

Perceived Stress and Sleep Quality Among Japanese University Students



愛知県立大学
Aichi Prefectural University



Who are we?

Josh Brunotte



Debbie Broadby



Collaborative Research into Sleep, Stress, and Health

Debbie and Josh's History

Agenda

- Stress and Sleep - Research findings
- Our Sleep and Stress research
- The relationship between sleep and stress
- Group Discussion
- Questions & Answers

- Please take out your cell phone
- Please search for:



→ pollev.com/debbieb189

→ Input a nickname
or
press skip

Do you think you get enough sleep most nights?

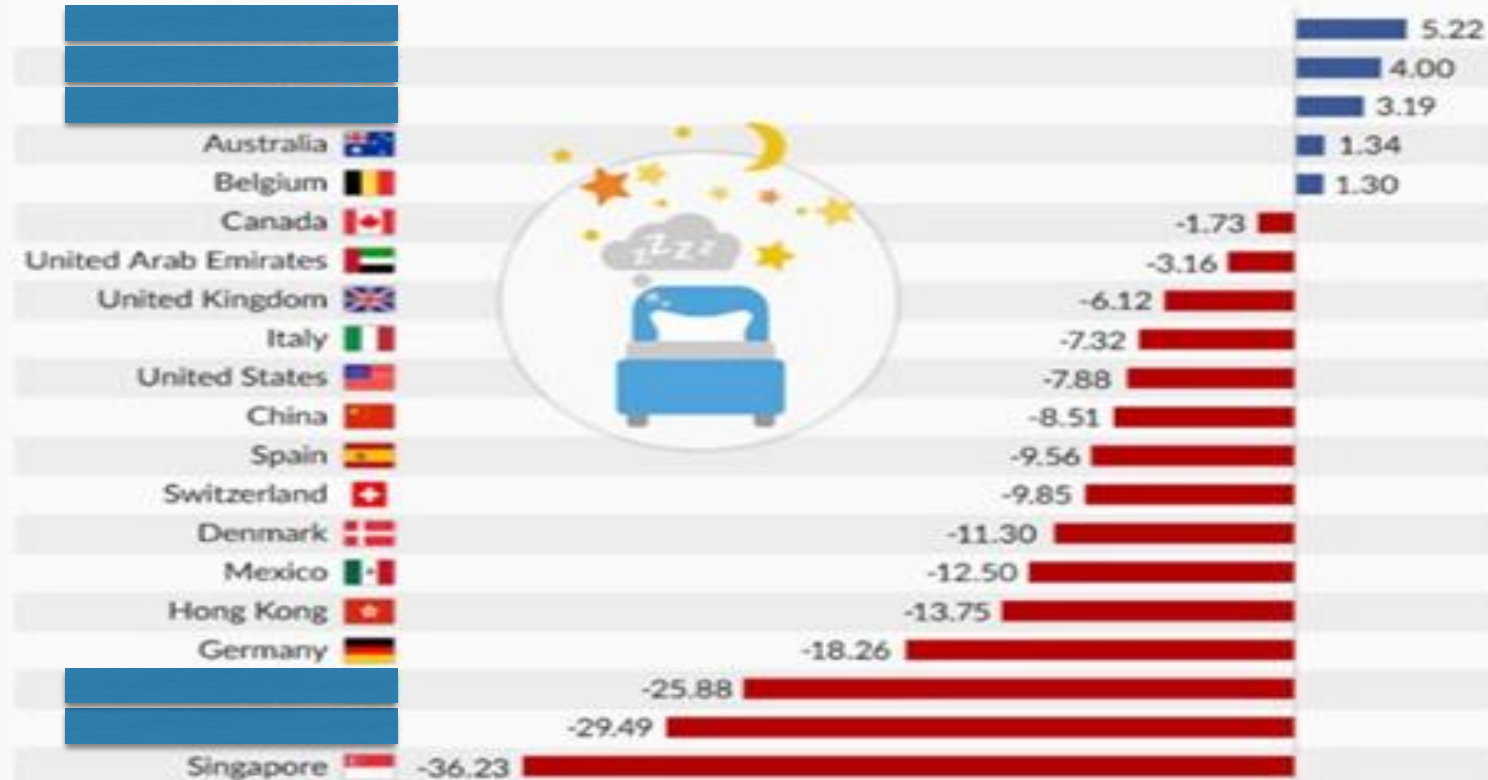
Yes

No

Netherlands?

Who's getting the most sleep?

