

# Sleep Debt in New York and in Japan

## Survey research about high school students' quality of sleep.

2737 Hyogo Prefectural Itami High School

### Sleep debt

↳ a situation that daily lack of sleep accumulates

**Cause bad physical, mental effects**

In Japan **40%** of adults lack sleep

economic loss **15 trillion yen** in a year.

### Target : high school students in NY

Students who don't take enough sleep

→ **75%**



### Insomnia

#### Causes

**Biological clock rhythm disorder**



**Stress**



Melatonin supplement



Chinese medicines



Antihistamine pills



Food giving good effects for sleep

#### Solutions

### Methods

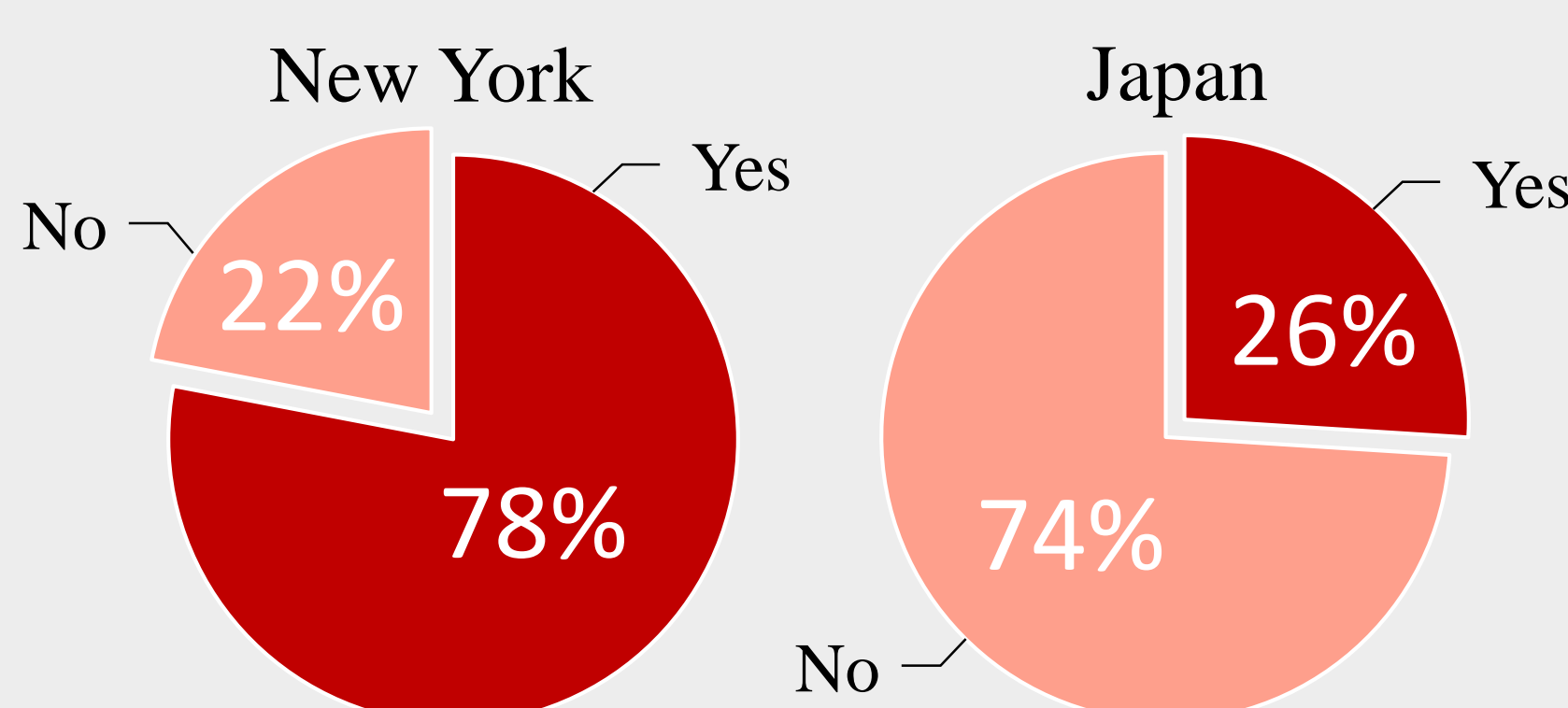
- Background research online / books
- Questionnaire / Tasting for high school students
- Observation / Interview in herbal specialty store, pharmacy

