

Work and mental health

Creating a mentally health workplace through a focus on sleep quality

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World Sleep Day[®]

Hosted by World Sleep Society

MARCH 19, 2021

**REGULAR SLEEP
HEALTHY FUTURE**

My research
programme on
workplace
mental health

Why sleep?

Sleep promotion
as workplace
mental health
strategy

Organisational
and individual
strategies

Ambulance Services developed a Joint Statement and Ten Strategic Objectives to be pursued in their respective countries

1. Promote a positive culture
2. Reduce stigma
3. Improve mental health literacy
4. Develop staff skills in supporting someone with mental health issues
5. Adopt an integrated approach to workplace mental health
6. Share examples of best practice between services
7. Support staff across all stages of their career
8. Implement systems to pick up early signs of psychological harm
9. Monitor and evaluate
10. Seek expertise when necessary



Ambulance staff wellbeing research programme

- What is the evidence base in the UK on ambulance staff wellbeing? Evidence map systematic review (Clark et al March 2021, British Paramedic Journal)
- SleepSmart study with a NHS Ambulance Trust: sleep, fatigue and mental health in staff and opportunities for prevention (funded by NIHR ARC East of England)
- What are the needs of staff and what organisational and individual supports are being offered? Mixed-methods study (funded by Health Education England)
- Development of guidance on prevention of ambulance staff deaths by suicide, commissioned by Chief Allied Health Professions Officer (NHS England/Improvement, Public Health England, Association for Ambulance Chief Executives)

SleepSmart Research Study N=689

Survey and focus group cross-sectional study with ambulance staff to:

1. Estimate extent of clinical fatigue and poor sleep quality
2. Identify modifiable correlates of fatigue and poor sleep quality to inform organisational and individual intervention selection
3. Investigate acceptability of two fatigue mitigation interventions from USA/Australia

First study in UK looking at sleep quality and fatigue in ambulance staff using clinically relevant measures

Participants were representative in terms of demographics and role, use of wave analysis to investigate possible response bias



Image: EEAST

SleepSmart: Headline Results

Scope of problem

78% poor sleep quality

69% severe fatigue in shift workers, 56% in day workers

Poor sleep habits common, especially in under 30 years of age (*Sleep Hygiene Index*)

Many staff had a low opinion of organizational response to minimizing fatigue risks and promoting sleep health

Risks

70% of staff arrived for shift with inadequate rest beforehand

Severe fatigue increased risk of being injured at work

Severe fatigue increased risk of reporting being at an unsafe scene

The opportunity

50% of staff trying to improve alertness at work, and we know the actions they are taking

58% of staff want help with their sleep

1 in 3 staff using a sleep tracker (e.g. smartwatch)

SLEEP HYGIENE INDEX

- 1 I take daytime naps lasting two or more hours
- 2 I go to bed different times from day to day
- 3 I get out of bed at different times from day to day
- 4 I exercise to the point of sweating within 1 hour of bedtime
- 5 I stay in bed longer than I should 2 or 3 times a week
- 6 I use alcohol, tobacco or caffeine within 4 hours of going to bed or after going to bed
- 7 I do something that may wake me up before bedtime (e.g. online gaming, use the internet)
- 8 I go to bed feeling stressed, angry, upset or nervous
- 9 I use my bed for things other than sleeping or sex (e.g. watch TV, eat, or study)
- 10 I sleep on an uncomfortable bed (e.g. poor mattress or pillow)
- 11 I sleep in an uncomfortable room (e.g. too bright, too stuffy, too hot, too cold, too noisy)
- 12 I do important work before bedtime (e.g. pay bills, schedule, or study)
- 13 I think, plan or worry when I am in bed

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Poor sleep and mentally unhealthy workplaces



- Fatigue
- Low mood
- Sickness absenteeism
- Poor emotional regulation
- Impaired decision-making
- Impacts on team cohesion
- Risks in safety-critical settings and industries

Poor sleep is almost unavoidable for people with mental health symptoms

Staff with probable PTSD
91% reported poor sleep

Staff with moderate or severe
generalized anxiety
95% reported poor sleep

Staff with moderately severe or
severe depression
95% reported poor sleep

Staff with thoughts of suicide or self-
harm in the past 2 weeks
93% reported poor sleep

