

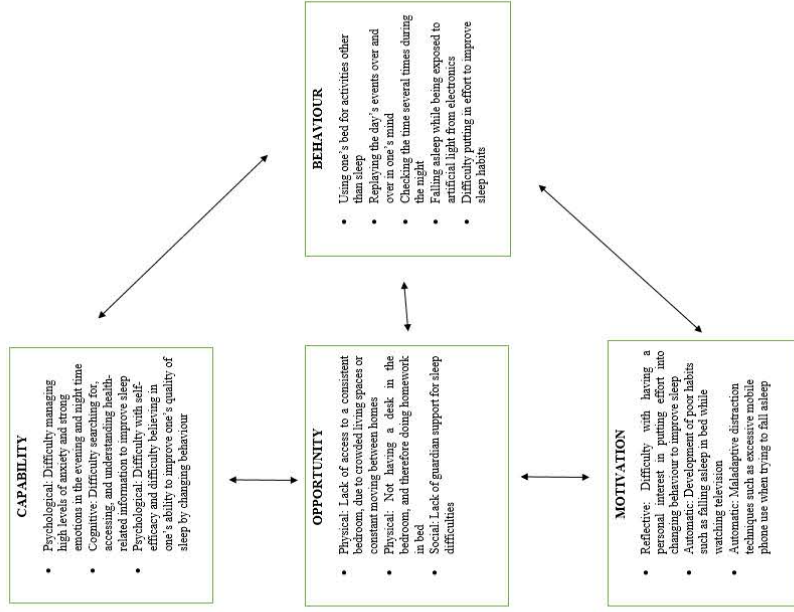
## Background

This report summarises a remote sleep intervention delivered at my placement, to five Luton Child and Adolescent Mental Health Service (CAMHS) users across the span of six weeks. Covid-19 lockdown has impacted young people's sleep, by deregulating their day, evening, and night routines as a result of suddenly stopping going to school or college, and adapting to changes from school- to home-based education (Leucelle et al., 2020; Lim et al., 2021). Evidence shows a linearly decreasing pattern of sleep quality from the first day of lockdown, and that the removal of a school start time and school commute was significantly associated with increased Internet use, which was strongly associated with poorer quality sleep (Dellagulia et al., 2020; Lim et al., 2021).

## Formulation

Diagram 1

Formulation of a map of the COM-B model and sleep hygiene practices



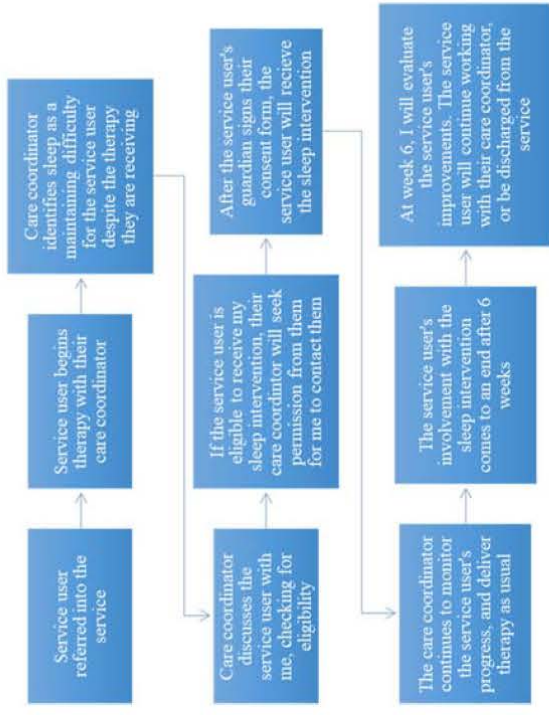
## Intervention

Behaviour change techniques used to address barriers to sleep hygiene practice identified in the formulation

