than forty years of research on burnout, the initial signs of the syndrome are thought to begin manifesting from interpersonal relationships and being in consistent contact with patients [5], then is further compounded by disproportionate workloads, redundant administrative tasks, limited influence over daily schedules, and deficiencies in organizational support [3].

Burnout is not exclusive to practicing healthcare providers but also to students in academic healthcare programs. The current body of research has identified a high prevalence of burnout and depression in medical students and residents, with rates higher than those of age-similar individuals pursuing other careers [2]. The cumulative experience of working in organizations and academic environments with high administrative and clinical demands causes mental, physical, and emotional exhaustion**.**

The Medscape Physician Burnout & Depression Report 2022: Stress, Anxiety and Anger "found a five-percentage point increase in burnout overall, from 42% in 2020 to 47% in 2021, with an increase in ER physician burnout from 43% to 60% in 2021" [6].

Researchers have also compared the U.S. Health systems to those systems in other wealthy nations (Australia, Canada, and seven European countries) as defined by the

Organization for Economic Co-operation and Development (OECD) and found that “Despite spending far more money than any peer nation, Americans live shorter lives and often face more barriers to care. The U.S. has just 2.7 practicing physicians per 1,000 residents, compared to an average of 3.9 among peer nations, and the U.S. has only 0.14 psychiatrists per 1,000, the second lowest of all peer nations” [7].

The U.S. Surgeon General’s Advisory on Building a Thriving Healthcare Workforce identifies the burdensome nature of administrative tasks as a factor, among others, which influences burnout, stating, “Workplace systems cause burnout among health workers. There are a range of societal, cultural, structural, and organizational factors that contribute to burnout among health workers. Some examples include: excessive workloads, administrative burdens, limited say in scheduling, and lack of organizational support.” [3].

Administrative and clinical tasks are also burdensome for students in healthcare programs. These demands often accompany additional factors contributing to burnout, including low or unpaid direct patient-care internships, long hours, interactions with patients’ support networks, inexperience, and limited coping resources [8]. While the data referenced thus far mostly reflects physician and medical student experiences, burnout syndrome impacts practitioners across healthcare domains and illustrates the need for early intervention to address the growing problem.

When expanding the context of burnout to healthcare practitioners outside of medical professions and training programs, research becomes narrow yet demonstrates similar findings. For instance, the first national study that investigated burnout syndrome and clinical work settings in Couple and Marriage and Family Therapy (C/MFT) trainees found that more than half of the surveyed trainees reported various levels of burnout [9]. Additionally, “MFTs working in

agencies may experience significant incongruence between the agency's worldview and their own theoretical orientation. Thus, MFTs committed to practicing congruently with systems theory may face institutional barriers to this practice and, feeling powerless to change these barriers, experience increased burnout" [10], as burnout is particularly pronounced for psychotherapy professionals working in community agencies or public sector managed care settings, where trainees are commonly placed [11] revealing the breadth of challenges faced by healthcare practitioners in the U.S.

Even though burnout has been studied for over four decades, research gaps remain in understanding early detection. Researchers assessing the predictors of burnout looked at 141 studies that evaluated a range of burnout predictors, with the presence and absence of associations and determined that the experience has a multidimensional construct. Workplace factors such as workloads, perceived support from leadership, work/life balance, and job autonomy had the strongest associations with the risk for burnout. This evaluation also concluded that mental health factors and physical health risks may increase the risk of developing burnout syndrome; however, associations for the predictive nature of these conditions remain unclear due to limited research addressing this question [12].

While other tools exist to measure the presence of burnout more directly, this research chose to explore the correlation between the subscales of the Quality of Life (ProQOL), a thirty-item self-assessment to rate compassion satisfaction (defined as job satisfaction from the pleasure derived from doing work well), burnout, and secondary/vicarious trauma [13], the Satisfaction with Life Scale (SWLS), a five item self-assessment tool for scoring global satisfaction with life [14], and the Self-Compassion Scale Short Form (SCS-SF), a 12-item self-assessment to score an individual's capacity for holding their own feelings of suffering with a

sense of warmth, connection, and concern [15], to capture data reflective of the multidimensional experience of healthcare practitioners and healthcare graduate students to identify early signs of the syndrome, which may produce a path toward early intervention, more self-assessment, and improved access to support resources. These correlation results may lead to improved career retention, longevity in direct patient care, and improved quality of patient care by reducing the practitioners' burnout experiences.

