Utilizing Education to Combat Compassion Fatigue in an Outpatient Psychiatric Setting

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Abstract

Aim: To determine the change in provider's compassion fatigue after implementing an education-based intervention in behavioral health.

Materials and Methods: A four-part education-based intervention for compassion fatigue was implemented over the course of 16 weeks. The Professional Quality of Life instrument was used to measure compassion fatigue and compassion satisfaction.

Results: Although not statistically significant, mean compassion fatigue scores decreased in the sample.

Conclusion: Based on these results, further exploration into the causative factors of compassion fatigue in behavioral health are recommended.

Keywords: Compassion fatigue, behavioral health, psychiatry, education

Utilizing Education to Combat Compassion Fatigue in an Outpatient Psychiatric Setting

Compassion fatigue is a challenge which can beset even the most resilient of healthcare professionals. The manifestation of compassion fatigue within an individual or organization often results in increased staff turnover, decreased workplace initiative, and poor patient outcomes (Henry, 2014). Causative factors of this phenomenon include lack of regular screening, failure to practice self care, and ongoing care of patients with high acuity diagnoses (Franza, Del Buono, & Pellegrino, 2015). Fortunately, several interventions for compassion fatigue have been identified, with education-based interventions being one of the most efficacious.

Background and Significance

Compassion fatigue is a state of physical or psychological distress in caregivers, the consequence of participating in an ongoing and demanding relationship with clients (Henry, 2014). Compassion fatigue can occur in any environment, but it tends to be most pronounced in acute settings such as psychiatry, oncology, and emergency medicine (Boyle, 2011). Hallmark symptoms of compassion fatigue include feelings of irritability, frustration, exhaustion, depression, anger, and avoidance. As such, compassion fatigue can greatly impede an individual's ability to effectively assess and provide care for patients. Fatigued caregivers report difficulty providing safe care, conducting thorough assessments, and therapeutically communicating with their clients (Boyle, 2011). Additionally, compassion fatigue negatively impacts the workplace by increasing the number of missed days of work, staff turnover, and by reducing initiative within the workplace (Henry, 2014).

A number of benefits would be derived from the alleviation of compassion fatigue, including fewer missed workdays, decreased staff turnover, increased morale, and increased

initiative in the workplace (Raab, 2014). In reducing compassion fatigue, providers have the energy, empathy, and patience to initiate, develop, and maintain a therapeutic relationship with their clients (Boyle, 2011). Overall, a reduction in compassion fatigue has the potential to further advance staff toward the ultimate goal of providing higher quality patient care.

When analyzing compassion fatigue in a behavioral health care setting, Boyle (2011) notes that healthcare professionals working with acutely ill psychiatric patients are at great risk for developing compassion fatigue. In psychiatry, high acuity diagnoses include Cluster B personality disorders: Antisocial Personality Disorder, Borderline Personality Disorder, Narcissistic Personality Disorder, and Histrionic Personality Disorder (Franza, Del Buono, & Pellegrino, 2015). These personality disorders encompass maladaptive patterns of behavior which are pervasive, inflexible, and often include overly affectual patterns of response, poor impulse control, unrealistic perceptions and expectations of others, and difficulty engaging in interpersonal relationships (Barkley, 2015). Additionally, these disorders often present with angry, aggressive, and dramatic emotional behaviors. This violence can greatly tax the emotional welfare of mental health professionals, ultimately leading to compassion fatigue (Franza, Del Buono, & Pellegrino, 2015). Providers with compassion fatigue tend to conduct less thorough assessments of their patients (Henry, 2014), are more inclined to make medication errors, and are less likely to report these errors (Reimer, 2013). Additionally, therapeutic engagement, a vital tool in mental health care, is also negatively impacted (Boyle, 2011). Mental health care professionals suffering from compassion fatigue report an inability to establish and maintain a therapeutic relationship with their patients; irritability, lack of patience, emotional exhaustion, and feelings of numbness act as a blockade in the communication between the provider and the patient (Boyle, 2011).

A majority of interventions for compassion fatigue highlight the concept of education. Awareness and education of symptoms and causative factors of compassion fatigue (Henry, 2014), the regular implementation of mindfulness techniques and coping strategies (Raab, 2014), and continued, purposeful efforts toward self-care (Henry, 2014), are among the most efficacious interventions. When used in conjunction, these interventions can greatly reduce feelings of compassion fatigue among healthcare providers (Mathieu, 2007). The purpose of this evidence-based practice project was to determine the change in healthcare professionals' compassion fatigue after implementing an education-based intervention in behavioral health. Thus, providing educational materials about compassion fatigue which consisted of identifying symptoms, causative factors, and self-care activities, as compared to current practice, may assist in decreasing the level of compassion fatigue that is experienced by mental health care professionals.

The purpose of this study was to determine if an education-based intervention decreased the perceived level of compassion fatigue in staff in an outpatient psychiatric clinic. Thus, the compelling clinical question to be answered by this study was: For direct care staff working in an outpatient psychiatric setting, will providing an educational intervention to increase self-awareness of compassion fatigue consisting of identifying symptoms, causative factors, and coping strategies, as compared to current practice, decrease the level of compassion fatigue that is experienced by staff in a 16-week period?