Minutes above and below eight hours of sleep in 2016

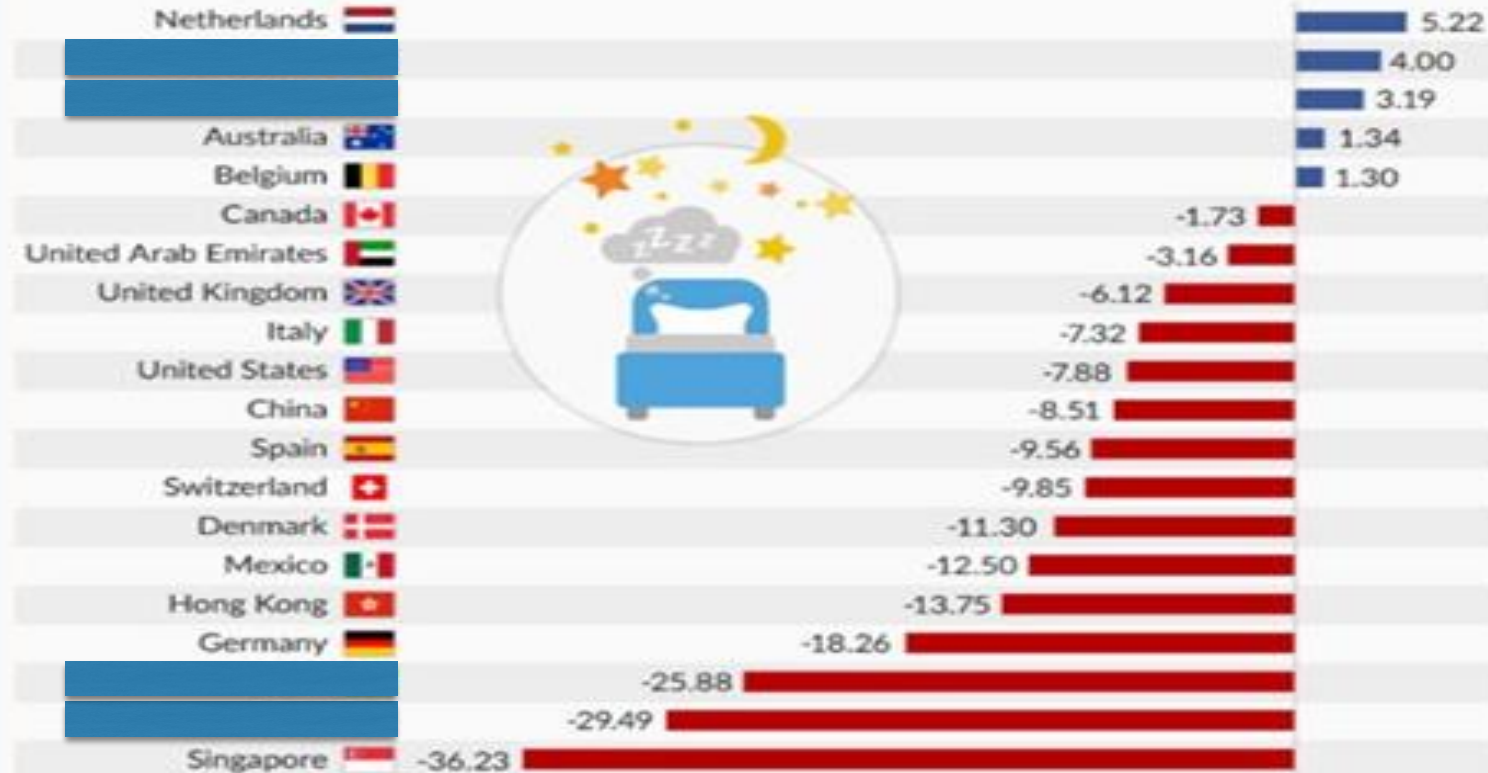




Brazil?

Who's getting the most sleep?

Minutes above and below eight hours of sleep in 2016



France?

Who's getting the most sleep?

Minutes above and below eight hours of sleep in 2016



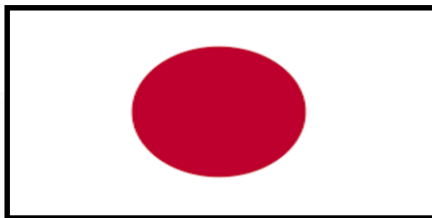


New Zealand?

Who's getting the most sleep?

Minutes above and below eight hours of sleep in 2016





Japan?