Bidirectional association of sleep and mental health



Depression
Anxiety
Post-traumatic stress disorder
Suicidal ideation

Disrupted sleep can start **BEFORE** the onset of a mental health condition, and may be an early warning sign

New evidence emerging that improving sleep, particularly insomnia, may reduce depression and anxiety symptoms, and potentially prevent these conditions

SleepSmart: correlates of thoughts of suicide or self-harm

Younger
women

PTSD

16% of staff
Thoughts of suicide or
self harm in past 2 weeks

Men working
in the control
room

**Poor sleep
quality**

Lack of feeling
connected to
others

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Public health approach to sleep health



Predictive

Biomathematical models for shift scheduling

Rapidly evolving field

Personalised rotas



Proactive

Promote good sleep habits

Manage sleep disorders and chronic poor sleep

Manage mental and physical health conditions that impact sleep



Reactive

Policies and procedures for self-identification of dangerous fatigue

Personal fatigue countermeasures such as naps

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- Biomathematical models for rotas based on circadian sleep science
- Personalised rotas

Predictive



- A key organisational strategy for mental health is quality of shift scheduling
- You may already be working with companies that specialise in shift scheduling software for wellbeing
- Personalised rotas take into account staff preferences for improved wellbeing, and potential to incorporate biological preference such as chronotype
- Important but only part of a systemic public health approach, won't eliminate poor sleep and fatigue in isolation

- Good sleep habits
- Manage sleep disorders
- Manage health conditions that impact sleep
- Job stress prevention and management

Proactive



- Screening and management of sleep disorders and chronic poor sleep (whether work-related or not)
- Occupational health management for conditions that impact sleep – e.g. chronic pain/MSK, menopause, high BMI, depressive and anxiety disorders
- Sleep health literacy but need to move beyond education to behaviour change interventions
- Mainstreaming circadian technologies for shift-workers

Behaviour change interventions for insomnia or long-term poor sleeping

The logo for Sleepstation, featuring the word "Sleepstation" in white, lowercase, sans-serif font on a dark blue rectangular background.

Sleepstation

<https://www.sleepstation.org.uk/>

The logo for Sleepio, featuring the word "Sleepio" in white, lowercase, sans-serif font on a dark blue rectangular background.

Sleepio

<https://www.sleepio.com/>

Both of these online programmes offer:

- a sleep quality assessment
- cognitive-behavioural therapy for insomnia
- cognitive tools and techniques, relaxation approaches, and lifestyle advice that are relevant to everyone

BUT not tailored to shift workers

- Fatigue identification and mitigation
- Personal fatigue countermeasures

(including alertness actions tailored for different settings)

Reactive



- Policies and procedures for self-identification of dangerous fatigue at work – how to assess, who to tell, what is the expected response
- Most common approaches in UK rely on educating about personal changes to help counteract fatigue, but have received very little investigation in health and social care settings

Preventing circadian disruption

- Two-thirds of SleepSmart study participants reported circadian disruption
- Shift changes should be considered but not always feasible or acceptable
- There is a preventative opportunity here before a sleep condition develops or other health and work consequences
- Wearable bright light therapy can start working in 3-4 days



Preventative individual sleep health intervention



Wearable bright light therapy:
Improving sleep quality and
alertness in front-line ambulance
staff for safer patient care



HEALTH &
SOCIAL CARE
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RE-TIMER™

NIHR | Applied Research Collaboration
East of England

Mental Health Across
the Life Course Theme

Wearable bright light therapy for prevention



RE-TIMER™

- Light is the strongest circadian synchronizer exerting rapid and strong effect on the body clock
- Bright light therapy can advance or delay the body clock to minimize disruption from shift work
- Can prolong sleep after night shifts
- Direct effect on mood via serotonin and other monoaminergic pathways
- Safe alternative to pharmacotherapy and faster than CBT
- Is it feasible and acceptable to an NHS workforce?

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Thanks and any questions



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