Search Strategy

A search was conducted via CINAHL, Pubmed, PsycINFO, and The Cochrane Library. Index terms used in the search included *compassion fatigue, nursing, psychiatric, mental health, education,* and *interventions.* Limits included English language, adults: 18+ years, peer-

reviewed, and publication dates from January, 2011 to January, 2016. The CINAHL search yielded 6 results, the Pubmed database yielded 8 results, the PsycINFO database yielded 10 results, and The Cochrane Library yielded 6 results.

Critical Appraisal and Synthesis

A literature review was conducted to ensure that all relevant evidence was identified. The evidence was then appraised via the utilization of rapid critical appraisal (Melnyk & Fineout-Overholt, 2014), and ten studies were selected for final inclusion based upon the reliability and validity of their evidence (Appendix D).

Several themes were derived from the critical appraisal of these studies and their interventions. All proposed interventions were low-risk, non-invasive, and incorporated either educational training and/or promotion of self-care (Appendix B). While not every study exhibited statistical significance, all studies demonstrated a negative correlation between the education-based intervention and compassion fatigue without any adverse side effects. Each of the education-based interventions could be conducted in both an inpatient or outpatient setting, and providers in both medical and behavioral health care derived benefit from implementation of the interventions. Since evidence suggests that a decrease in compassion fatigue and its derivatives may reduce staff turnover and requested time off, an education-based intervention may provide a potential cost benefit and subsequent increase in quality of patient care.

Evidence-Based Practice Model for Implementation

The Rosswurm and Larrabee model served as the Evidence-Based Implementation Model for this study (Appendix C). The Rosswurm and Larrabee model consists of six formulated steps which utilize critical-thinking and decision-making skills in order to safely and effectively implement evidence-based changes (Rosswurm & Larrabee, 1999). These steps include assessing

a need for change within the practice, linking problem interventions and outcomes, synthesizing best evidence, designing a practice change, implementing and then evaluating the change in practice, and finally integrating and maintaining the change in practice (Rosswurm & Larrabee, 1999).

Theoretical Framework

The Theory of Transpersonal Caring was chosen to guide the project, utilizing a framework that focuses upon the interactions between the caregiver and patient. The framework is composed of several processes which assist the caregiver in highlighting positive experiences, such as love and caring, versus negative experiences, such as death, trauma, abuse, and illness (Zehr, 2015). These processes may be extremely beneficial when utilized by caregivers experiencing compassion fatigue; when adhered to, the processes assist the caregiver in focusing upon positive experiences rather than the negative experiences that precede compassion fatigue.

Implementation Plan

Planning: A pre/post design was used to measure the implementation of an education-intervention on compassion fatigue using a convenience sample of 13 staff employed as direct care providers.

Protection of Human Subjects: The project received Institutional Review Board approval from Arizona State University as exempt from oversight. Before collecting both the pre and post data for the project, all participants were informed about the purpose of the project, its duration, and the procedures involved. Additionally, all participants were reminded that participation was voluntarily, that they could choose to stop participating at any time, and that their identities and all data collected during the project would be kept anonymous.

Participants and Setting: The project was conducted in an outpatient psychiatric clinic. All direct

care providers at the outpatient clinic were invited to participate in the project. The clinic is located in the Southwestern United States and provides outpatient behavioral health services to children and adults. Commonly treated diagnoses at the clinic include Attention-Deficit Disorder, Major Depressive Disorder, Bipolar Disorder, Generalized Anxiety Disorder, Schizophrenia, and various personality disorders.

Inclusion and Exclusion Criteria: Inclusion criteria consisted of English-speaking full and part-time advanced practice nurses, physician assistants, behavioral therapists, and supporting staff employed at the outpatient clinic. Individuals were required to be actively providing direct patient care. All participants were 18 years or older and able to give consent. Those who did not provide direct patient care, such as administrative and non-clinical staff, were excluded from the project.

Data Collection: Data was collected before and after a series of three evidence-based educational presentations on compassion fatigue. Both the pre and post survey instruments were distributed in a paper-and-pencil format. The first page of the survey was a consent page; participants were asked to read and checkmark this page before continuing with the rest of the survey. If the participant chose not to checkmark the consent page, then that participant did not complete the rest of the instrument and did not participate in the study. To avoid identifying information, the next page of the survey asked participants to create a randomized code. For post intervention data collection, the participant was asked to recreate the code in order to link the first and second survey and thus compare pre and post data.

Demographics: Participants were asked five questions regarding their characteristics, including gender (male/female), profession (advanced practice nurses, physician assistants, behavioral therapists, or support staff), years of experience (in number of years), employment status (full

time/part time), and past recognition of work (ever been recognized by employer yes/no).

Practice Change Implementation: Following the conclusion of monthly, mandatory staff meetings, participants were asked to voluntarily attend a series of three education-based interventions to improve their knowledge regarding compassion fatigue and its causative factors in the field of psychiatry once a month over the course of 16 weeks. The interventions were designed specifically for the project and given as presentations. The presentations included visual displays on a large screen and an oral presentation by the primary author to the participants. Since the literature strongly suggests that compassion fatigue may be alleviated through an education based-intervention (Henry, 2014, Raab, 2014, Mathieu, 2007), the presentations consisted of information specific to compassion fatigue and its causative and alleviating factors in psychiatry. The first educational presentation conveyed information regarding the definition of compassion fatigue, its hallmark symptoms, and the overall effects of compassion fatigue on individual and workplace performance. The second presentation highlighted the potential alleviating factors of compassion fatigue, specifically focused on the necessity of psychiatric staff regularly engaging in self-care activities. These activities were explained in great detail during the presentation; including improved sleep and diet, diversified patient assignments, engagement in a hobby, pursuit of spiritual connectivity, and regular engagement in supervision and mentorship. The third presentation focused upon the potential causative factors of compassion fatigue in the field of psychiatry. Thus, the presentation conveyed information regarding Narcissistic Personality Disorder, Antisocial Personality Disorder, Borderline Personality Disorder, and Histrionic Personality disorder. Information regarding the definitions, behavior patterns, and theory of origin were presented for each of the disorders. Furthermore, the presentation highlighted several methods for improving therapeutic

