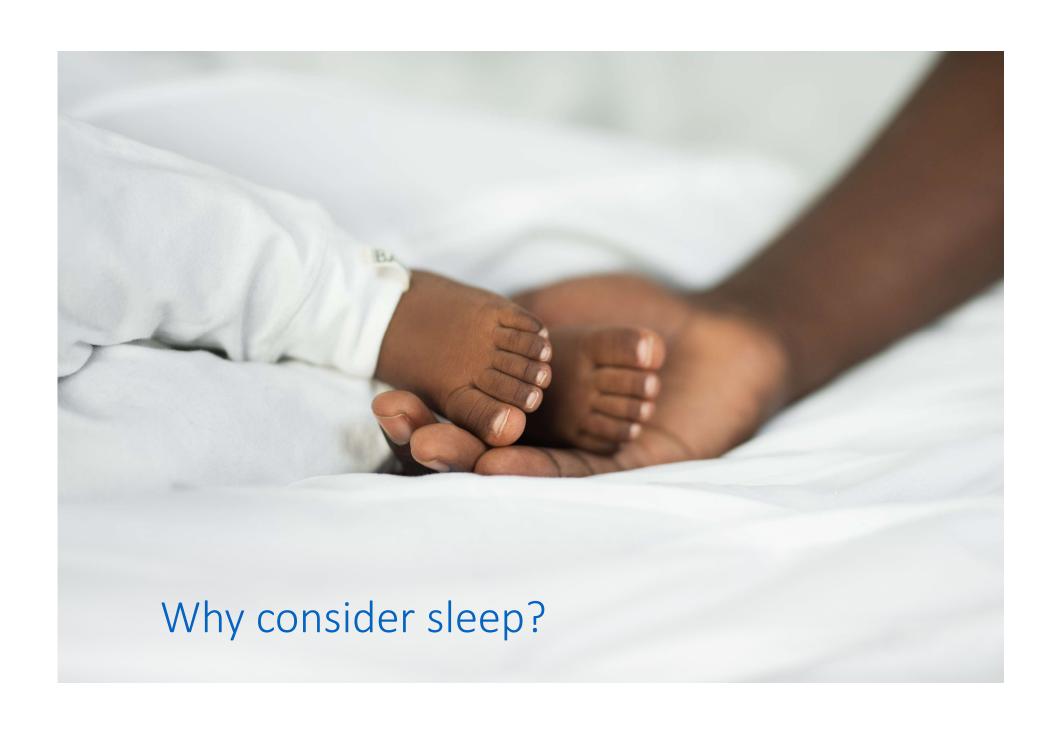




Alice Gregory RHUL Sleep as a critical ingredient for mental health





We sleep a lot

Age	Sleep recommendations
0-3 months	-
4-12 months	12 to 16 hours
1-2 years	11 to 14 hours
3-5 years	10 to 13 hours
6-12 years	9 to 12 hours
13-18 years	8 to 10 hours
18-25 years*	7 to 9 hours
26-64 years*	7 to 9 hours
65+ years*	7 to 8 hours

Paruthi et al (2016). American Academy of Sleep Medicine. J Clin Sleep Med, 12, 785+ *Hirshokowitz et al (2015). National Sleep Foundation. Sleep Health, 1, 40+

It's important

Some theories	
Restorative theory	Sleep allows brain and body growth/repair
Information/ memory processing	New brain circuits laid down when sensory input is minimal; unnecessary connections pruned
Emotional recalibration	REM helps us recalibrate emotional functions