The research aims to answer two questions: (1) Are there significant correlations between the study scales? (2) Can correlations, if found, identify early signs of burnout? This aim will build on current knowledge of burnout for planning and developing proactive strategies for identifying healthcare professionals and students needing support to prevent burnout. It also provides insights into opportunities for connecting them to appropriate resources before a disruption in patient care occurs.

Adding information to the current body of evidence serves to identify how organizations can prevent and reduce the incidents of burnout that result in health practitioners leaving direct patient care, transitioning careers, and changeover in the academic field of study by students. Seeking to determine if correlations exist between the ProQOL subscales, SWLS, and SCS-SF can illuminate a path from simply reducing burnout to creating work and academic environments where practitioners and students can thrive. Any correlation found may influence increased self-awareness in healthcare practitioners, increased organizational awareness, and empowerment of early conversations for prioritizing the needs of the healthcare practitioners and students before stepping out of patient care or academic pursuits is necessary, thus improving patient care overall.

Methods

The approach chosen for this research was quantitative, using a one-time, de-identified, forty-eight item combined survey of a consent item and the three validated survey tools. These forty-eight items were divided into four pages, resulting in about forty-five minutes of volunteer engagement for this study. The survey was created in Qualtrics, a digital survey delivery tool, using the original questions and scored with original metrics developed by their respective authors.

This approach made delivery to participants via email convenient and removed the primary investigator's potential bias, preserving the survey's reliability and validity. It also allowed participants to answer freely without external influence and meet time constraints for quantitative data collection and analysis, as only correlations between the surveys were being studied.

The study was structured as a correlational design to explore the relationships between ProQOL subscales, SWLS, and the SCS-SF. This study used a convenience sample of thirty-nine healthcare practitioners in an academic doctoral program. This group was invited to participate in the research due to time constraints, limited financial resources, and ease of access to the qualifying study population for the principal investigator.

An email invitation was sent to thirty-nine healthcare practitioners enrolled in an academic doctoral program at the University of the Pacific. Individuals in this population already fit the study inclusion criteria of being eighteen years or older and enrolled as a health science graduate student and/or being a mental health professional or a healthcare professional.

The survey data set was composed of forty-eight items and consisted of four pages. The study's first page provided research information and a participant consent question. The second page of the survey was the ProQOL subscales, which consisted of thirty items that assessed compassion satisfaction, burnout, and secondary/vicarious trauma [13]. The third page of the survey was the SWLS, which consisted of five items that assessed global satisfaction with life [14]. The final page of the survey was the SCS-SF, which consisted of twelve items to assess an individual's capacity for holding their own feelings of suffering with a sense of warmth, connection, and concern [15].

Participants were not informed of the scales' names. Instead, they were given general information about the study on the consent page and instructed that they could answer survey items in their entirety, skip survey items, or discontinue the survey at any point.

The survey was available to invited participants for two weeks. Ten participants completed the study, resulting in a participation rate of about 25% among the identified group. This participation rate was likely due to the study's length and timing of availability.

Results

Data was analyzed using Kendall's tau rank correlation coefficient for nonparametric correlations.

Table 1: Descriptive Statistics of the Sample

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Compassion Satisfaction Scale	82.2000	12.45258	10
Burnout Scale	44.2000	9.25923	10

Secondary Trauma Scale	43.6000	8.93433	10
Satisfaction With Life	71.3000	17.60713	10
Self-Compassion Short Form	53.38	9.899	8

Table 2 demonstrates the correlation results. While weaker correlations are present between the scales evaluated, there is a statistically significant ($\alpha = 0.05$), strongly positive correlation (.621) between compassion satisfaction, a subscale of ProQOL, and the SWLS. There is also a statistically significant ($\alpha = 0.05$), strongly negative correlation (-.552) between the compassion satisfaction and burnout subscales of the ProQOL. Notably, no significant correlations are present between the secondary/vicarious trauma scale of the ProQOL, and other scales assessed in this study.