engagement with these patients. Attendance to these educational presentations was voluntary and supported by the facility and leadership but, to participate in the post survey, participants' had to attend all three presentations. Before the start of each presentation, participants were verbally reminded that their attendance was not mandatory, and that they could leave the presentation at any time. Paid time was not offered for attending the presentations.

Quality Improvement Questions: The second survey contained four quality improvement, open-ended questions regarding the participant's views on compassion fatigue in behavioral health (Appendix B). The purpose of these questions was to conduct quality improvement by obtaining additional data on reducing compassion fatigue in staff.

Professional Quality of Life Scale (ProQOL 5): Compassion fatigue was measured using the Professional Quality of Life Scale (ProQOL version 5) (Stamm, 2010). The ProQOL is a standardized instrument consisting of 30 questions which are scored on a Likert-type scale. The scale is then further broken down into three sub-scales which measure compassion satisfaction, burnout, and secondary trauma. Burnout and secondary trauma are components of compassion fatigue, and compassion satisfaction is the satisfaction that an individual derives from their work. When the scales are scored and assessed in conjunction, information regarding the positive and negative consequences of caregiving, such as compassion fatigue, can be deduced.

Statistical Analysis: The SPSS 24 statistical package program was used to assess the data. Descriptive analysis, including means, frequencies, and percentages were used to describe the sample. Spearman correlations were used to examine the relationship between the outcome variables and the demographic descriptive characteristics of the participants. The Wilcoxon Signed Ranks Test was used to assess the difference in means between the participants' pre and post intervention scores in the outcome variables of burnout, secondary trauma, and compassion

satisfaction. The level of significance was set at $p < 0.05$.

Results

Thirty-two out of a potential eighty-six direct care providers initially participated in the pre intervention data collection with 13 providers completing the post-intervention. The recidivism rate was 40.6%. The majority of the 13 participants were female (76.9%), employed full-time (92.3%), working as behavioral therapists (46.2%), and had not received any past awards or recognition related to their work performance (69.2%). Participants had either 1- 4 years of work experience (38.5%), or 5-10 years (38.5%) (Figure A1). Per the ProQOL self-scoring measure, this population also exhibited lower than average mean scores for burnout and secondary traumatic stress; the mean burnout score was 20.54 (*SD* = 4.50), and the mean secondary traumatic stress score was 20.31 (*SD* = 3.38). Per the ProQOL self-scoring measure, this population also exhibited average mean scores for compassion satisfaction; the mean compassion satisfaction score was 40.69 (*SD* = 3.90) (Figure A2).

Nonparametric analysis using a Wilcoxon Signed Ranks Test determined that no statistically significant relationship existed between the pre and post intervention scores; burnout ($p= .205$, $p< 0.05$), secondary traumatic stress ($p= .556$, $p<0.05$), and compassion satisfaction ($p= .234$, $p<0.05$).

Each of the 13 participants completed the four quality improvement, open-ended questions regarding the participant's views on compassion fatigue in behavioral health. Common themes identified within the responses included subjective feelings of compassion fatigue related to high patient volume and high workload (Appendix B).

Discussion

The purpose of this EBP project was to evaluate whether the implementation of an

education based intervention reduced compassion fatigue in behavioral health providers. Although staff had anecdotally reported strong feelings of compassion fatigue before the start of the study, study results indicated the sample demonstrated average levels of burnout, secondary traumatic stress, and compassion satisfaction according to published cutoff levels by the ProQOL manual. However, the scores found in this sample align with previously published burnout, secondary trauma, and compassion satisfaction scores for nurses in the literature (Flarity et. al, 2016; Hunsaker, Chen, Maughan, Heaston, 2015; Kelly, Runge, Spencer, 2015). One explanation may be the established normative values are based on a sample of all professions that submit scores for inclusion in the ProQOL database. Additionally, this discrepancy in subjective versus objective data may be explained by the fact that negative perceptions of the workplace may possibly be correlated with subjective feelings of burnout (Thompson, Amatea, Thompson, 2014). Indeed, participants' negative perceptions of the workplace were captured via the quality improvement questions administered during the post ProQOL. According to themes identified in the responses (Appendix B), participants expressed dissatisfaction with the high number of patients that must be seen each day, and the short amount of time allotted to see these patients. In a previous study conducted by Yada et al. (2014), psychiatric nurses were found to have greater than average workloads when compared to other nursing fields. This is because behavioral health does not solely focus upon mental health. Rather, psychiatric nurses are required to care for both the mental and physical needs of patients. When coupled with severe time restraints and high volume, these increased care demands can result in increased quantitative overloads of physical and mental workloads which, in turn, can lead to an overall increase in subjective feelings of stress and exhaustion (Yada, Lu, Omori, Abe, Matsuo, Ishida, & Katoh, 2014). Although participants' burnout levels are not yet significant, evidence suggests

that compassion fatigue may develop if the negative perceptions of the workplace persist.