It's important

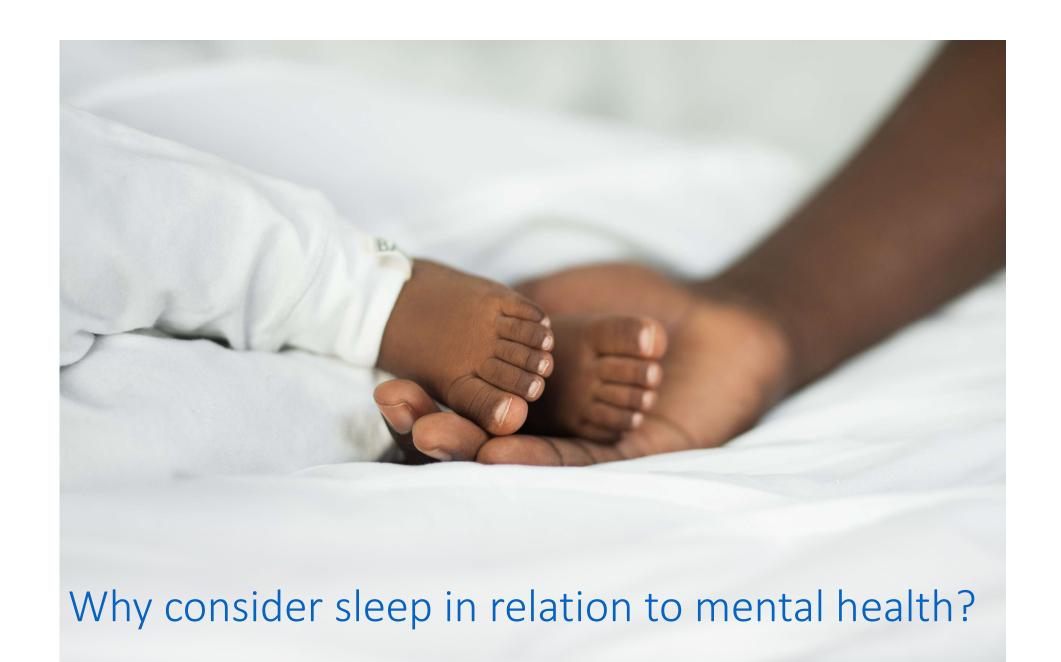
'If sleep doesn't serve an absolutely vital function, then it is the greatest mistake the evolutionary process ever made'

- Allan Rechtschaffen

It can go wrong

Category	Brief Description
Insomnia	Persistent sleep difficulty
Sleep Related Breathing Disorder	Abnormal respiration during sleep
Central Disorders of Hypersomnolence	Excessive sleepiness
Circadian Rhythm Sleep-Wake Disorders	Misalignment of sleep-wake propensity and environment
Parasomnias	Physical events/ experiences related to sleep
Sleep Related Movement Disorder	Movements that prevent/ disrupt sleep

Six main categories of sleep disorders (See ICSD-3-TR , AASM, 2023)
NB// In this presentation, different definitions of sleep difficulties are considered reflecting the wider literature



Sleep and mental health are linked

""JOURNAL ... CHILD PSYCHOLOGY PSYCHIATRY



Journal of Child Psychology and Psychiatry 57:3 (2016), pp 296-317

dei:10.1111/jcpp.12469

Annual Research Review: Sleep problems in childhood psychiatric disorders – a review of the latest science

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Background: Hippocrates flagged the value of sleep for good health. Nonetheless, historically, researchers with an interest in developmental psychopathology have largely ignored a possible role for atypical sleep. Recently, however, there has been a surge of interest in this area, perhaps reflecting increased evidence that disturbed or insufficient sleep can result in poor functioning in numerous domains. This review outlines what is known about sleep in the psychiatric diagnoses most relevant to children and for which associations with sleep are beginning to be understood. While based on a comprehensive survey of the literature, the focus of the current review is on the latest science (largely from 2010). There is a description of both concurrent and longitudinal links as well as possible mechanisms underlying associations. Preliminary treatment research is also considered which suggests that treating sleep difficulties may result in improvements in behavioural areas beyond sleep quality. Findings: To maximise progress in this field, there now needs to be: (a) greater attention to the assessment of sleep in children; (b) sleep research on a wider range of psychiatric disorders; (c) a greater focus on and examination of mechanisms underlying associations; (d) a clearer consideration of developmental questions and (e) large-scale well-designed treatment studies. Conclusions: While sleep problems may sometimes be missed by parents and healthcare providers; hence constituting a hidden risk for other psychopathologies - knowing about these difficulties creates unique opportunities. The current excitement in this field from experts in diverse areas including developmental psychology, clinical psychology, genetics and neuropsychology should make these opportunities a reality. Keywords: Sleep: psychopathology; child; adolescent; review.