Who's getting the most sleep?

Minutes above and below eight hours of sleep in 2016

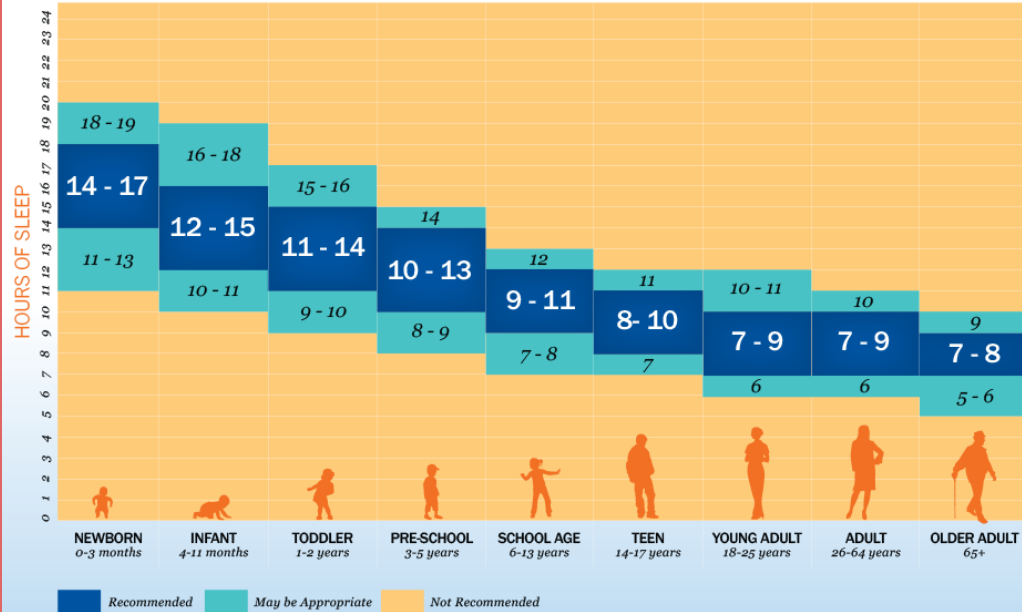


Who's getting the most sleep?

Minutes above and below eight hours of sleep in 2016



SLEEP DURATION RECOMMENDATIONS



SLEEPFOUNDATION.ORG | SLEEP.ORG



How high is your usual level of stress?

5 (very high)

4

3 (so,so)

2

1 (I never
feel stress)

Why is it important to understand about sleep and stress?

How do sleeping students affect teachers?

- Bad teacher
- Unmotivated Ss
- Ss dislike me
- Ss dislike the course
- Frustrated
- Hitting my head against the blackboard



<https://bit.ly/2H0rFia> 2019/03/05

Sleep and Health

- Linked to illness
 - *more use of health care services*
- Injuries
- Death

- More depression
- Decreased motivation
- Lower self esteem
 - *especially in teenagers*



<https://bit.ly/2SKIXTO> 2019/03/05



<https://bit.ly/2NHQZdv> 2019/03/05

Sleep and School

Burnout
from
university

Lower test
scores

Negative
mood
during
classes

Dulls
cognitive
abilities



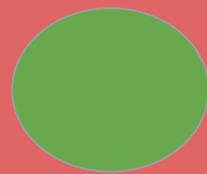
Combines
with stress
of school
workload

Stress -

What is stress?

"Stress arises when there is an imbalance between demands on the self and one's ability to cope with a situation."

– *Cohen, et al. (1997)*



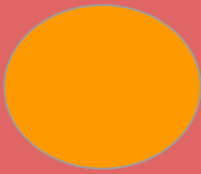
Eustress - Good Stress

Eustress is an uncomfortable situation, that could possibly lead to personal growth.

It is a response to a stressor with a sense of meaning or hope.

e.g. An exam, first date, job interview

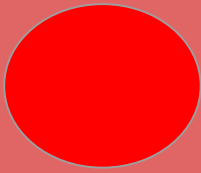
Acute Stress



Arises in response to an event that is traumatic or terrifying for the person that induces a strong emotional response by the individual

e.g. car accident, health related

Chronic Stress



Response to emotional pressure suffered for a prolonged period of time in which an individual perceives they have little or no control.

e.g. Stressful work or home environment

Stressors for students

- Upcoming tests
- Too much homework
- A heavy workload
- Lack of organization
- Too little down time
- Classes that are too hard
- Changes in routine
- Poor sleep schedule
- Participating in class
- Lack of support
- Transitioning to a new environment

Prolonged Stress

School

- Bad relationships
- Low academic grades
- Lack of motivation

Health

- Headaches
- obesity
- heart disease
- Insomnia

Emotional

- irritability
- anxiety/panic attacks
- depression



Suicidal thoughts

Our Research

On average, how many hours do you sleep each night?