Another important finding deduced includes participants reporting causative factors which differed from those identified in the literature. According to the literature, patients exhibiting impulsive, violent, and dramatic behaviors (such as individuals with cluster B personality disorders), are one of the greatest causative factors of compassion fatigue in behavioral health (Boyle, 2011). However, according to the themes identified in the responses to the quality improvement questions administered during the post ProQOL (Appendix B), participants did not identify the cluster B personality disorders as a causative factor of compassion fatigue. Rather, most participants reported that they were more negatively affected by the high number of patients which they were required to see each day, and the substantial workload which accompanies each of these patients. Indeed, the literature suggests that large caseloads coupled with lack of leadership support can increase workplace stress and thus potentially lead to burnout and increased compassion fatigue (Flarity, Rhodes, & Reckardl, 2016). In behavioral health, literature suggests that perceptions of workload have a significant influence upon the provider's emotional exhaustion and tendencies toward depersonalization, and thus high workloads may indeed increase the likelihood of compassion fatigue development in behavioral health professionals (Bogaert, P., Clarke, S., Wouters, K., Franck, E., Willems, R., & Mondelaers, M, 2013). Thus, further study regarding the causative factors of compassion fatigue in behavioral health may be warranted.

Although evidence suggests that education-based interventions are one of the most efficacious methods for alleviating compassion fatigue, the implemented EBP project did not result in a statistically significant decrease in compassion fatigue. However, although not statistically significant, levels of burnout and secondary traumatic stress decreased after the

education intervention, demonstrating positive trends for improvement possibly subsequent to the implementation of the education-based intervention (Figure A2).The goal of the education based intervention incorporated the current evidence regarding the symptoms and causative factors of compassion fatigue (Henry, 2014), and the importance of continued, purposeful efforts toward self-care (Henry, 2014), to result in reduced feelings of compassion fatigue among healthcare providers.

Strengths and Limitations of the EBP Project

Several possible limitations may explain the outcome. First, data may have been skewed by the unequal number of participants in the pre and post interventions; although 32 staff members initially participated, the project consisted of 13 pre and post paired compassion fatigue assessments for analysis. The small sample size may have skewed the results in that those who participated may have differed from those who did not. Secondly, the education-based intervention may require revision. Data analysis demonstrated a patterned decrease in burnout and secondary traumatic stress and an increase in compassion satisfaction which suggests that an education-based intervention may indeed be an efficacious means of alleviating compassion fatigue in behavioral health. However, the intervention may need to be implemented in a shorter time span rather than over 16 weeks. Additionally, the education regarding causative factors of compassion fatigue may need to be revised to include high workload and volume rather than Cluster B personality disorders. Despite its limitations, it should be noted that the project also exhibited several strengths. As a whole, the project was evidence-based and utilized an intervention supported by the literature. A validated tool, the ProQOL, was used as the instrument of measurement, and the participants of the project were interprofessional and thus created a well-rounded and diverse sample group.

Future Implications and Conclusion

Although this study did not find a statistically significant decrease in compassion fatigue after implementing the evidence-based intervention, the findings contribute to the current body of knowledge regarding compassion fatigue in behavioral health, and advanced quantitative studies should be conducted to further determine the causative factors of compassion fatigue in psychiatry. Additionally, this information should then be incorporated into an education-based intervention and implemented within a psychiatric setting determined to have higher than average burnout and secondary traumatic stress scores. This will allow behavioral health professionals to self-identify, deduce the cause of, and independently engage in activities which will inhibit the development of compassion fatigue. In turn, these professionals will experience improved energy, empathy, morale, and therapeutic communication. Overall, knowledge of compassion fatigue in behavioral health will result in improved quality of patient care. In conclusion, future studies will provide additional insight into using education-based interventions to combat compassion fatigue in behavioral health.

Conflict of interests

None.

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Appendix A

Table 1.
Demographic Characteristics (n: 13).

		Frequency	Percent
Gender	Male	3	23.1
	Female	10	76.9
	Total	13	100.0
Provider	Advanced Practice Nurse	3	
	Therapist	6	46.2
	Other	4	30.8
	Total	13	100.0
Employment	Full Time	12	92.3
	Part Time	1	7.7
	Total	13	100.0
Years of Experience	1-4	5	38.5
	5-10	5	38.5
	11-19	1	7.7
	20-30	2	15.4
	Total	13	100.0
Past Award/ Recognition*	Received Recognition	4	30.8
	No Recognition	9	69.2
	Total	13	100.0

*Measured as have you ever received an award/recognition for your work (such as Employee of the Month, a DAISY nomination, etc)?

Table 2.
The Descriptive Statistics of the Pre and Post

ProQOL 5 Scoring Measures

		N	Mean	Std. Deviation	Z	Asymp. Sig. (2 -tailed)
Burnout	Pre-Intervention	13	20.54	4.50		
	Post-Intervention	13	19.15	4.08	-1.267	.205
Secondary Traumatic Stress	Pre-Intervention	13	20.31	3.38		
	Post-Intervention	13	19.85	3.83	-.589	.556
Compassion Satisfaction	Pre-Intervention	13	40.69	3.90		
	Post-Intervention	13	41.46	3.67	-1.191	.234

**Note.* Significance at the $p<0.05$ level.

Table 3.
The pre and post mean scores of
BO, STS, and CS per provider type.