See Also: Morales-Muñoz & Gregory (2023). Sleep Med Clin, 18, 245+





Almost all mental health problems are associated with sleep difficulties





Anxiety and depression as an example

DSM-5 criteria for anxiety and depression

- Generalised anxiety disorder
 - The anxiety or worry is associated with three (or more) of the following six symptoms. [Note. Only one is required for children].
 - Restlessness, fatigued, difficulty concentrating, irritability, muscle tension, sleep disturbance (difficulty falling asleep or staying asleep or restless, unsatisfying sleep)
- Major depressive disorder
 - Five or more of the following symptoms have been present for the same 2week period:
 - Depressed mood, lack of interest, weight change, insomnia or hypersomnia nearly every day, psychomotor agitation or retardation, fatigue/ loss of energy, worthlessness, concentration issues, recurrent thoughts of death

Anxiety and depression as an example

TABLE 4 Depressive symptoms recorded at baseline research assessment

	Treatment group, frequency (%)			
Depressive symptom	BPI (n = 155)	CBT (n = 154)	STPP (n = 156)	Total (n = 465)
weeks prior to baseline assessment				
Sleep disturbance	141 (91.0)	141 (91.6)	145 (92.9)	427 (91.8)
Depressed mood	131 (84.5)	134 (87.0)	125 (80.1)	390 (83.9)
Disturbed concentration, inattention	112 (72.3)	119 (77.3)	118 (75.6)	349 (75.1)
Fatigue, lack of energy	117 (75.5)	113 (73.4)	111 (71.2)	341 (73.3)
Worthlessness	108 (69.7)	101 (65.6)	105 (67.3)	314 (67.5)
Anhedonia, apathy	96 (61.9)	104 (67.5)	103 (66.0)	303 (65.2)
Irritable, anger	97 (62.6)	104 (67.5)	91 (58.3)	292 (62.8)
Suicidal ideation	95 (61.3)	91 (59.1)	97 (62.2)	283 (60.9)
Decreased appetite	71 (45.8)	78 (50.6)	71 (45.5)	220 (47.3)
Hopelessness	74 (47.7)	66 (42.9)	71 (45.5)	211 (45.4)
Indecision	47 (30.3)	62 (40.3)	51 (32.7)	160 (34.4)
Guilt	53 (34.2)	51 (33.1)	45 (28.8)	149 (32.0)
Agitation	43 (27.7)	53 (34.4)	50 (32.1)	146 (31.4)
Psychomotor retardation	37 (23.9)	38 (24.7)	36 (23.1)	111 (23.9)
Weight loss	29 (18.7)	25 (16.2)	23 (14.7)	77 (16.6)
Increased appetite	21 (13.5)	23 (14.9)	23 (14.7)	67 (14.4)
Weight gain	15 (9.7)	12 (7.8)	15 (9.6)	42 (9.0)
Hallucinations	12 (7.7)	16 (10.4)	6 (3.8)	34 (7.3)
Delusions	4 (2.6)	5 (3.2)	5 (3.2)	14 (3.0)
Recent suicidal attempt	3 (1.9)	2 (1.3)	7 (4.5)	12 (2.6)
Lifetime suicidal attempt	57 (36.8)	48 (31.2)	55 (35.3)	160 (34.4)

- Study on treatment for depression
- 11-17 years old with unipolar depression
- Great study but for this slide, my interest is symptoms at baseline (pretreatment)
- 92% had sleep disturbance
- More common than depressed mood!
- Table is from the Appendix

Goodyer, I. M., Reynolds, S., Barrett, B., Byford, S., Dubicka, B., Hill, J., ... & Fonagy, P. (2017). Cognitive-behavioural therapy and short-term psychoanalytic psychotherapy versus brief psychosocial intervention in adolescents with unipolar major depression (IMPACT): a multicentre, pragmatic, observer-blind, randomised controlled trial. Health Technology Assessment (Winchester, England), 21(12), 1.

