

Health Psychology (CMED2006)(2023-2024)

Case Study Portfolio

Section 1

Description of an individual (“the case”) and an ongoing health compromising behaviour (“the behaviour”) that they exhibit.

Pseudonym or initials of the case:

➤ Pseudonym: **Anna**

Brief demographic information of the case (e.g., age, occupation, marital status):

- Age: **54**
- Gender: **Female**
- Occupation: **Unemployed (housewife)**
- Education Level: **Primary School Level**
- Ethnicity: **Buddhism**
- Marital status:
Widowed, with 2 children living together.
- Family structure:
Raises 2 children up independently and lives with 2 children (one 20 years-old; one 23 years-old) now, and having one sister (with one daughter) in the Guangdong, near to Hong Kong, while other close relatives are far away from Hong Kong.

Nature and frequency of the behaviour:

- Nature:
Anna has developed a habit of staying up late at night, resulting in a lack of adequate sleep, because of indulging in excessive and prolonged use of the social media platform (e.g.: short videos from TikTok, WeChat), spending an extensive amount of time watching videos. However, Anna always has poor sleep quality and short sleeping period, often experiencing midnight awakenings and difficulty falling back asleep, as well as early morning awakenings.
- Frequency:
Anna tends to spend almost every night, starting around 10:00 PM, getting immersed in watching TikTok videos for approximately 4 hours until around 2:00 AM, while Anna usually sleep for around 6 hours, with poor sleep quality.

Negative health impact of the behaviour:

- **According to the National Institute on Aging (2020), older adults require the same amount of sleep as all adults, which is around 7 to 9 hours per night.**
- **However, Anna's ongoing behaviour results in sleep deprivation and exacerbates the issue further.**

- Consequently, Anna's ongoing behaviour can have severe physical health consequences, including cardiovascular disease, renal disease, hypertension, type 2 diabetes mellitus, stroke, obesity, and depression (National Heart, Lung, and Blood Institute of National Institutes of Health, 2022). This can be explained by the negative impact on immune cells due to insufficient and prolonged sleep deprivation, potentially leading to inflammatory disorders (Motivala, 2011).
- In addition to compromising physical health, Anna's ongoing behaviour also contributes to mental health problems such as increased anxiety and distress levels (Blackwelder et al., 2021).
- Anna's ongoing behaviour also worsens the sleep deprivation issue since smartphones emit a significant amount of blue light, which can suppress the production of a hormone that regulates sleep-wake cycles. This can result in difficulty falling asleep and disrupted sleep patterns (Correa-Iriarte et al., 2023).

(Wong Kwok Yin, 3036070362)

Health Psychology (CMED2006) (2023-2024)

Case Study Portfolio

Section 2

Conscious thoughts that the case has about the behaviour; and interventions that might change their decision to continue the behaviour

Main reason(s) for behaviour according to the case:

- Anna perceives engaging in social media at midnight as a me time:
 - **Allowing her to escape from stress, boredom in her life:**
 - Anna has to take on heavy household chores, so she doesn't have much time for entertainment during the day and feels stressed.
Consequently, Anna experiences a sense of stress in her life.
 - Anna can only rely on the inheritance from significant other and does not have extra money to hire a domestic helper to alleviate her workload.
Consequently, Anna experiences a sense of stress in her life.
 - Anna is currently unemployed, which restricts her disposable income and hinders her ability to engage in entertainment activities (with limited options).
Consequently, Anna experiences a sense of boredom in her life.
 - **Providing temporary relief from negative emotions and daily challenges.**
- Anna **feels a sense of social connection**, particularly if she shares the short videos with relatives and interacts with others through comments.
- In short, she may have developed a dependence on social media as a means of coping and seeking pleasure.

Case's thoughts about benefits / positive aspects of the behaviour (including their importance):

- **Coping mechanism:** Anna perceives her behavior as a coping mechanism to temporarily escape from stress, boredom in her life.
- **Entertainment and enjoyment:** Anna finds short videos from social media entertaining and enjoyable, providing a source of amusement and relaxation during her late-night sessions.
- **Social connection:** she shares the short videos with relatives and interacts with others through comments.
- **In short, Anna currently perceives this behavior as essential and obvious thing to do in her daily lives without consider the other options (System 1 Intuition in Dual Process Theory).**

Case's thoughts about costs / negative aspects of the behaviour (including their importance):

- Anna knows that staying up late may have negative impacts on her body, but she perceives that the negative impact (cost) of the behaviour is limited.

