STRESS, BURNOUT AND COPING IN STAFF WORKING ON A PAEDIATRIC/NEONATAL INTENSIVE CARE UNIT

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Setting

- Tertiary children’s hospital PICU/NICU
- High acuity > 90% children invasively ventilated
  - UK average 65 %
- Largest training centre for intensivists in Europe
- Concerns about fellow well-being
INTRODUCTION

• Stress and burnout in ICU workers
  – Little research on P/NICU medical staff

• Drs have high suicide rate!
  – Highest – anaesthetists & dentists – access… (& PICU)

• Dr Burnout ➔ higher suicide rates & fatal medical errors BMA

• Jading = ‘exhaustion whereby apathy, cynicism, and callousness replace the drive to be responsive, to make a difference, and to care.’

• FRANCIS REPORT ANYONE……

• Staff shortage, particularly in ICU nurses
BURNOUT

• Chronic job-related stress, physical and emotional exhaustion, negative attitudes, reduced job performance and patients’ quality of care

• Embriaco (2007) - Half of doctors and a third of nurses working on adult ICU
Post Traumatic Stress Disorder (PTSD)

• Witnessing traumatizing events, leading to symptoms such as heightened arousals and memories of the events

• Mealer (2007) - PTSD symptoms ICU nurses > general nurses
Resilience

• Smith (2008) ‘ability to bounce back and recover from stress’

• Mealer (2012a) – link between resilience and traumatic stress and burnout in 744 (adult) ICU nurses

• Mealer (2012b) – evidence re coping strategies most used by the most resilient nurses (qualitative study, n=27)
ICU STRESSFUL ENVIRONS → STRESS BURNOUT
ICU STRESSFUL ENVIRONS

OTHER LIFE STRESS

TRAUMATIC ICU EVENTS

STRESS BURNOUT

Time
ICU STRESSFUL ENVIRONS + PERSONALITY + STRESS BURNOUT +

OTHER LIFE STRESS ↓

TRAUMATIC ICU EVENTS ↓

Time
ICU STRESSFUL ENVIRONMENTS

PERSONALITY

SOCIAL SUPPORT

OTHER LIFE STRESS

TRAUMATIC ICU EVENTS

STRESS BURNOUT
ICU STRESSFUL ENVIRONS

PERSONALITY

SOCIAL SUPPORT

COPING STRATEGIES

STRESS BURNOUT

OTHER LIFE STRESS

TRAUMATIC ICU EVENTS

Time
HYPOTHESES

• A number of individuals will report significant symptoms of Traumatic Stress and Burnout
• Resilience will be negatively associated with Burnout and Traumatic Stress in PICU/NICU

For exploration:
  – Are some groups more affected by Stress/Burnout than others?
  – Are some coping strategies associated with better outcomes?
**MEASURES**

- Brief Resiliency Scale (BRS): 6 item scale

- Trauma Screening Questionnaire (TSQ): 10 item screen for PTSD symptoms (>=6 clinically significant)

- Abbreviated Maslach Burnout Inventory (aMBI): 9 item scale measuring Emotional Exhaustion, Depersonalisation and Personal Achievement

- List of coping strategies
## Coping Strategies

<table>
<thead>
<tr>
<th>Attend reflective practice groups</th>
<th>Attend psychology drop-ins</th>
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<tbody>
<tr>
<td>Try to ignore it</td>
<td>Talk to seniors/managers</td>
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<tr>
<td>Attend debrief meetings</td>
<td>Attend teaching sessions</td>
</tr>
<tr>
<td>Speak to staff/friends at work</td>
<td>Outside interests/hobbies</td>
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<tr>
<td>Keep work and home separate</td>
<td>Get emotional (e.g. angry/cry)</td>
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<tr>
<td>Use religion/faith</td>
<td>Keep myself busy</td>
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<tr>
<td>Try to problem solve/think of solutions</td>
<td>Use relaxation strategies</td>
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<tr>
<td>I don’t experience job-related stress</td>
<td>Look for positives in my job</td>
</tr>
<tr>
<td>Work harder</td>
<td>Exercise</td>
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<tr>
<td>Drink more</td>
<td>Talk to the unit psychologist</td>
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<tr>
<td>Smoke more</td>
<td>Keep professional boundaries</td>
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<tr>
<td>Talk to your preceptor/mentor</td>
<td>Try to be cheerful and positive</td>
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<tr>
<td>Take time off</td>
<td>Remember how valuable work is</td>
</tr>
<tr>
<td>Speak to staff/friends/family out of work</td>
<td>Seek support from Care First (previously known as Oasis)</td>
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</table>
• 58 respondents

Gender: 50 female (86%)

Age:
- < 25y n=8
- 26-30y n=12
- 31-35y n=15
- 36-40y n=13
- > 40y n=10

(Consultants all suffered PTSD as in oldest group......)