### Results of questionnaire

Students of Baruch High School (NY), Hyogo Prefectural Itami High School (Japan)

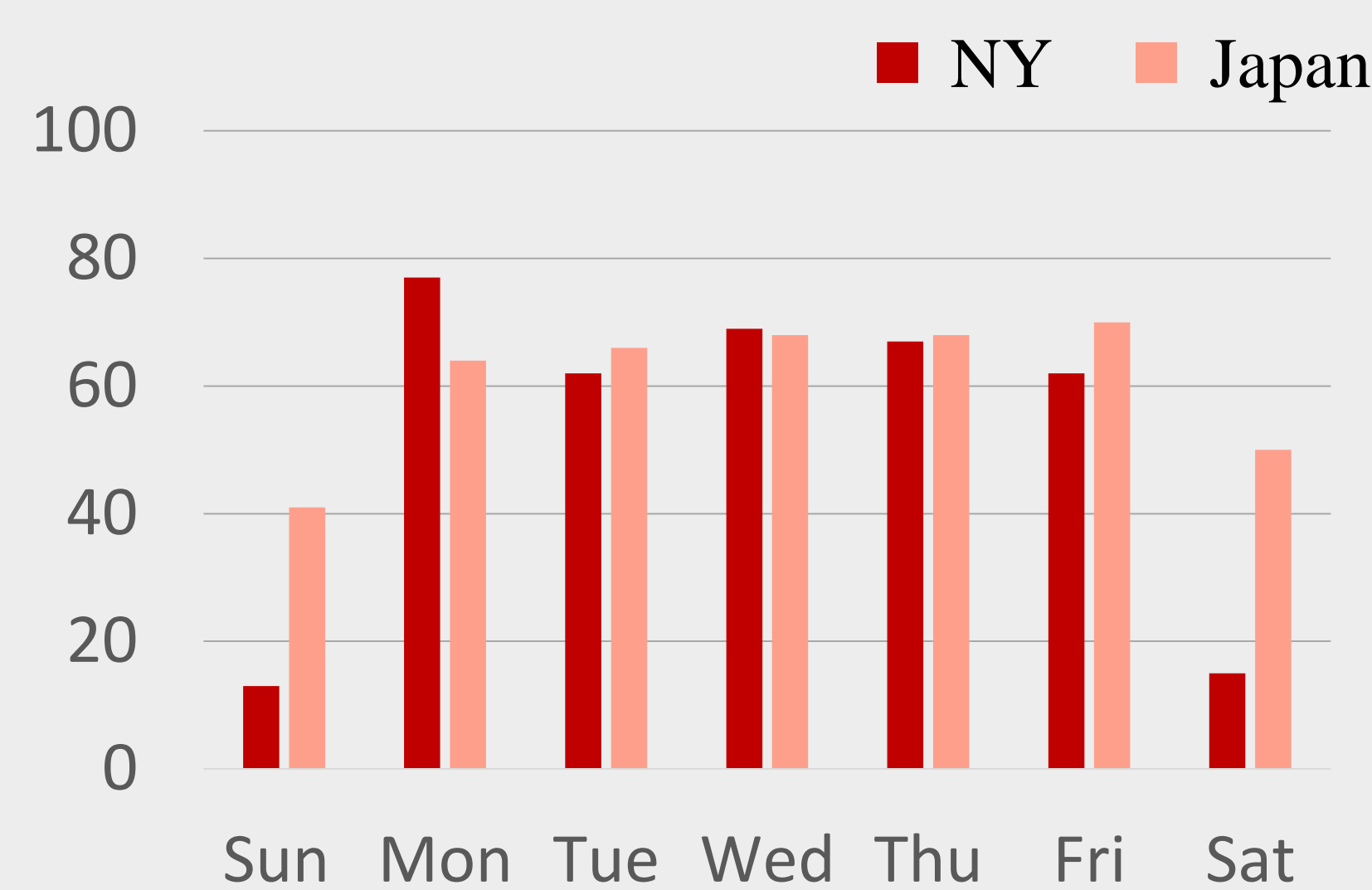
Sleeping time average	New York	Japan
weekday	6 h 59 m	6 h 21 m
weekend	9 h 23 m	7 h 26 m