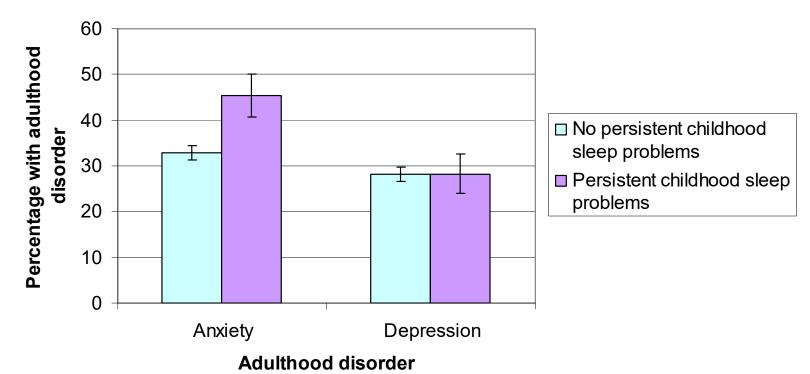
Slide: Faith Orchard

Longitudinal

Study	Dunedin Multidisciplinary Study of Health and Development
N	1037 (912 provided relevant information in childhood and adulthood)
Age	Longitudinal (5, 7, 9 years; 21, 26 years)
Measures	Sleep problems (signs of sleep problems at 9 years and at one other assessment as assessed by questionnaire items)
	Anxiety & Depression (Diagnostic Interview Schedule)

Longitudinal

Childhood sleep problems predict adult anxiety BUT not adult depression

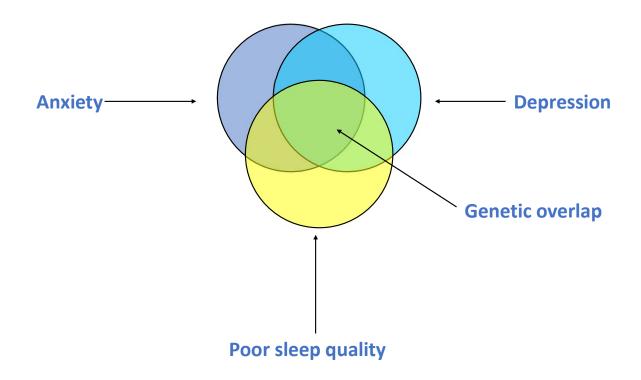




Origins of associations



Origins of associations



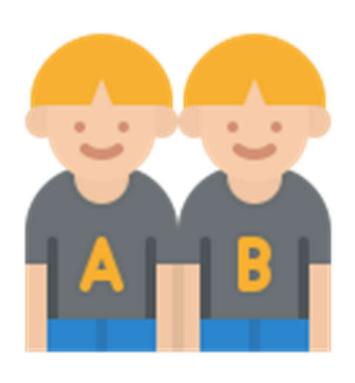
Origins of associations: genetic correlations





Madrid-Valero et al (2020). SLEEP, 43, zsz229

Specifying environments



Identical twins share:

- Genotype
- Parents
- Age
- Sex

They differ: non-shared environment

MZ differences design: examines whether environmental factors can predict the differences between twins

Specifying environments











MZ twin differences for problematic use of technology were associated with their differences for sleep quality (p < 0.001; B = 0.21).