Year-long Sleep Study Results ($n=156$)



<https://bit.ly/2NM8rxy> 2019/03/05

*Average length of
sleep*

**5 hours, 46
minutes per night**

Only 25% of participants slept 7 hours or more on
average

PITTSBURGH SLEEP QUALITY INDEX (PSQI)

INSTRUCTIONS: The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

- During the past month, when have you usually gone to bed at night?
USUAL BED TIME _____
- During the past month, how long (in minutes) has it usually take you to fall asleep each night?
NUMBER OF MINUTES _____
- During the past month, when have you usually gotten up in the morning?
USUAL GETTING UP TIME _____
- During the past month, how many hours of actual sleep did you get at night? (This may be different than the number of hours you spend in bed.)
HOURS OF SLEEP PER NIGHT _____

INSTRUCTIONS: For each of the remaining questions, check the one best response. Please answer all questions.

- During the past month, how often have you had trouble sleeping because you...

	Not during the past month	Less than once a week	Once or twice a week	Three or more times a week
(a) ...cannot get to sleep within 30 minutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) ...wake up in the middle of the night or early morning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) ...have to get up to use the bathroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) ...cannot breathe comfortably	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) ...cough or snore loudly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) ...feel too cold	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) ...feel too hot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(h) ...had bad dreams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(i) ...have pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(j) Other reason(s), please describe	_____ _____			
How often during the past month have you had trouble sleeping because of this?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Pittsburgh Sleep Quality Index Survey ($n=183$)

Average PSQI score
(>6 = poor sleep)

6.21



What kind of sleep disturbance do you experience most often?



When poll is active, respond at **PollEv.com/debbieb189**



Text **DEBBIEB189** to **+61 429 883 481** once to join

cannot get to sleep within 30 minutes

wake up in the middle of the night or early morning

have to get up to use the bathroom

cannot breathe comfortably

cough or snore loudly

feel too cold

feel too hot

have bad dreams

have pain

Common sleep problems

<i>Falling asleep within 30 mins</i>	66%
<i>Temperature problems</i>	51%
<i>Waking up at night</i>	35%

Stress

Perceived Stress Scale

A more precise measure of personal stress can be determined by using a variety of instruments that have been designed to help measure individual stress levels. The first of these is called the **Perceived Stress Scale**.

The Perceived Stress Scale (PSS) is a classic stress assessment instrument. The tool, while originally developed in 1983, remains a popular choice for helping us understand how different situations affect our feelings and our perceived stress. The questions in this scale ask about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the number of times you felt a particular way; rather indicate the alternative that seems like a reasonable estimate.

For each question choose from the following alternatives:

0 - never 1 - almost never 2 - sometimes 3 - fairly often 4 - very often

- _____ 1. In the last month, how often have you been upset because of something that happened unexpectedly?
- _____ 2. In the last month, how often have you felt that you were unable to control the important things in your life?
- _____ 3. In the last month, how often have you felt nervous and stressed?
- _____ 4. In the last month, how often have you felt confident about your ability to handle your personal problems?
- _____ 5. In the last month, how often have you felt that things were going your way?
- _____ 6. In the last month, how often have you found that you could not cope with all the things that you had to do?
- _____ 7. In the last month, how often have you been able to control irritations in your life?
- _____ 8. In the last month, how often have you felt that you were on top of things?
- _____ 9. In the last month, how often have you been angered because of things that happened that were outside of your control?
- _____ 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

1983

Sheldon Cohen

In the last month, how often do you feel nervous or stressed?