Students who sleep an extra 1.5 more hours than on weekdays



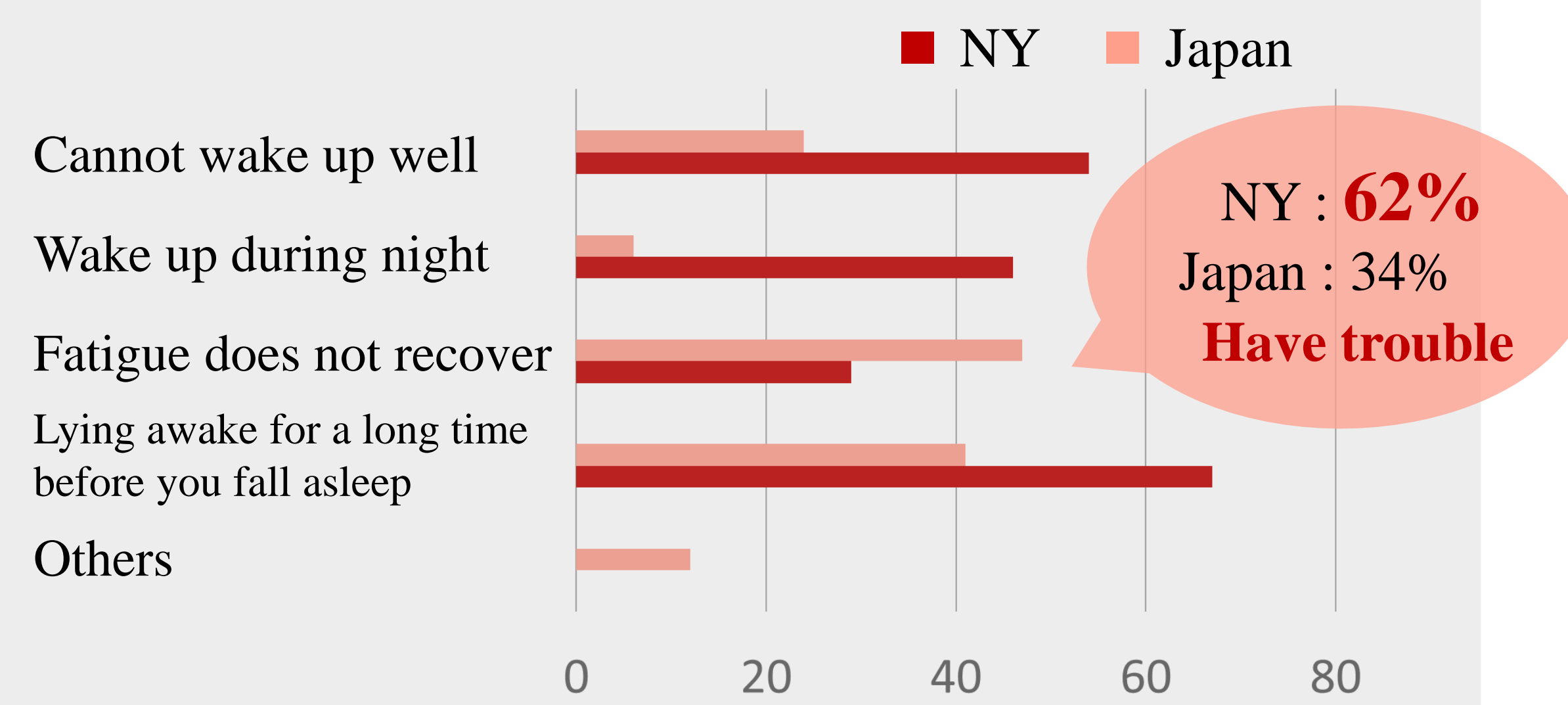
Avg : 3.20 hours / 2.79 hours

#### Days that students feel sleepy during the day



Both NY and Japanese students feel sleepy during the day at school but NY students have more sleep troubles.

#### Student's trouble about sleep



NY : **62%**  
Japan : 34%  
**Have trouble**

### Discussion

Melatonin supplements / Antihistamine pills

Chinese medicines / Eat food giving good effects for sleep



#### Not Recommended

- have side effects (for teenagers)
- use side effects of medicine



#### Recommended

- no side effects
- The awareness of Chinese medicines' existence is high



### Conclusion

**Problem** : Sleep debt

**Solutions** : Chinese medicines

Eat food giving good effects for sleep

**Goal** : improve "Sleep debt" by increasing the quality of sleep

### Future research

Research ways to increase **the quality of sleep itself**

**REM sleep**



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