Article DOI: 10.1111/jcpp.70000

EDITORIAL

Editorial: Sleep privilege - research and clinical recommendations for when sleep cannot be optimal

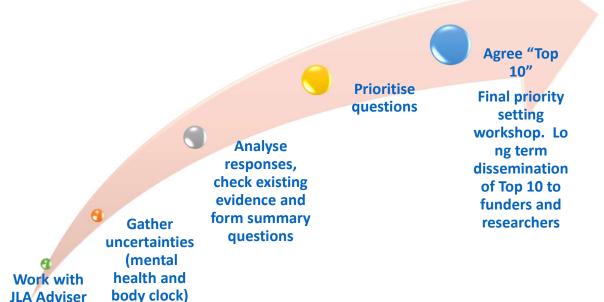
Alice M. Gregory 1, ■ | Allison G. Harvey 2 | Roz Shafran 3,4



Circadian Mental Health Network



JLA Priority Setting Process









12 - 18 months

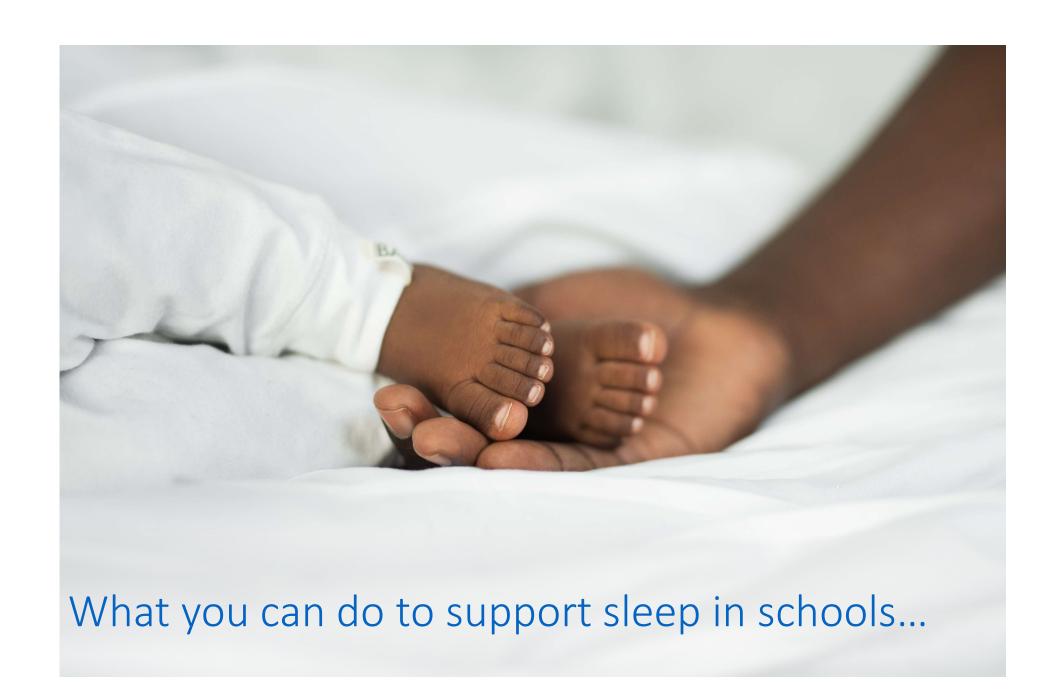
and form

PSP Steering Group

Circadian Mental Health Network (a selection of the 'top 10')

Number	
1	Does the interaction between mental health and the body clock vary by age, especially during different life stages?
3	What is the relationship between the body clock and mental health in neurodivergent individuals and does body clock disruption worsen mental health in these individuals?
5	What societal and/ or policy changes can help prevent mental health issues for, and reduce stigma towards, extreme chronotypes?
8	Would it be better for a person's mental health to follow their own (natural) rhythms or to follow more typical sleep patterns and/ or social norms?

https://www.jla.nihr.ac.uk/priority-setting-partnerships/mental-health-and-the-body-clock#tab-78746



What you can do in schools to help...

Tips!

Understand the sleep challenges...

Understand how sleep is associated with learning, emotional regulation etc

Educate the children about sleep (see Department of Education Content)

Understand methods by which sleep can be improved

An ideal world...delay school start times; nap pods

Acknowledge that not everyone has 'the sleep privilege'

Conclusions

Conclusions

Sleep is associated with mental health

These associations occur at the same time and over time too

There are different explanations for these links (some are genetic and some environmental)

Consider EDI in discussions of this topic

There are lots of ways that you can support sleep of young people

This could have an impact on other aspects of school life

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