Table 2: Correlations with Kendall's Tau

		Compassion Satisfaction Scale	Burnout Scale	Secondary Trauma Scale	Satisfaction With Life	Self-Compassion Short Form
Compassion Satisfaction Scale	Correlation Coefficient	1.000	-.552*	.184	.621*	-.333
	Sig. (2-tailed)	.	.030	.469	.015	.258
	N	10	10	10	10	8
Burnout Scale	Correlation Coefficient	-.552*	1.000	.209	-.442	.415
	Sig. (2-tailed)	.030	.	.413	.084	.164
	N	10	10	10	10	8
Secondary Trauma Scale – no significant correlations	Correlation Coefficient	.184	.209	1.000	.209	.000
	Sig. (2-tailed)	.469	.413	.	.413	1.000
	N	10	10	10	10	8
Satisfaction With Life	Correlation Coefficient	.621*	-.442	.209	1.000	-.453
	Sig. (2-tailed)	.015	.084	.413	.	.129

	N	10	10	10	10	8
Self-Compassion Short Form	Correlation Coefficient	-.333	.415	.000	-.453	1.000
	Sig. (2-tailed)	.258	.164	1.000	.129	.
	N	8	8	8	8	8

*. Correlation is significant at the 0.05 level (2-tailed).

Discussion

The University of the Pacific Institutional Review Board evaluated and granted this study exempt status. Informed consent was acquired by participants' affirmative agreement to the consent question on the survey's first page. Participants were provided with an explanation of the study and its purpose. They were also offered the opportunity to ask questions and receive answers by being given the primary investigator's contact information before completing the survey. Participants were also informed that engagement in the study was entirely voluntary and that withdrawing consent and discontinuing participation in the survey at any time was an option.

To protect participant privacy and mitigate potential harm, no identifying information or other materials were collected, and any secondary identifying information, such as email addresses, was removed from survey responses. Data collected was reported in aggregate, and research data will be maintained for three years following study completion. At that time, all survey data and any notes will be deleted.

This study combined three standardized and validated measurement tools. The ProQOL measures three subscale areas: compassion satisfaction, burnout, and secondary/vicarious trauma. Each subscale consists of ten questions that are specific to the subscale. The assessment measures the positive and negative effects of working with people who have experienced extremely stressful events [13]. The ProQOL assessment is the most used measure of the positive

and negative effects of work on helping professionals who engage with those experiencing suffering and trauma. It has been cited in over 200 published articles and is available in several languages [16, 17]. The repeated citations and accessibility demonstrated the cross-cultural relevance and validity of the measure, making it a high-quality choice for this correlation exploration.

The SWLS is designed to measure global cognitive judgments (overall perspective) of one's life satisfaction [14]. The SWLS has been cited in over 19,000 articles and is identified as the most widely used measure of global life satisfaction by many authors [18, 19]. Through validation of the scale, the original researchers found it effective across various demographic groups. They defined the subjective nature of overall life satisfaction without specific affective measures, making it highly suitable for this correlation study.

The SCS-SF gathers baseline data on volunteer capacity for holding their own feelings of suffering with a sense of warmth, connection, and concern [15]. Through the validation process, the original researchers found the 12-item Self-Compassion Scale- Short Form has a near perfect correlation with the original 26-item long form. It demonstrates reliability as an alternative to the long form, especially in settings such as this study, when time constraints are a consideration [15]. The SCS-SF is also widely used in healthcare research and demonstrates cross-cultural relevance, making it a strong choice for this study.

These measurement scales were used according to their original development; therefore, no additional validity or reliability testing was necessary.