Case's illness cognition towards the illness(es) associated with the behaviour:

- Anna can only recognize one **Identity of illness** as **tiredness** associated with the behaviour.
- Anna tends to **attribute the perceived cause of illness(es)** associated with the behaviour as:
 - **Mainly External Cause**, as she believes the heavy household chores is the most significant factors that contributing to the **tiredness**.
 - **Timeline:**
She believes that the timeline is short by simply sleeping more.
 - **Consequences:**
She believes the consequences is simply tired.
 - **Curability:**
She believes that It can be cured by simply sleeping more.
 - **Controllability:**
Cannot not be controlled because she believes the heavy housework is inevitable, leading the tiredness is uncontrollable.
 - **Chance or fate**, as she believes that “bad things are for bad people” (**Just World Hypothesis**), thus, **she perceives other illness(es)**, including: Chest tightness, shortness of breath, arrhythmia, and etc, **are not associated with the behaviour**.

Misunderstands, biases and errors that you might want to target (and the way to target them):

- I want to target on the:
 - **misattribution of the perceived cause of illness(es)**
 - I will provide more options and information for her to cope with her stress.
 - **intuition thinking system toward coping mechanism of stress.**
 - I will help her to understand concepts in health.

(Wong Kwok Yin, 3036070362)

Health Psychology (CMED2006)(2023-2024)

Case Study Portfolio

Section 3

The needs (according to Maslow's hierarchy of needs) that the case fulfil through the behaviour;
and alternative ways to fulfil those needs

One need that the case fulfil through the health-compromising behaviour:

➤ **Safety and security needs:**

The behavior can provide Anna with a sense of psychological comfort and escape from the stress and boredom she faced, allowing her temporary relief from negative emotions, and providing the experience of entertainment and relaxation.

Alternative ways to fulfil the above need:

➤ Anna can select **Emotion-Focused Coping rather than Unhealthy Coping.**

- Example: *engage in hobbies or activities (including listening to relaxing music.)*

Another need that the case fulfil through the health-compromising behaviour:

➤ **Love and Belonging Needs:**

The behaviour provide Anna with an opportunity to connect with relatives and fulfil her need for **positive love**.

(Generous interchange of emotions: a sense of belonging and connection to family)

Alternative ways to fulfil the above need:

➤ Anna can select **Emotion-Focused Coping rather than Unhealthy Coping.**

- Example: *Sharing feelings with family*

(Wong Kwok Yin, 3036070362)

Health Psychology (CMED2006)(2023-2024)

Case Study Portfolio

Section 4

The case's readiness to change (according to the Transtheoretical Model); and possible interventions according to their readiness

According to the Transtheoretical Model, the person belongs to the stage of:

- **Precontemplation Stage:**
 - **Misattribution** of the perceived cause of illness(es) and **intuition thinking system** toward coping mechanism of stress indicating that **Anna doesn't recognize the need for changing the behaviour and not intend to make any change.**

Possible interventions to move them to the next stage of change:

- Transform thinking system from (**System 1 Intuition**) to (**System 2 Reasoning/Calculation**) by providing accurate health information, so that Anna will not fall into **unrealistic optimism** and be **motivated to consider a change** based on **Loss Aversion** by recognizing the cost of the behaviour (**Increasing the awareness**).
 - Example:
 - **Correct the misattribution** by explaining the cause of illnesses of the behaviour to **increase the illness cognition in illness identity.**
- **Showing the various stress coping options and information for her** to increase the **illness cognition in Curability and Controllability**, so that **Certainty Effect** can be constructed. Finally Anna can **envision possibility of change** because of the achievable behavioural change.
 - Example:
 - Watching TV with family in the evening, Listen to the relaxing music.

