Behavioral and work-related factors associated with secondary traumatic stress, burnout, and compassion satisfaction among health care workers at an academic-medical center

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Disclosures

The speaker has no conflicts of interest to disclose
Learning Outcomes

Upon completion of this presentation, participants will be able to:

1. Define secondary traumatic stress (STS), burnout (BO), and compassion satisfaction (CS)

2. Identify behavioral and work-related risk factors for STS, BO, and CS among healthcare workers

3. Discuss solutions to mitigate STS & BO, and enhance CS among healthcare workers
Secondary Traumatic Stress (STS or Vicarious Trauma)

• Resulting from indirect contact with a traumatic event
• Characterized by physical and psychosocial symptoms such as:
  • Poor concentration
  • Anger
  • Disturbing thoughts
  • Sleep disturbances
  • Avoidance of patients or others

Burnout (BO)

- An overwhelming state of emotional exhaustion, patient depersonalization and feelings of professional insufficiency


Compassion Satisfaction (CS) & Fatigue (CF)

- CS is pleasure derived from caring for others
- CF is a loss of the ability to nurture, often defined as a combination of STS and BO


Why study STS, Burnout, & Compassion Satisfaction/Fatigue?

• Estimates of STS experienced by health care workers are high
  • 70% among social workers
  • 85% among critical care nurses

• The World Health Organization has classified ‘Burnout’ as an occupational health problem in the ICD-10

• CF is associated with increased mental health problems, low work productivity, absenteeism, low morale

• These problems combined are known to:
  • Increase rates of medical errors
  • Malpractice claims
  • Greater work turnover
  • Poor patient care


Study AIMS

The aims of this study were to:

1. Examine differences in STS, BO, and CS by discipline and work setting

2. Assess work-related and behavioral factors associated with STS, BO, and CS
Design & Procedures

• **Correlational study design** using on an electronic survey

• Participants from **UK Healthcare enterprise**
  - UK Chandler (inpatient and Outpatient)
  - Kentucky Clinic
  - UK Children’s Hospital
  - Good Samaritan
  - Eastern State Hospital
  - Central Kentucky Recovery Center

• Procedure:
  - IRB Approval (# 46822), October 2018
  - Eligibility: ≥18 years of age, employed full/part-time, directly involved in patient care
  - Surveys distributed between November 2018 to April 2019 (5 months)
  - Anticipated 900 participants (i.e., 10% of approximately 9,000 employees)
    - Obtained responses from 1006
    - Useable data from 764 (75.9%)
Measures

**Demographics**
- Age categories
- Gender & Sexual Orientation
- Marital status
- Education level
- Marital Status
- Having children living with them

**Behavioral/Lifestyle factors**
- Current tobacco use
- Perceived Secondhand Smoke Exposure
- Alcohol Consumption
- Average sleep & Quality of Sleep
- Physical activity
- Having a behavioral health diagnosis
- Ever received professional trauma treatment

**Work-related variables**
- Discipline: Advance Practice, Nursing staff, Social work/Psychology, Nursing care assistants, Therapists, Pharmacy, Other (i.e., clerical staff)
- Primary service setting: Intensive care, Emergency, General Wards, oncology, psychiatry, outpatient services, ancillary services, other (i.e., administrative)
- Work shift & Length of work day
- Time worked in setting & discipline

**Witnessed or Experienced Workplace violence**
- Patient assault, co-worker bullying, physical/sexual/verbal abuse (Yes vs. No)

**Professional Quality of Life Scale (ProQOL)**
- Secondary Traumatic Stress (Cronbach’s alpha= .81)
- Burnout (Cronbach’s alpha= .83)
- Compassion Satisfaction (Cronbach’s alpha= .92)

Sample Discipline, Service Setting, Experience of Workplace Violence

**Discipline**
- Advanced Practice (n=35): 12.4%
- Nursing staff (n=329): 6.2%
- Social Work/psychology (n=47): 13.6%
- Therapists (n=82): 10.7%
- Pharmacy (n=72): 9.4%
- Other (n=35): 4.6%

**Service Setting**
- Intensive care (n=170): 22.3%
- Emergency (n=105): 13.7%
- General wards (n=209): 27.4%
- Oncology (n=40): 5.2%
- Psychiatry (n=136): 17.8%
- Outpatient (n=48): 6.3%
- Ancillary (n=36): 4.7%
- Other (n=20): 2.6%

**Workplace Violence**
- Witnessed (n=347): 45.4%
- Experienced (n=244): 31.9%
### Discipline*

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# Hierarchical Multivariate Regression Analysis of Factors Associated with CS, BO, and STS

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<th>BO</th>
<th>CS</th>
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<tr>
<td><strong>Demographics</strong></td>
<td>• Younger age</td>
<td>• Younger age</td>
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<tr>
<td><strong>Behavioral/Lifestyle factors</strong></td>
<td>• Poorer quality of sleep</td>
<td>• Poorer quality of sleep</td>
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<tr>
<td></td>
<td>• Non-current tobacco user</td>
<td>• Alcohol use in past 7 days</td>
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<td></td>
<td>• Greater SHS exposure</td>
<td>• Diagnosed with behavioral health problem</td>
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<td></td>
<td>• Received trauma treatment</td>
<td></td>
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<td><strong>Work-related variables</strong></td>
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**Adjusted R²**:
- STS: .18, F=4.92, p<.0001
- BO: .26, F=7.01, p<.0001
- CS: .12, F=3.32, p<.0001
Highlights of Findings

- STS and BO are relatively low among our sample in the UK Healthcare enterprise.
  - Similar to rates from national survey of physicians, nurses, and nursing assistants (Smart et al., 2014)

- Differences in rates vary by discipline (i.e., STS) and service setting (i.e., STS, BO, CS)
  - Social workers/Psychologists may be at greatest risk for STS as are those working in the Emergency care settings

- Common factors associated with STS, BO, CS were sleep quality and experience of workplace violence
  - 45.4% witnessed, nearly 32% have experienced
Limitations

• Cross-sectional Analysis
  • No causality can be inferred

• Convenience sample of an estimated 10% of health care workforce
  • May not be representative of the setting
  • Findings cannot be generalized beyond the setting of the study

• Survey did not obtain information on interpersonal factors (e.g., empathy, resilience, mental health status) known to influence main outcomes
  • These factors may have explained more variance in the regression model.
    (STS Adjusted $R^2=.18$, BO Adjusted $R^2=.26$, CS Adjusted $R^2=.12$)
Implications

- Sleep quality is a modifiable variable
  - Sleep hygiene and fatigue management may be supported as a health promotion intervention
  - Workplace environment modifications (e.g., light supplementation, access to windows)

- Adoption of tailored evidence-based interventions to reduce exposure to violence
  - Consumer/Patient risk assessments
  - Staff education and training
  - Aggression/violence management teams

- Future studies needed to understand reasons for increased STS & BO among high risk discipline groups (e.g., Social Workers/Psychologists) and service settings (e.g., Emergency Department and Psychiatric Services).

Redeker, Caruso, Hashmi, Mullington, Grandner, & Morgenthaler. (2019). Workplace interventions to promote sleep health and an alert, healthy workforce. *Journal of Clinical Sleep Medicine, 15*(04), 649-657.


Questions?