Kendall's tau was chosen to analyze the dataset due to the small sample size and ordinal measurement scales. The SWLS was scored using a 7-point Likert scale, and the ProQOL and

SCS-SF each used a 5-point Likert scale. The results proved clear monotonic relationships between statistically significant variables.

Limitations of this study include the small sample size, time constraints to recruit participants and complete the data collection, financial limitations - as no incentives were available to participants for engagement, and extended survey length requiring approximately forty-five minutes of participation time. Also, results are not stratified by demographic identification nor qualitative data; consequently, correlations between measurement scales are reported in aggregate and generalizable to the specific group surveyed.

The exploration of correlations between the relationships of ProQOL subscales, SWLS, and SCS-SF resulted in a statistically significant, strongly positive correlation between compassion satisfaction, a subscale of ProQOL, and SWLS. A statistically significant, strongly negative correlation between compassion satisfaction and burnout, both subscales of the ProQOL, was also found.

While other, weaker correlations are present, this study's statistically significant findings suggest that an abbreviated assessment containing the ten-question compassion satisfaction subscale could indicate the presence of early signs of burnout, given the strong relationships identified.

Interventions for early signs of burnout are twofold, primarily addressing organizational factors and helping the individual practitioner with personal areas of growth. Findings may be of particular interest to healthcare organizations or to academic institutions interested in practices that increase practitioner and student support through considering approaches such as modifying workloads, addressing psychological safety within team structures, providing resources for peer

support across departments, and removing obstacles to help-seeking [20]. Reducing the onset of burnout syndrome requires moving beyond basic prevention to create environments where practitioners can thrive through feeling valued, respected, included, and seen [21].

Moreover, respecting the intrinsic resilience of healthcare practitioners and students means recognizing that individual interventions do not go far enough to resolve the root cause of burnout; instead, they bolster organizational changes. Organizations and academic institutions can begin to support individual resilience by acknowledging that "a culture of openness and support that encourages practitioners to seek help when needed, without fear of stigma or negative consequences, is also essential for staff's psychological safety and long-term well-being. While resilience training is one potential solution, it only has a modest impact on reducing burnout among healthcare professionals" [22].

Mindfulness-based individual interventions such as yoga and meditation, breathwork, mindfulness-based psychotherapeutic interventions, and behavioral activation-based cognitive psychotherapies have been identified as methods that strengthen individual resilience [23].

Burnout syndrome begins manifesting from interpersonal relationships and being in consistent contact with patients [5] and is compounded by societal, cultural, structural, and organizational factors, including deficiencies in organizational support [3]. Therefore, organization-level interventions are more effective at reducing burnout and related outcomes in healthcare practitioners than individual-level interventions alone [24].

Conclusion

It is important to note that the findings in this exploration are not diagnostic and only offer perspective to raise organizational and individual awareness about student and healthcare

practitioner well-being. Organizational-level changes are necessary to develop supportive work and academic environments where practitioner growth and flourishing are prioritized, shifting the lens of healthcare culture from focusing on individual resilience to organizational accountability for providing openness and support. This may encourage practitioners to seek help when needed, without fear of stigma or negative consequences, and produce the psychological safety required for sustainable climates of long-term well-being [22, 25].

When considering the time spent in occupational and academic settings for healthcare practitioners and students, improvements in professional quality of life can have a cascading effect of improving overall well-being experiences. Open and supportive work and academic environments can transition individuals' experiences from places where energy is expended to places where motivation, inspiration, and recharging of energy occur [25], moving beyond simple prevention of burnout to practitioner and student thriving.

The findings in this study can be used to facilitate empowerment for early conversations about prioritizing burnout prevention before patient care or academic pursuits are impacted. Early intervention, more frequent self-assessment, access to support resources, improved career retention, longevity in direct patient care, and improved quality of patient care are the overarching goals connected to early conversations surrounding practitioner and student burnout.

Given the limitations of this study's sample size, more extensive exploration is necessary to identify the globalization of findings and determine whether statistical significance exists between scales with weaker correlations. Further research into the correlation between self-compassion and burnout may yield noteworthy results, leading to additional strategies to support healthcare practitioners through challenging work experiences.

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