Very Often

Fairly
Often

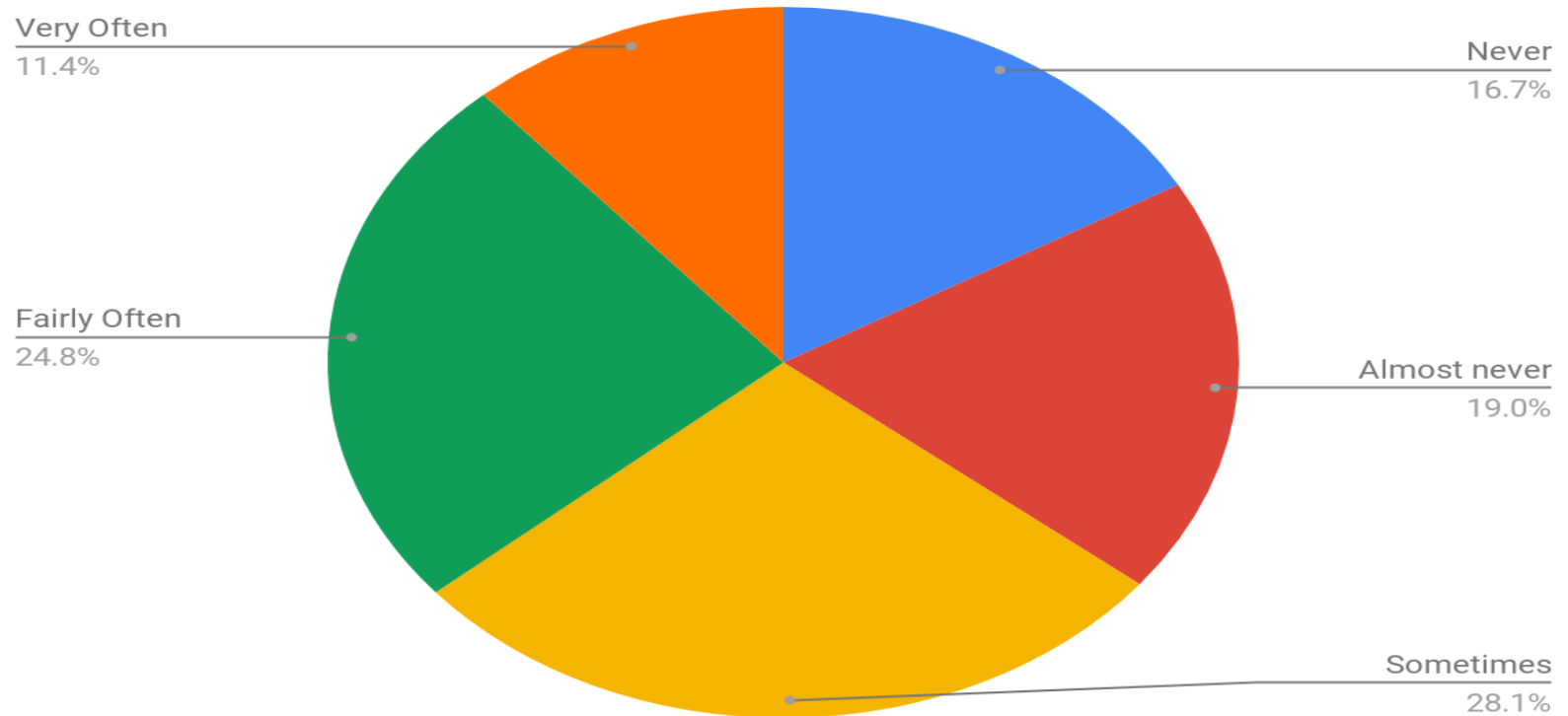
Sometimes

Almost
Never

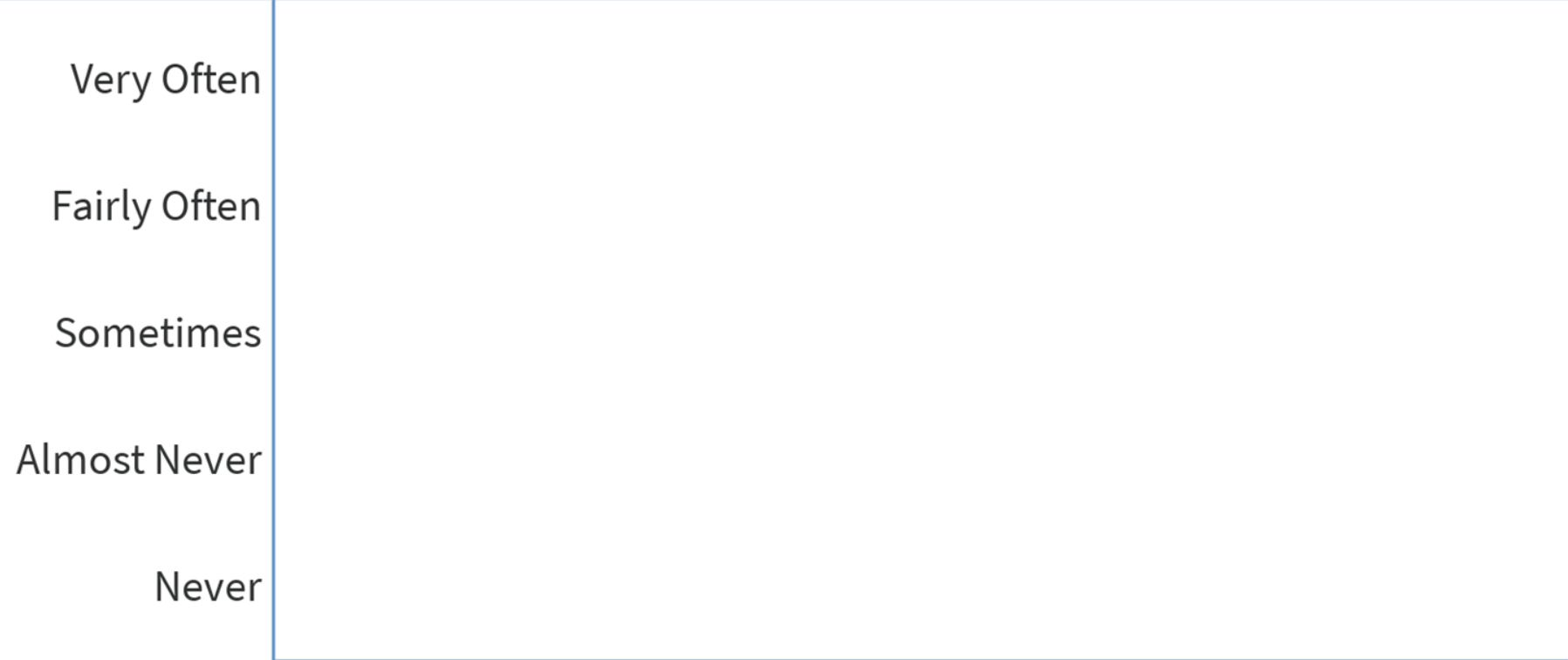
Never

Perceived Stress Scale (n=210)

In the last month, how often do you feel nervous or stressed?