Possible interventions to move them from contemplation stage to preparation stage:

- **Providing adequate health information** for rational analysis in **Interpretation stage in Self-Regulatory Model** by **increasing the overall illness cognition**, and
- Clarifying the gain from behavioural change, so as to increase **Certainty Effect**
 - Example:
 - Elaborating the **negative impacts of the illnesses from the behaviour**, as well as **certain gain of behavioural change** on physical health, and mental well-being.

Possible interventions to move them from preparation stage to action stage:

- Based on Self-Determination Theory, increasing commitment by raising the **Controlled motivation** to **Autonomous motivation**, and
- Suggest available social resources, so that Anna can have a feeling of **Autonomy** (able to choose suitable resources autonomously from adequate options), **Competence** (sufficient resources), **Relatedness** (courage from family).
 - Example:
 - **Through a conversation with Anna and her family, Anna's family can express their concern for her health, their support for her behavior change, and their hope which Anna can take care of her health as she cares for her family. (Equating her value for family and her value for health)**
 - **Suggesting the Stress Coping Workshop which teaching the professional stress coping interventions from the district health centre for her.**
- Assist Anna to **formulate the action plans**, such as
 - Examples:
 - utilizing SMART principles to construct the goals and objectives, and
 - Construct the start date of the behavioural change.

Possible interventions to move them from action stage to maintenance stage:

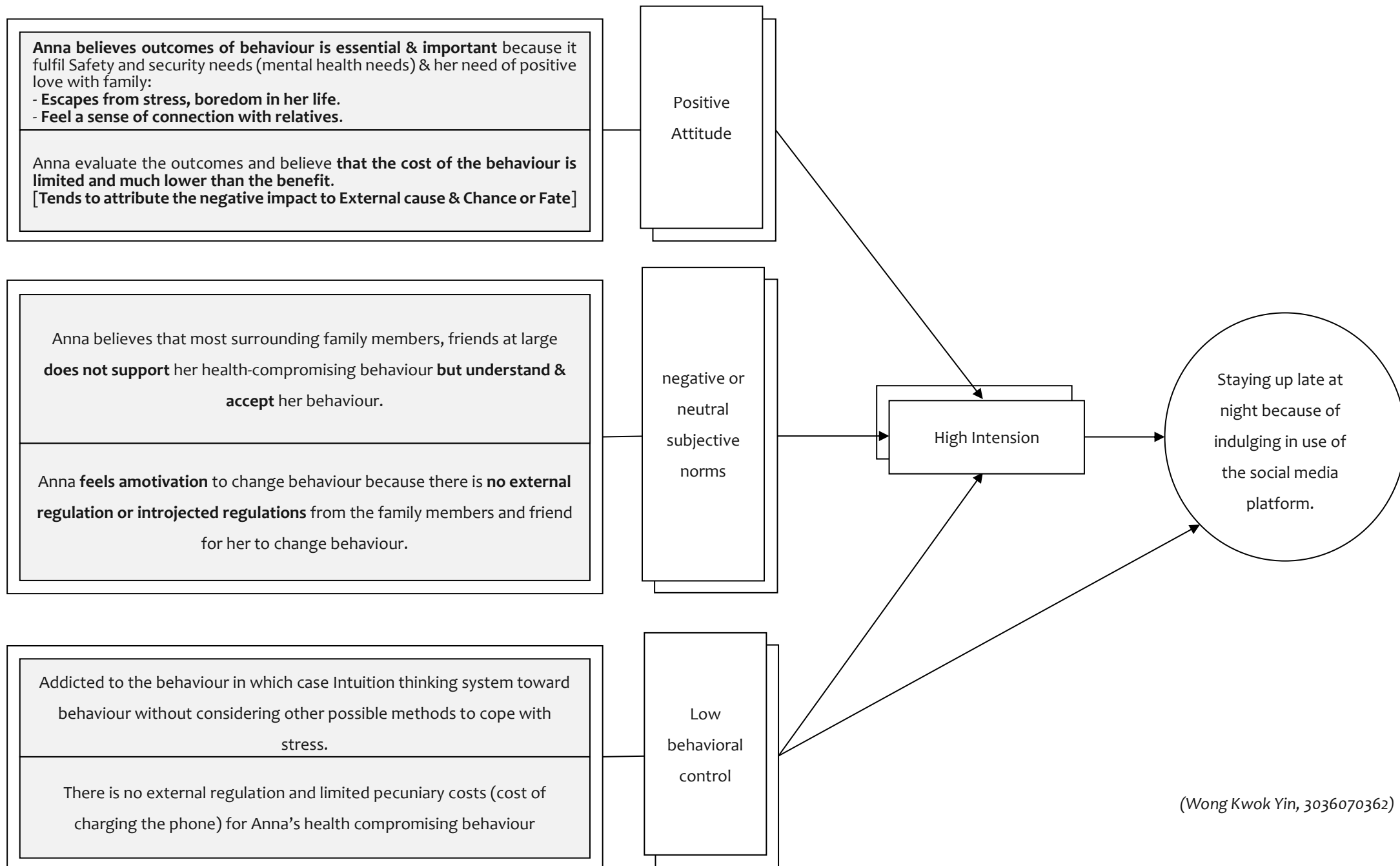
- By **teaching Anna strategies** to improve the action plan, such as implementing the **Operant conditioning (negative punishment / positive reinforcement)**, to increase the feasibility and efficiency of the action plan.
 - Example:
 - If the health compromising behavior happens again, uninstall the social media app for one day.
 - If the behavioral change is successful in one week, Anna would be able to lend the housework to family for three days.
- By **providing frequent support and appreciation for her sustain behavioral change**, it can increase Anna's feeling of **Competence** (immediate support), **Relatedness** (she is not alone), ultimately Anna can be more determined can keep the action plan up.