Profession: 32 nurses; 22 doctors; 4 HCPs

Years qualified: 0-32 (average 10.4)
RESULTS

Demographic associations with Traumatic Stress and Burnout

- Gender? ns
- Doctor v Nurse? ns
- Live alone? ns
- Have children? ns
- Years qualified? ns
- Years working on P/NICU? ns
## RESULTS

### Resilience Scores

<table>
<thead>
<tr>
<th>BRS Score</th>
<th>Frequency %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 – 2.0</td>
<td>3.5 (n=2)</td>
</tr>
<tr>
<td>2.1 – 3.0</td>
<td>22.4 (n=13)</td>
</tr>
<tr>
<td>3.1 – 4.0</td>
<td>58.6 (n=34)</td>
</tr>
<tr>
<td>4.1 – 5.0</td>
<td>15.5 (n=9)</td>
</tr>
</tbody>
</table>

Mean = 3.52
Std. Dev. = .728
N = 58
RESULTS

Relationship between Resilience and Burnout

Figure 1: Relationship between resilience and emotional exhaustion

Figure 2: Relationship between resilience and personal achievement (greater PA = less burnout)

$r = -0.36$

$r = 0.36$
RESULTS

PTSD

- PTSD: 66%
- No symptoms of PTSD: 17%
- Symptoms of PTSD: 17%
RESULTS

Relationship between Resilience and Traumatic Stress

Figure 3: Relationship between resilience and PTSD symptoms

$\text{TSQ Score}$ vs $\text{BRS Score}$

$r = -0.41$
RESULTS

Most used coping strategies

• Speak to people outside work 79%
• Speak to colleagues 76%
• Keep cheerful 69%
• Hobbies 66%
• Exercise 53%
• Keep positive 53%
Most ‘helpful’ coping strategies

- Speak to people outside work 79%
- Speak to colleagues 76%
- Keep cheerful 69%
- Hobbies 66%
- Exercise 53%
- Keep positive 53%
RESULTS

Coping strategies associated with higher levels of Traumatic Stress

• *Ignoring* stress (p=0.008)**
• *Not* having Hobbies (p=0.02)*
• Taking time off (p=0.039)*
Coping strategies associated with Burnout

**Emotional Exhaustion**
- Increased EE
- Venting Emotion**
- Keeping Busy*
- Take time off*
- Decreased EE
- Relax*
- Mentor/Seniors**
- Hobbies**

**Depersonalisation**
- Increased DP
- Take time off**
- Drink*
- Smoke*
- Decreased PA
- Keeping Busy*

**Personal Achievement**
- Increased PA
- Relax**
- Problem Solve**
- Value Work**
- Keep positive*

Key
- *p<0.05
- **p<0.01
• N=58
• Findings may be specific to this unit
• Cross-sectional correlational study, therefore not possible to establish direction of causality
• ?could have used a standardised measure of coping eg BriefCOPE
• Significant number of staff have PTSD level symptoms of stress

• Staff might usefully be informed that ignoring stress and keeping busy may increase likelihood of emotional exhaustion and traumatic stress

• Greater provision of regular contact with senior professionals/mentors may reduce burnout
POSITIVE OUTCOMES: LOCAL

Teaching Workshops

1. Trauma and stress awareness on ICU
2. Sleep tips and guidance
3. Relaxation and mindfulness
4. Introduction to counselling skills

Reflective Practice groups (with Drs and Nurses)
Continued Psychology drop-ins
Nurse Reps (more social activities!)
• Replicate
  – Local CICU & St Georges AICU
  – PICANET meeting - discuss -? National

• Interventional study
  – ? Build resilience (yoga & relaxation)
  – Outcome
    • staff wellbeing, same questionnaire.
    • Absence rates
THANKS

(I wish you good mental health)

• http://mobro.co/joebrierley