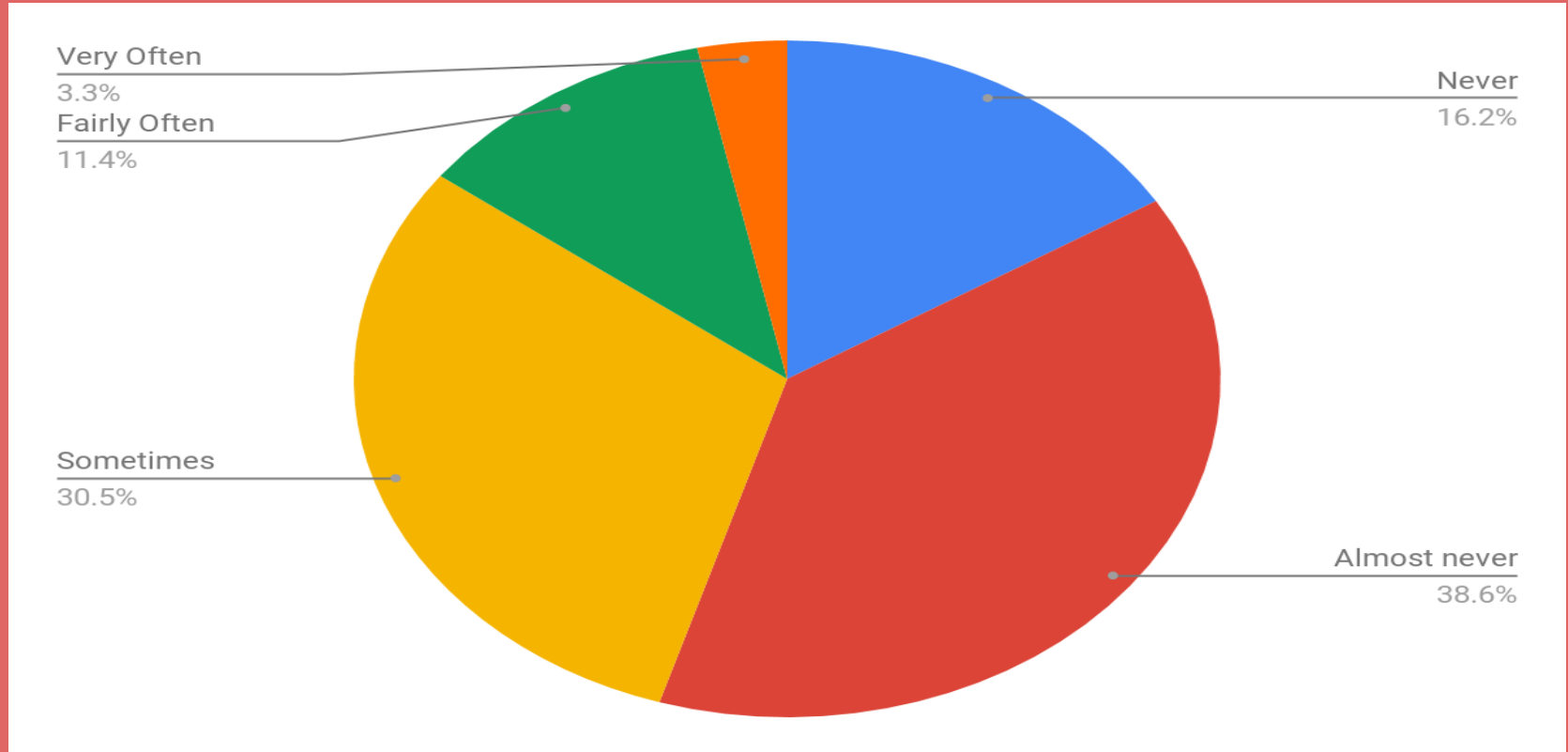


In the last month, how often do you feel confident that you can handle your personal problems?

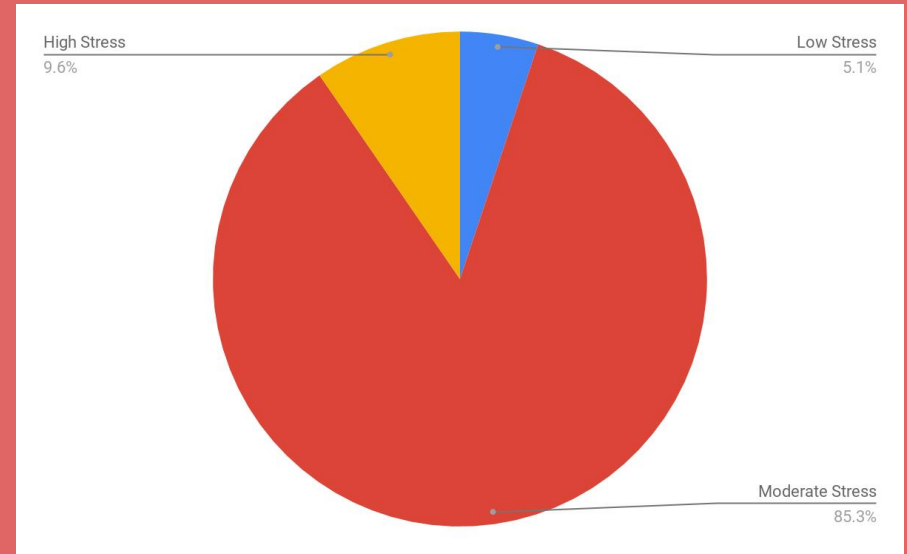
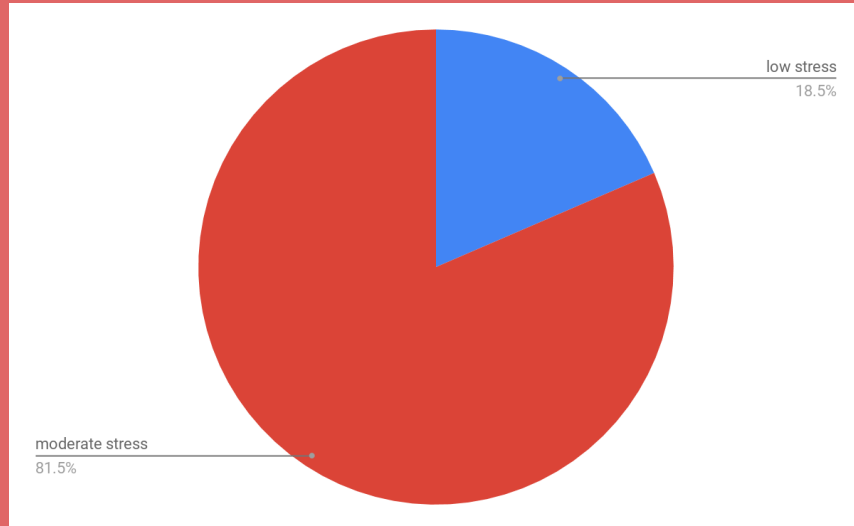


Perceived Stress Scale ($n=210$)

In the last month, how often do you feel confident that you can handle your personal problems?