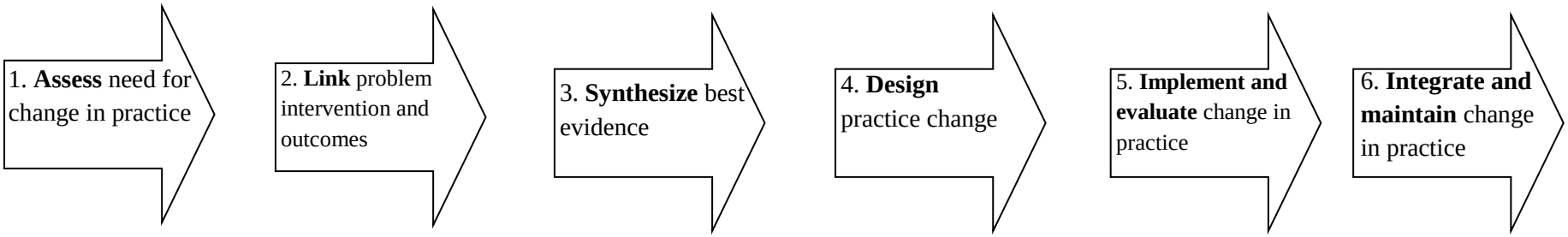
Provider	Burnout		Secondary Trauma		Compassion Satisfaction	
	Pre Mean	Post Mean	Pre Mean	Post Mean	Pre Mean	Post Mean
Advanced Practice Nurse (n=3)	16.333	15.67	19.0	20.67	42.67	42.67
Behavioral Therapist (n=6)	22.16	21.17	21	20.83	39.17	39.5
Other Direct Care Provider (n=4)	21.25	18.75	20.25	17.75	41.5	43.5

Appendix B

Table 1
Themes identified within the QI questions.

	What is one thing you learned about compassion fatigue?	With regard to working in behavioral health, what do you believe increases your feelings of compassion fatigue?	What can you do to reduce your feelings of compassion fatigue?
Theme 1	Increased awareness of the signs and symptoms of compassion fatigue.	Increased workload/larger caseloads increase the risk of developing compassion fatigue.	Being aware of personal health and recognizing signs of compassion fatigue.
Theme 2	The risks of compassion fatigue, including physical, emotional, and mental exhaustion.	Lack of support from management increases the risk of developing compassion fatigue.	Engage in activities to decrease stress and increase well-being, and engage in therapeutic communication with friends, family, and coworkers.
Theme 3	Managing, understanding, and relieving compassion fatigue through self-care.		

Appendix C



1. **Assess** need for change in practice	2. **Link** problem intervention and outcomes	3. **Synthesize** best evidence	4. **Design** practice change	5. **Implement and evaluate** change in practice	6. **Integrate and maintain** change in practice
• Internal evidence - project site reported subjective feelings of CF • External evidence - psychiatric providers are at risk for developing CF (Boyle, 2011) • CF can increase staff turnover, decrease workplace initiative, and result in poor patient outcomes (Henry, 2014)	• Awareness and education of symptoms (Henry, 2014) • Continued, purposeful efforts toward self-care (Henry, 2014) • Education-based interventions which stress self-care and self-awareness may reduce BO and STS, and increase CS (Mathieu, 2007) • Reduced CF may result in increased patient safety and quality of care (Boyle, 2011)	• Search conducted via CINAHL, Pubmed, PsycINFO, and The Cochrane Library • Evidence was appraised via rapid critical appraisal (Melnyk & Fineout-Overholt, 2014) • Ten studies were selected for final inclusion • All proposed interventions were low-risk, non-invasive, and incorporated either educational training and/or promotion of self-care	• Series of evidence-based presentations designed to decrease compassion fatigue in outpatient behavioral health providers • CF measured using validated ProQOL instrument • Rigorous pre/post design used to measure implementation of intervention on CF	• Average burnout and secondary trauma scores decreased after the education intervention, however, not a statistically significant decrease • Average compassion satisfaction scores increased after the education based intervention, although not a statistically significant increase • Common themes identified in QI questions included subjective feelings of CF related to high patient volume and high workload	• Thorough synthesis of literature contributes to the knowledge regarding CF in behavioral health • Advanced quantitative studies should be conducted to further determine the causative factors of CF in behavioral health • Knowledge of CF in behavioral health may result in improved quality of patient care

Appendix D

Table 1

Evaluation Table: Interventions for Compassion Fatigue in Health Care Providers

Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Smart, D. (2014). Compassion fatigue and satisfaction: A cross-sectional survey among US healthcare workers. Country: United States Funding: NA Stakeholders: NA Bias: None noted	Stress Process Framework	**Design:** Cross-Sectional Study **Purpose:** To investigate compassion satisfaction and compassion fatigue levels in a community hospital in the United States.	N= 139 SS=1 IP=1 OP=0 **Role** Physicians= 2% Direct Care RNs= 54% CNA= 44% **Race** Caucasian= 96%	IV1: CS IV2: ST DV1: BO	ProQOL-V	ANOVA SPSS version 17.0)	Negative correlation between CS and BO r = -0.788, P < 0.001 Negative correlation between CS and ST r = -0.320, P < 0.001 Positive correlation between ST and BO	**Level of Evidence:** Level III **Strengths:** Low-risk, noninvasive intervention, measurement and data analysis tools are reliable and valid. **Weaknesses:** Small sample group, little variability in demographics of sample group, only 1 SS.