Behaviour change technique	Implementation	COM-B barrier identified in formulation (See gem 1)
Goal setting (behaviour), setting or agreeing on a goal defined in terms of the behaviour to be achieved	In week 1, service users choose 4 goals to work on over the next 4 weeks.	Motivation (Reflective): Reflective sleep due to depressive cognitions.
Behavioural contracts: create a written specification of the behaviour to be performed, agreed on by the person, and witnessed by another	In week 1, service users write down their 4 goals in their booklets, with one goal assigned to each week.	Capability (Cognitive): Difficulty searching for, accessing, and understanding health-related information to improve sleep.
Problem-solving: analysis, or prompt the person to analyse factors influencing the behaviour and generate or select strategies that include overcoming barriers and/or increasing facilitators	In weeks 2-4, service users are guided on how to identify barriers and facilitators to their weekly goal behaviours, with guidance from the COM-B model. Service users are given an opportunity, or motivation, to identify, or address, any barriers to their goal behaviours. Service users are also supported in maximising the benefits of their capabilities, opportunities, and motivation to achieve their weekly goals.	Opportunity (Physical): Lack of access to a consistent bedroom, due to crowded living spaces or constant moving between homes.
Feedback of behaviour: Monitor and provide informative or evaluative feedback on performance of the behaviour	In weeks 2-4, service users are asked about their progress with their goals, and they are educated on the purpose of changing various behaviours, and their appropriate role are outlined for their effectiveness.	Motivation (Reflective): Difficulty with having a personal interest in putting effort into changing behaviour to improve sleep.
Practical social support: Advise on, arrange or provide practical help for performance of the behaviour	In weeks 2-4, service users are encouraged to identify a member of their social circle who they could ask for help in specific areas to help them achieve their goals.	Opportunity (Social): Lack of guardian support for sleep difficulties.
Behavioural experiments: Advise on how to identify and test hypotheses about the behaviour, its causes and consequences, by collecting and interpreting data	In weeks 2-4, service users are supported in developing their psychological flexibility. They are encouraged to adopt a gently curious, non-judging, empirical, experimental approach to their behaviours, and to test hypotheses that they get the way of good quality sleep.	Motivation (Automatic): Maladaptive habits, such as distraction techniques like excessive mobile phone use when trying to fall asleep.
Restructuring the physical environment: Advise on how to change the physical environment in order to facilitate performance of the behaviour	In weeks 2-4, service users are supported in identifying ways in which restructuring their physical environment might facilitate behaviour change.	Opportunity (Physical): Not having a desk in the bedroom, and therefore doing homework in bed.
Associative learning: Present a neutral stimulus paired with a stimulus that already elicits the behaviour repeatedly until the neutral stimulus elicits that behaviour	In weeks 2-4, service users are given an opportunity to reflect on ways in which they have associated their bed with various non-sleep behaviours, and behaviours that are incompatible with sleep.	Capability (Psychological): Development of poor habits such as falling asleep in bed while watching television.
Reframing/reframing: suggest the deliberate adoption of a perspective or new perspective on behaviour in order to change cognitions or emotions about performing the behaviour	In weeks 2-4, service users are guided in reframing/reframing of their perspective on their chosen goal behaviour.	Capability (Psychological): Difficulty with managing high levels of anxiety and strong emotions in the evening and night time.
Mental rehearsal of successful performance: Advise on practices imagining performing the behaviour successfully in relevant contexts	In weeks 2-4, service users are guided in mental rehearsal of successful performance of their chosen goal behaviour.	Capability (Psychological): Difficulty with self-efficacy and believing in one's ability to improve one's quality of sleep by changing behaviour.

## References

Available on request



## Evaluation using Adolescent Sleep Hygiene Scale (Lebourgeois et al, 2013)

Factor of Sleep Behaviors	Average pre-intervention score	Average post-intervention score
<b>Physiological Factor</b>	32	34
After 6:00 in the evening, I have done with coffee		
During the 1 hour before bedtime, I am very active		
During the 1 hour before bedtime, I drink more than 5 I go to bed with a stomach ache		
<b>Behavioural/Arousal Factor</b>	32	47
I go to bed feeling hungry		
During the 1 hour before bedtime, I do things that make me feel very awake (e.g., playing video games), watching TV, talking on the telephone		
I go to bed with things in my bed that keep me awake (e.g., watching TV, talking on the phone, or overpacked clothes)		
I was woken for things other than sleep (eating, washing TV, doing homework, playing video games)		
<b>Cognitive/Functional Factor</b>	38	48
I go to bed and think about the things I need to do		
I go to bed and replay the day's events over and over in my mind		
I check the time several times during the night		
During the 1 hour before bedtime, things happen that make me feel strong emotions (e.g., sadness, anger, excitement)		
I go to bed feeling upset		
I go to bed not worried about things happening at home or at school		
I fall asleep while listening to loud music		
I fall asleep while watching TV		
<b>Sleep Environment Factor</b>	38	52
I fall asleep in a brightly lit room (e.g., the overhead lights on)		
I fall asleep in a room that feels too hot or too cold		
I fall asleep in one place then move to another place during the night		
<b>Daytime sleep factor</b>	38	52
During the day, I take a nap that lasts more than 1 hour		
After 6 in the evening, I take a nap		