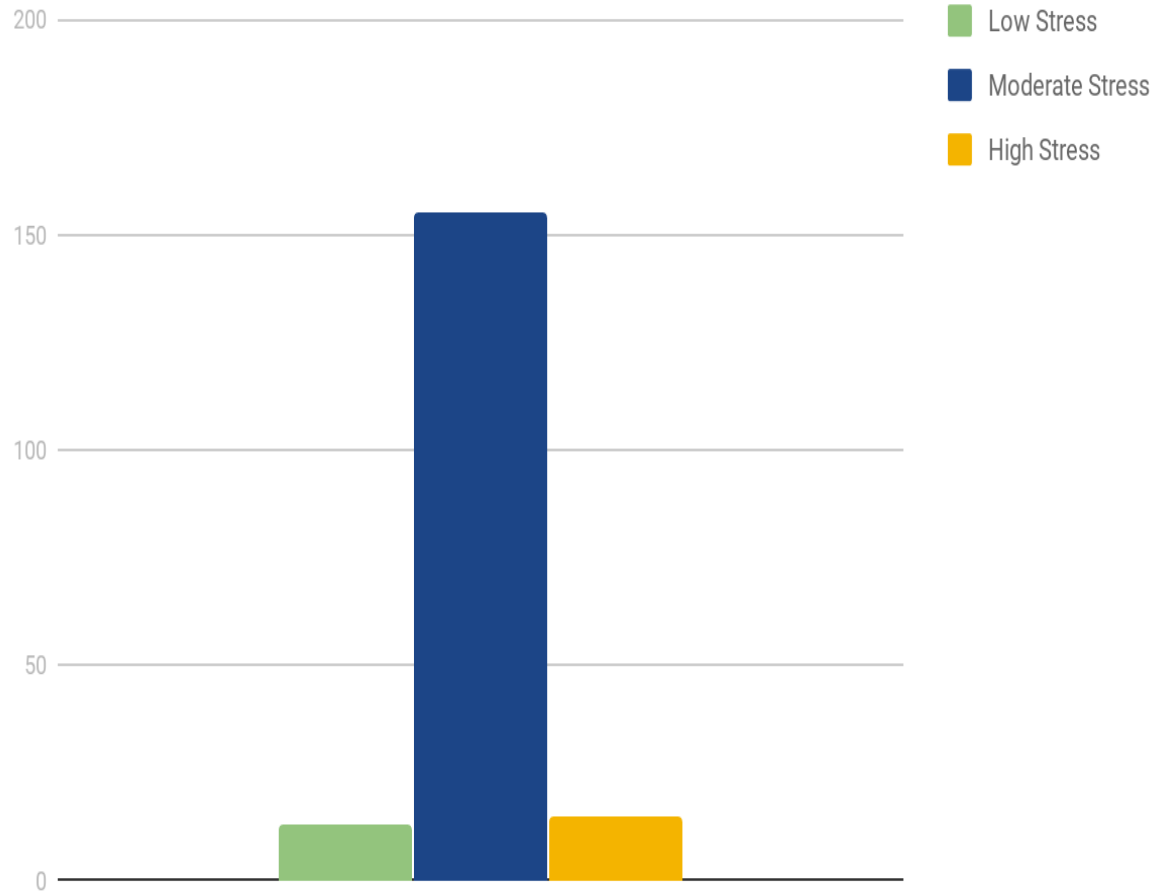


Females PSS-J



Males PSS-J

Total PSS-J



Sleep (*PSQI*) vs. Stress (*PSS*) Scores

$r(181)$	0.322
p	<0.001



Group Discussion

Relationship between Sleep and Stress



<https://bit.ly/2NJ7BBR> 2019/03/05



<https://bit.ly/2UjS0e7> 2019/03/05



<https://bit.ly/2Ug5zeF> 2019/03/05



1. What are some ways that both peers and teachers can help raise awareness about sleep and stress related issues in the classroom?

1. How should universities and other educational institutions in Japan improve student support for sleep and stress related issues?

Q&A

More Information

Pittsburgh Sleep Quality Index



Perceived Stress Survey



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Thank you!