(Wong Kwok Yin, 3036070362)

Health Psychology (CMED2006)(2023-2024) Case Study Portfolio

Section 5

Analysis of the behaviour using the TPB; and interventions according to the case's attitude, subjective norm, behavioural control, and intention



Health Psychology (CMED2006)(2023-2024)

Case Study Portfolio

Section 6

Reflection on the most important factor(s) that drive the case's behaviour (can be ones mentioned above or completely new ones)

Motivation

One important factor is that it fulfills the **Safety and security needs in Maslow's hierarchy of needs**. Anna faces stress and boredom in her life due to heavy household chores, limited financial resources, and unemployment, while the behavior allows her to escape from these stressors and find psychological comfort by providing her with a sense of entertainment, relaxation, and a temporary escape from her daily challenges, ultimately fulfilling her safety and security needs.

Another important factor is that it fulfills the **Love and Belonging Needs in Maslow's hierarchy of needs**. Anna can feel a sense of social connection, particularly if she shares the short videos with relatives and interacts with others through comments. In this case, the behavior provides Anna with an opportunity to connect with relatives and others, and ultimately fulfills her need for **positive love** (*Generous interchange of emotions: a sense of belonging and connection to family*).

In short, Anna has **autonomous motivation (Identified regulation)** toward the behavior because she perceives **that the cost of the behavior is limited (correlated to illness cognition part) and much lower than the values given by behavior**.

Illness Cognition

Another important factor is Anna's **poor illness cognition**. Anna **tends to misattribute the cost of the behavior to an external cause**, as she believes that heavy household chores are the most significant factors contributing to the *illness she recognized* (tiredness). Anna also **tends to misattribute** the perceived cause of *illnesses she does not recognize* (i.e.: chest tightness, shortness of breath, arrhythmia) **to Chance or Fate**, as she believes that "*bad things are for bad people*" (**Just World Hypothesis**). The poor illness cognition results in Anna's misinterpretation of the situation. Anna falls into unrealistic optimism, perceiving that the cost of behavior is uncertain and in the future, while the gain of behavior is certain and in the present, triggering Anna's ongoing behavior by **certainty effect** and **time preference**.

In short, Anna's poor illness cognition which is caused by misattribution, and leads to her misinterpretation of situation, as a result, the behaviour is ongoing based on certainty effect and time preference.

Availability of Stress Coping Information

Another important factor is availability of stress coping Information. According to Anna's case, Anna has limited entertainment opportunity and heavy household chores, resulting in **limited exposure to adequate amount of stress coping the information**. As a result, Anna **develop a Intuition thinking system toward behaviour** without considering other possible methods to fulfil her needs in **Maslow's hierarchy**, including **Safety and security needs**, as well as, **Love and Belonging Needs**.