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			Other=4%				r = 0.580, P < 0.001	**Conclusions:** If CS is >, BO can be decreased. CS can be improved via stress-reduction practices and self-care.

Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Tarantino, B (2013). Qualitative and quantitative evaluation of a pilot integrative coping and resiliency program for healthcare. Country: United States Funding: NR Stakeholders:NA Bias: PSS conducted by staff members directly involved in self-care	Stress Process Framework	**Design:** Cross-Sectional Study **Purpose:** To deduce if an integrative self-care program can decrease stress and thus improve functioning and	N= 82 SS=1 IP=0 OP=1 **Role** RNs and APNs = 90% Social workers and therapists = 10% .	**IV1:** Self-care program **DV1:** S	Perceived Stress Scale (PSS)	Analysis of Variance in PSS	PI S = 16.9 S after 8 weeks of intervention= 11.7 PoI S = 14.4	**Level of Evidence:** Level III **Strengths:** Low-risk, noninvasive intervention, measurement tool is reliable and valid, post-intervention assessment included a 12 month follow-up. **Weaknesses:** Selection bias due to participants being self-selected.

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training, thus incurring possible sampling bias.		wellbeing for nurses and other healthcare providers.						Randomized and controlled design not utilized. Possible sampling bias. **Conclusions:** Healthcare workers who engage in self-care activities may experience decreased stress.

Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Zeidner, M. (2013). Personal factors related to compassion fatigue in health professionals. Country: Israel	General Adaption Syndrome Theory	**Design:** Cross-Sectional Study **Purpose:** To examine the role of some	N=182 SS= 10 OP= 3 IP=7 **Setting** Seven major hospitals	IV1= EI IV2= EM DVI = CF	Schutte self-report inventory (SSRI) Emotion-management subscale	Hot Deck imputation procedure	EI and EM are inversely related to CF. EI: B=-.19, t=-2.78, p<.01	**Level of Evidence:** Level III **Strengths:** Low-risk, noninvasive intervention, multiple measurement tools, multiple SS, varied

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Funding: NA Stakeholders: NA Bias: None noted		personal and professional factors in compassion fatigue among health-care professionals.	and six private clinics in Northern and Central Israel. **Role** Mental Health Providers: 49% Medical Health Providers: 51%		of the MayerSaloveyCaruso emotional intelligence test (MSCEIT) Coping inventory for stressful situations situation specific coping (CISS-SSC) Mood subscales of the Dundee stress state questionnaire ProQOL-III		EM: B = -.17, t= -2.45, p<.01	demographic of N. **Weaknesses:** Time limitation, study was not designed to address the dynamic relationship between negative emotional states, S, and CF. **Conclusions:** Increased EI and EM may act as protective factors against CF. EI and EM can be increased via utilizing effective and healthy coping strategies.

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Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings	Level/Quality of Evidence; Decision for practice/ application to practice
Zehr, Kathryn. (2015). The effect of education on compassion fatigue as experienced by staff nurses. Country: United States Funding: NR Stakeholders: Unit director and CNO of Hospital X Bias: None noted	The Theory of Transpersonal Caring	**Design:** Case-control study **Purpose:** Purpose of study was to increase awareness about CF risks, symptoms, and coping mechanisms through educational training for registered nurses in an effort to decrease levels of CF.	N= 33 SS =1 IP=1 OP=0 MA = Mid twenties – late fifties F = 100% All participants were RNs who worked on a medical-surgical unit at Hospital X, a level II trauma center in northern Indiana.	IV1= Educational Training DV1 = Compassion Fatigue	ProQOL-V	ANOVA	AS for ST =20.7 AS for CS =39.1 PI MS=39.1 PoI MS =39.7 1-month PoI MS = 39.1 3 month PoI MS =38.4 P value for CS = 0.617 P value for ST = 0.118	**Level of Evidence:** Level III **Strengths:** Low-risk, noninvasive intervention, measurement tool credited with being reliable and valid, PoI analysis was conducted immediately after intervention and at 1 and 3 month PoI. **Weaknesses:** Variability in the educational sessions, sessions were only 30 minutes in length, small N. **Conclusions:** Educational training is best practice to

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								decrease levels of CF among staff nurses.

Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Ruotsalainen J., Verbeek J., Mariné Albert., & Serra C. (2015). Preventing occupational stress in healthcare workers. Country: NR Funding: NR Bias: None noted	Physiologic Theory	SR based on Cochrane review criteria. **Purpose=** To evaluate the effectiveness of work and person directed interventions compared to no intervention or alternative interventions in preventing	n = 58 n, RCT = 54 n, non-RCT = 4 N =7, 188 MP = 100% **Inclusion Criteria =** RCTs of interventions aimed at preventing psychological stress in healthcare workers. For organizational intervention	IV1: PR (Massage) IV2: MR (Meditation) IV3: CBT with Relaxation IV4: CBT without Relaxation IV5: OC DV1: Stress	GRADE System	Standardized Mean Differences (SMDs)	PR: SMD -0.48, 95% CI -0.89 to -0.08 MR: SMD -0.50, 95% CI -1.15 to 0.15 OC: SMD -0.55, 95% CI -0.84 to -0.25 CBT w/ and w/out Relaxation: SMD -0.27,	**Level of Evidence:** Level I **Strengths:** Low risk and non-invasive intervention, high level of evidence, majority of studies reviewed were RCTs, large N. **Weaknesses:** More RCTs are needed with at least 120 participants that compare the intervention to a placebo-like intervention.