(Wong Kwok Yin, 3036070362)

Health Psychology (CMED2006)(2023-2024)

Case Study Portfolio

Section 7

Suggestion of 3 interventions (can be ones mentioned before or completely new ones) that are most likely to reduce or eliminate the behaviour.

Intervention 1 -

- **I am the role** to implement the intervention.
- **Target on Illness Cognition Factors**
- *Intervention Method:*

Correct the misattribution by explaining the cause of illnesses of the behaviour and elaborating the negative impacts of the illnesses from the behaviour.
- *Justification of the Intervention Method:*

The Intervention is to increase Anna's overall illnesses cognition.

By **establishing accurate and adequate Anna's understandings in illnesses cognition** from her behaviour, Anna will be able to **transform thinking system from (System 1 Intuition) to (System 2 Reasoning/Calculation)**, so that Anna will not fall into **unrealistic optimism** and be motivated to consider a change based on **Loss Aversion** by **correcting the misattribution** and **realizing the cost of the behaviour** (*Increasing the awareness*).

Intervention 2

- **Anna's Family is the role** to implement the intervention.
- **Target on Motivation Factors**
- *Intervention Method:*

Through regular conversations with Anna and her family, Anna's family can frequently express their concern for her health, their support, their appreciation for her behavior change, and their hope which Anna can take care of her health as she cares for her family to Anna. (Equating her value for family and her value for health)
- *Justification of the Intervention Method:*

The Intervention is to increase the motivation for Anna to reduce the behaviour.

The aims of the conversation is **equating her value for family caring and her value for health**. In which case, increasing commitment by **raising the amotivation to Identified regulation in Autonomous motivation** based on *Self-Determination Theory*, as well as, **raising Anna's Relatedness** (courage from family) in behavioral change.

Intervention 3

- **District Social Center and me are the role** to implement the intervention.
- **Target on Availability of Stress Coping Information**

➤ *Intervention Method:*

Arranging Anna a Stress Coping Workshop in district social center that focuses on teaching practical stress coping techniques. This workshop will be led by experts from the district health center, providing Anna with various strategies to effectively manage and cope with stress in a professional environment. For example: suggesting various Emotion-Focused Stress Coping activities (e.g.: Listening to music, Meditation, etc.). Anna can also make friend who are facing similar situation.

➤ *Justification of the Intervention Method:*

By arranging Anna the workshop, the workshop can assist her to understand certain terms and concepts in stress-coping field in order to decide a rational stress coping method (Emotion-Focused Stress Coping activities rather than Unhealthy Coping activities). As a result, the Intervention can fulfil Anna's Psychological needs which are **Autonomy** (*various of stress coping methods*), **Competence** (*Increased stress awareness and cognition in stress-coping field*), and **Relatedness** (*Feel accepted* by District Health Center and society, and *make friend in the workshop*), ultimately increasing the motivation to reduce behaviour (Unhealthy Coping activities) by *Self-Determination Theory*.

(Wong Kwok Yin, 3036070362)

Reference

Blackwelder, A., Hoskins, M., & Huber, L. (2021). Peer reviewed: effect of inadequate sleep on frequent mental distress. *Preventing chronic disease*, 18.

Correa-Iriarte, S., Hidalgo-Fuentes, S., & Martí-Vilar, M. (2023). Relationship between Problematic Smartphone Use, Sleep Quality and Bedtime Procrastination: A Mediation Analysis. *Behavioral Sciences*, 13(10), 839.

Motivala, S. J. (2011). Sleep and inflammation: psychoneuroimmunology in the context of cardiovascular disease. *Annals of Behavioral Medicine*, 42(2), 141-152.

National Heart, Lung, and Blood Institute of National Institutes of Health. (2022, March 24). *What are sleep deprivation and deficiency?*. National Heart Lung and Blood Institute. <https://www.nhlbi.nih.gov/health/sleep-deprivation>

National Institute on Aging. (2020, November 3). *A good night's sleep*. <https://www.nia.nih.gov/health/sleep/good-nights-sleep>