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		stress at work in healthcare workers.	s, interrupted time-series and controlled before-and-after (CBA) studies were also eligible. **Search Method:** Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PsycINFO, CINAHL, NIOSHTIC-2 and Web of Science up to November 2013.				95% Cl -0.66 to 0.13	**Conclusions:** Low-quality evidence that CBT with or without relaxation was no more effective in reducing stress/burnout symptoms than no intervention.

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Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Franza, F., Del Buono, G., & Pellegrino, F. (2015). Psychiatric caregiver stress: clinical implications of compassion fatigue. Country: Italy Funding: NR Bias: None noted	General Adaption Syndrome Theory	**Design =** Case control **Purpose =** To investigate the stress of mental health care workers and its relationship with psychiatric inpatients, and to assess the ways in which psychiatric health care providers may be affected by	SS: 1 IP: 1 OP: 0 Group I (Inpatients) N=237 M=152 F=85 Group II (Psychiatric Staff) N= 47 M=23 F=24 **Setting:** Inpatient mental health facility in Italy which	IV1: Acuity of Patient Diagnosis IV2: Participation in Balint Groups DV1: Job Burnout DV2: CF	Brief Psychiatric Rating Scale (BPRS) Ham-D PANSS YMRS	EZAnalyze 3.0/Excel Platform	T0 vs T1= 31.07+/- 14.99 vs 22.75 vs. 8.96 P Value = p<0.000001 **CBI P Values=** Nurses - 0.00280 Psychiatrists – 0.16190 Social Workers – 0.22900 Operators – 0.02340	**Level of Evidence:** Level III **Strengths:** Low-risk, noninvasive intervention, utilized two tools to assess for CF, large N of Group 1. **Weaknesses:** No control group – all providers participated in Balint groups, no clear methodology explained for relationship between CF and patient acuity, small N of Group2.

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		CF.	provides day care and rehabilitation.				**sCFs P Values=** Nurses-0.000020 Psychiatrists – 0.057700 Social Workers-0.221100 Operators-0.009000	**Conclusions:** Psychiatric health care providers are highly at risk for CF. Psychiatric nurses have highest percentage of CF. Higher acuity (bipolar, schizophrenia, severe MDD, personality disorders), of patients can result in higher levels of CF. In psychiatry, CF results in misjudgments, clinical errors, poor treatment planning, and poor therapeutic communication. Balint groups can represent a management

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								strategy for CF.

Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Potter, P., Deshields, T., & Rodriguez, S. (2013). Developing a systematic program for compassion fatigue. Country: United States Funding: Hospital's Charitable Foundation Bias: None noted	King's General System's Framework	Quasi-Experimental Study	SS= 1 IP= 1 OP = 0 Initial N = 389 F = 92.7% M=7.3% MA (mean age) = 40.5 **Role** RN/APN =73.0% Allied health= 9.1% Tech/Clerical= 3.8% Interpreters= 0.5% Others = 0.8%	IV1 – Resiliency program consisting of self-care promotion, educational sessions, and an off-site retreat. DV1 – CF	ProQOL R-IV	Self-Report Survey Codes	PI N – 389 PoI N- 85 **ProQOL Scores** PI BO – 48.1 PI ST – 38.3 PoI BO – 23.5 PoI ST- 21.2 BO t=4.50 P < .01 ST t= 4.72 P < .01	**Level of Evidence:** Level III **Strengths:** Low-risk, non-invasive intervention. EB tool utilized as the instrument of measurement. Large N of PI. **Weaknesses:** Poor response rate. PI N was 389, PoI N was 85. No control group – all hospital employees received intervention. **Conclusions:** ProQOL is a reliable

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								and valid instrument for measurement of CF. Feelings of CF/BO were reduced after implementation of resiliency program.
Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Potter, P., Deshields, T., Berger, J.A., Clarke, M., Olsen, S., & Chen, L. (2013). Evaluation of a compassion fatigue resiliency program for oncology nurses. Country: United States Funding: NR Bias: None noted	Dorothea Orem's Self-Care Theory	Quasi-Experimental Study **Purpose:** To evaluate a resiliency program designed to educate oncology nurses about CF.	SS = 1 IP =0 OP = 1 N=13 F= 100% **Setting:** A National Cancer Institute–designated comprehensive cancer center in the midwestern	IV1 – Resiliency Program (consists of education about CF, including causative factors and symptoms, and promotion of self-care). DV1 – CF	Maslach Burnout Inventory (MBI)–Human Services Survey ProQOL-IV Impact Event Scale-Revised (IES-R)	SAS®, version 9.2.	**IES-R** Improved significantly overall X difference = 1.24 P-value = 0.04, 95% CI = 0.04, 2.45 **ST**	**Level of Evidence** = Level III **Strengths** Low risk, noninvasive, financially fiscal, data collection occurred at multiple intervals. **Weaknesses=** Small N, time demands for participation in the five week program

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			United States. **Inclusion Criteria:** Staff RNs, aged 20 years or older, provides direct patient care, employed at SS, willing to participate in all 5 weeks of intervention. **Exclusion Criteria:** Actively suicidal or currently abusing substances, as determined by self-report.		Nursing Job Satisfaction Scale		Overall reduction PI MS = 19.76 PoI MS = 16.23 P-value = .044	may have acted as a barrier to participation. **Conclusions** Relaxation and self-care exercises were reported to be the most helpful aspect of the IV1. Participants reported benefit from learning that many individuals suffer from CF. Education regarding causative factors of CF, and self-validation, connection, and self-care assists in alleviating CF.

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Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Flarity, K., Gentry, J. E., & Mesnikoff, N. (2013). The effectiveness of an educational program on preventing and treating compassion fatigue in emergency nurses. Country: United States Funding: Colorado State Emergency Nurses Association, Colorado Nurses Foundation, and the Memorial Health Auxiliary. Bias: None noted	Peplau's Interpersonal Theory	**Design:** Quasi-Experimental Study **Purpose:** To examine the treatment effectiveness of a multifaceted education program to decrease CF BO symptoms and increase CS of emergency nurses participating in the	SS: 2 OP: 0 IP: 2 N: 73 20+ years experience = 38% 8- years experience = 58% **Setting:** Two EDs in Colorado Springs, CO. Both facilities were Level II trauma centers.	IV1 – Resiliency Program (included education regarding symptoms, causative factors, and effects of CF, and promotion of self-care and mindfulness). DV1 – ST DV2 – BO DV3 - CS	ProQOL-V	Statistical Package for the Social Sciences Version 20	RR: 100% PI BO MA= 23.9 PI CS MA= 40.3 PI ST MA =23.5 PoI BO MA= 20 P-Value = 0.001 PoI CS MA= 42.2 P-Value= 0.004 PoI ST MA= 21.4	**Level of Evidence:** Level III **Strengths** Low risk, noninvasive intervention. IV1 was low-cost and easy-to-implement. High RR. Reliable and valid measurement. **Weaknesses** Need to repeat the posttest after a longer lapse of time and then repeat again at 1 year. **Conclusions** A four hour resiliency program

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		training.					P-Value= 0.001	resulted in increased CS, decreased BO, and decreased ST (CF). Demonstrated a low-cost, easy-to-implement method for both enhancing CS and diminishing the negative effects of work-related stress.

Citation	**Conceptual Framework**	**Design/ Method**	**Sample/ Setting**	**Major Variables & Definitions**	**Measurement**	**Data Analysis**	**Findings**	**Level/Quality of Evidence; Decision for practice/ application to practice**
Beck, C. T. (2011). Secondary traumatic stress in nurses: A systemic review. Country: United States Funding: NR	The Theory of Transpersonal Caring	**Design**: SR **Purpose:** To review the literature on secondary traumatic stress in nurses	n= 7 RCTs = 0 non-RCTs= 7 **Inclusion Criteria:** Sample included nurses, the	IV1 – Continuing education DV1 - ST	Compassion Fatigue Self Test for Helpers Compassion Fatigue ScaleRevised	Secondary Traumatic Stress Scale	**Risk of ST in RN's** High Risk= 26.4% Moderate Risk= 52.3%	**Level of Evidence:** Level I **Strengths** Multiple data sources, study results are applicable and easy to implement.

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Bias: None noted			ST stress symptoms were measured, and the language was English. **Data Sources:** CINAHL, PubMed, and PsycINFO databases were searched for the years 1981 to the present.				Low Risk= 21.3%	**Weaknesses** Small samples and the use of different instruments in the studies hindered the ability to make comparisons across study findings. No RCTs. **Conclusions** ST is present in RNs in a number of different clinical specialties. LR found a lack of published studies on ST in psychiatric nurses – a specialty which frequently cares for acute, traumatized patients. This gap in the knowledge base needs to be rectified. RNs need education about vulnerability to and symptoms of

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								compassion fatigue. Education regarding coping strategies should be instituted.

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Appendix D

Table 2

Synthesis Table: Interventions for Compassion Fatigue in Health Care Providers

	Beck	Zeidner	Flarity	Franza	Tarantino	Smart	Potter, Deshields, & Rodriguez	Potter et al.	Ruotsalaine	Zehr
Study Characteristics										
Year	2011	2013	2013	2015	2013	2014	2013	2013	2015	2015
SS		10	2	1	1	1	1	1		1
OP		3	0	0	1	0	0	1		0
IP		7	2	1	0	1	1	0		1
RCT	0								54	
Cross-Sectional		X			X	X				
Non-RCT	7								4	
Case-Control				X						X
SR	X								X	
QE			X				X	X		
Level of Evidence	I	III	III	III	III	III	III	III	I	III
Population Demographics										
N		182	73	47	82	139	389	13	7,1888	33
n	7								58	
Male Gender (%)				48%			7.3%	0%		0%
Female Gender (%)				52%			92.7%	100%		100%
Profession	RN	MP	RN	RN/BHT	MP	MP	MP	RN	MP	RN
Independent Variables										
ET	X		X	X			X	X		X
OC							X		X	
CS						X				
ST						X				

	Beck	Zeidner	Flarity	Franza	Tarantino	Smart	Potter, Deshields, & Rodriguez	Potter et al.	Ruotsalaine	Zehr
Independent Variables Continued										
Acuity of Diagnosis				X						
SC			X		X		X	X	X	
EI		X								
EM		X								
Dependent Variables										
CF		X		X			X	X		X
ST	X		X						X	
BO			X	X		X			X	
CS			X							
S					X					
Measurement										
BPRS				X						
Ham-D				X						
PANSS				X						
YMRS				X						
ProQOL		X	X			X	X	X		X
MBI								X		
IES-R								X		
NJSS								X		
ANOVA						X			X	X
PSS					X					
STSS	X									
Outcome										
IV resulted in reduction of DV	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes