WHERE AND HOW WELL DO CABIN CREW SLEEP DURING LONG-HAUL FLIGHTS?

LUCIA ARSINTESCU
SAN JOSE STATE UNIVERSITY
FATIGUE COUNTERMEASURES LABORATORY
NASA AMES RESEARCH CENTER

ARSINTESCU L, HILDITCH CJ, PRADHAN S, GREGORY, KB, & FLYNN-EVANS EE

SJSU NASA

ASMA 2024, MAY 5-10

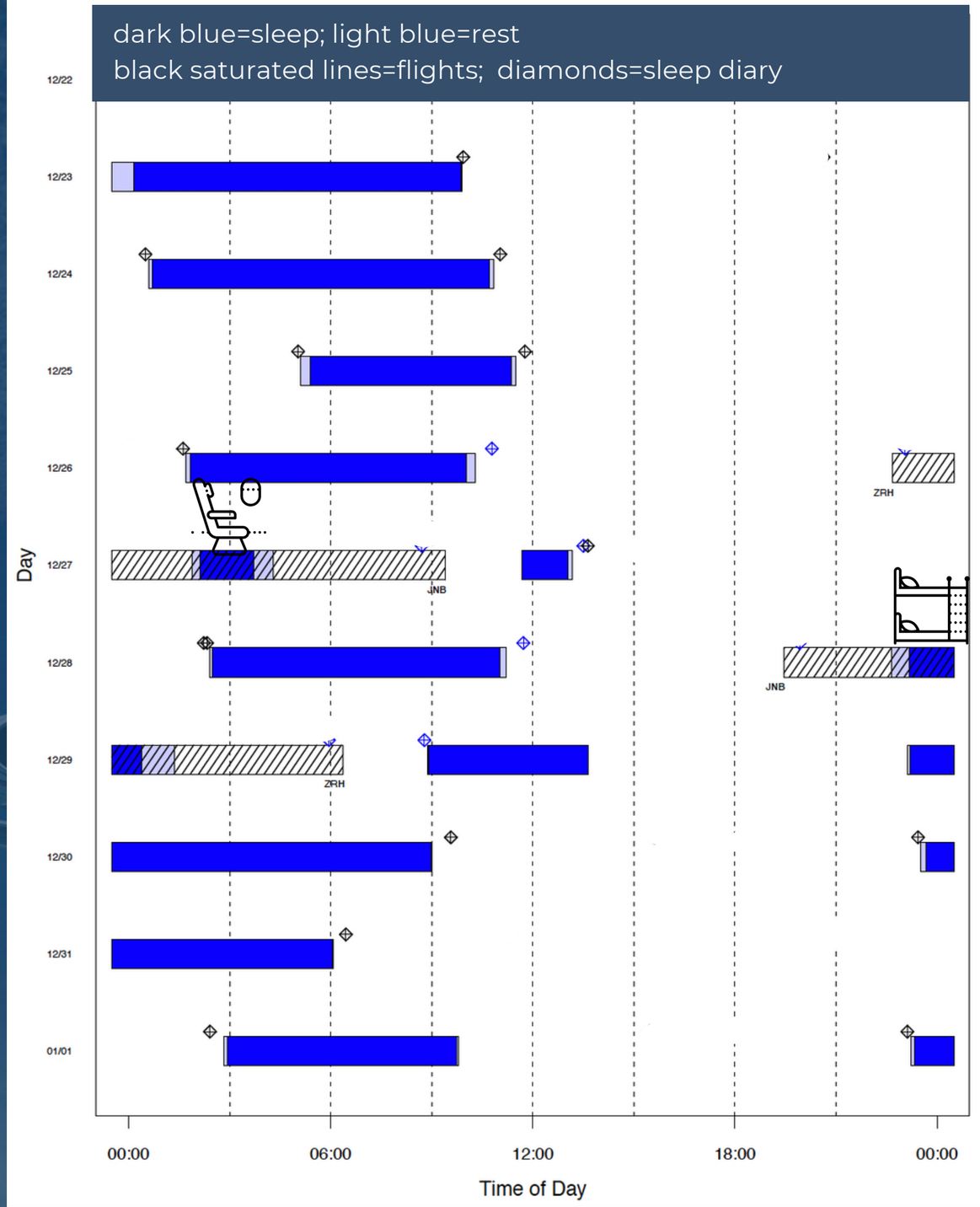
INTRODUCTION

- Fatigue factors: irregular schedule, sleep loss and circadian disruptions, workload
- Issues with cabin crew rest
- Aim: to assess sleep outcomes among cabin crewmembers sleeping in a bunk during both outbound and inbound compared to alternating sleep in a bunk or a jump seat during one long-haul route.

STUDY PROTOCOL

n = 29 cabin crewmembers

- Randomly assigned to either bunk or jump seat
- Actiwatch throughout the study
- Sleep diary before and after sleep
- In flight: nap information



PARTICIPANTS

n = 29 (5 male)

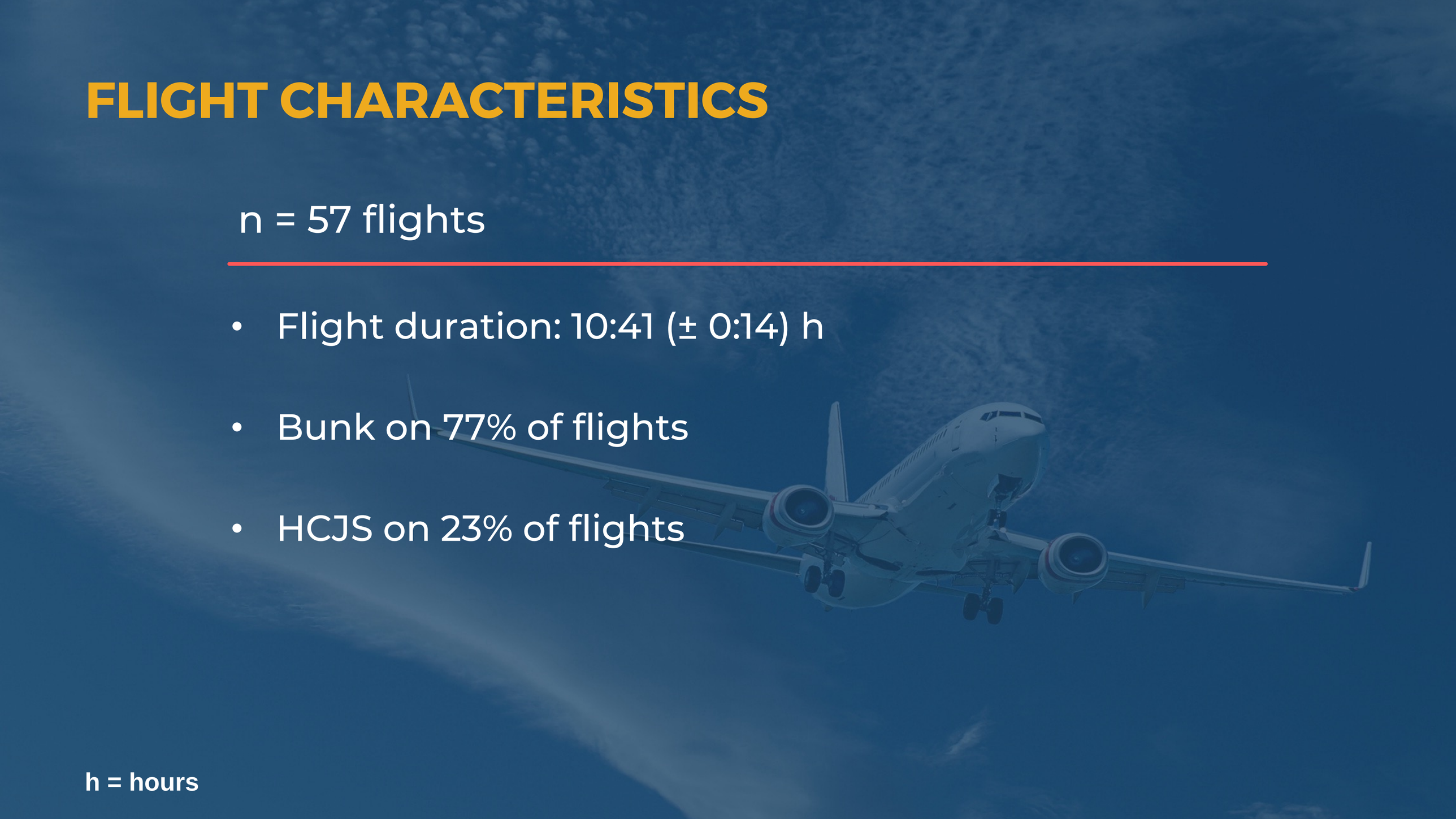
	Mean +/- SD
Age	31 (3)
Flight hours	4,573.4 (6,003.7)
Self-reported sleep need (h)	7.9 (0.9)
MEQ score	49.1 (6.8)
ESS score	8.4 (2.5)

h = hours

FLIGHT CHARACTERISTICS

n = 57 flights

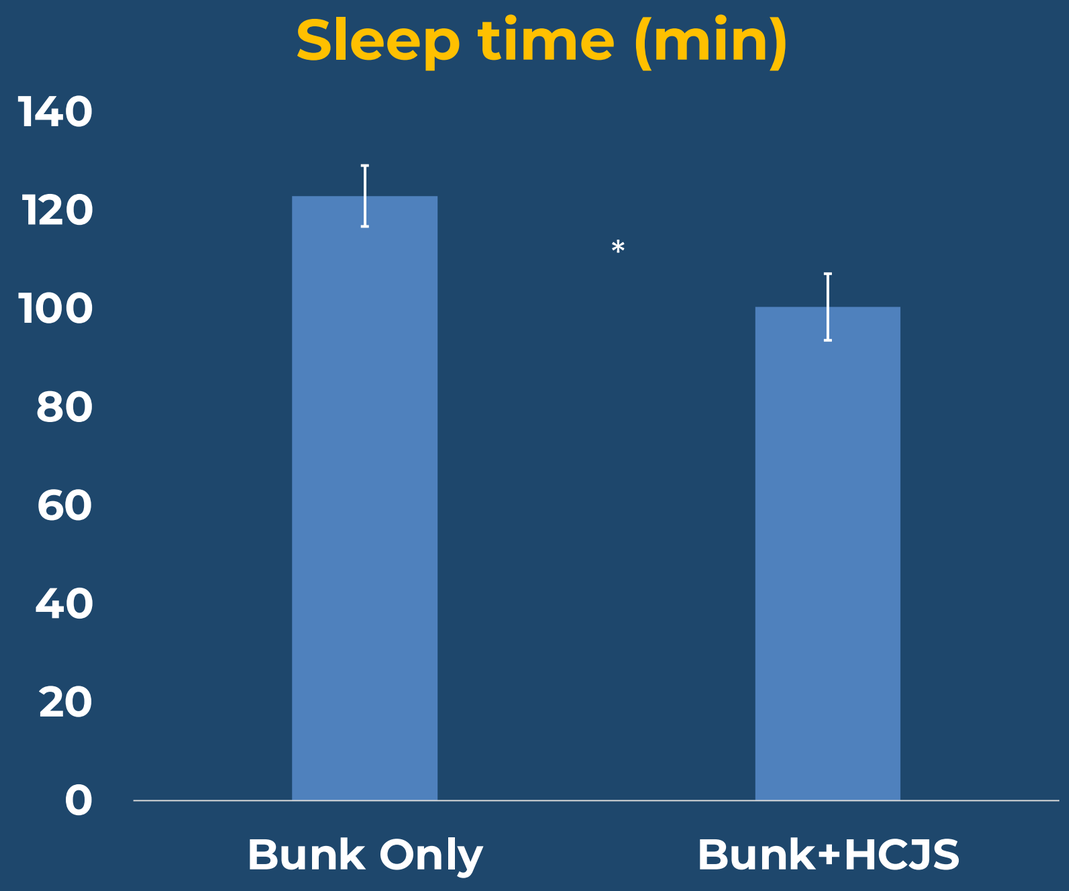
- Flight duration: 10:41 (± 0:14) h
- Bunk on 77% of flights
- HCJS on 23% of flights

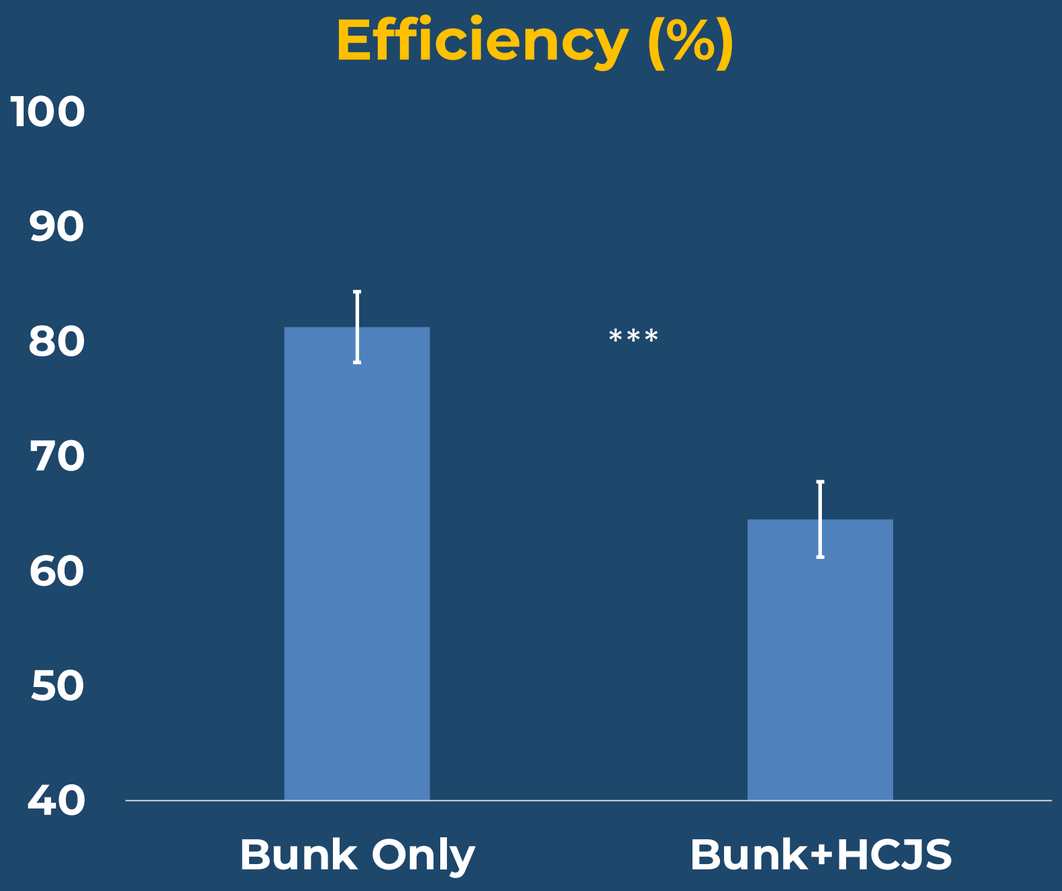


h = hours

RESULTS

- Longer sleep duration and better efficiency when crewmembers slept in the bunk only



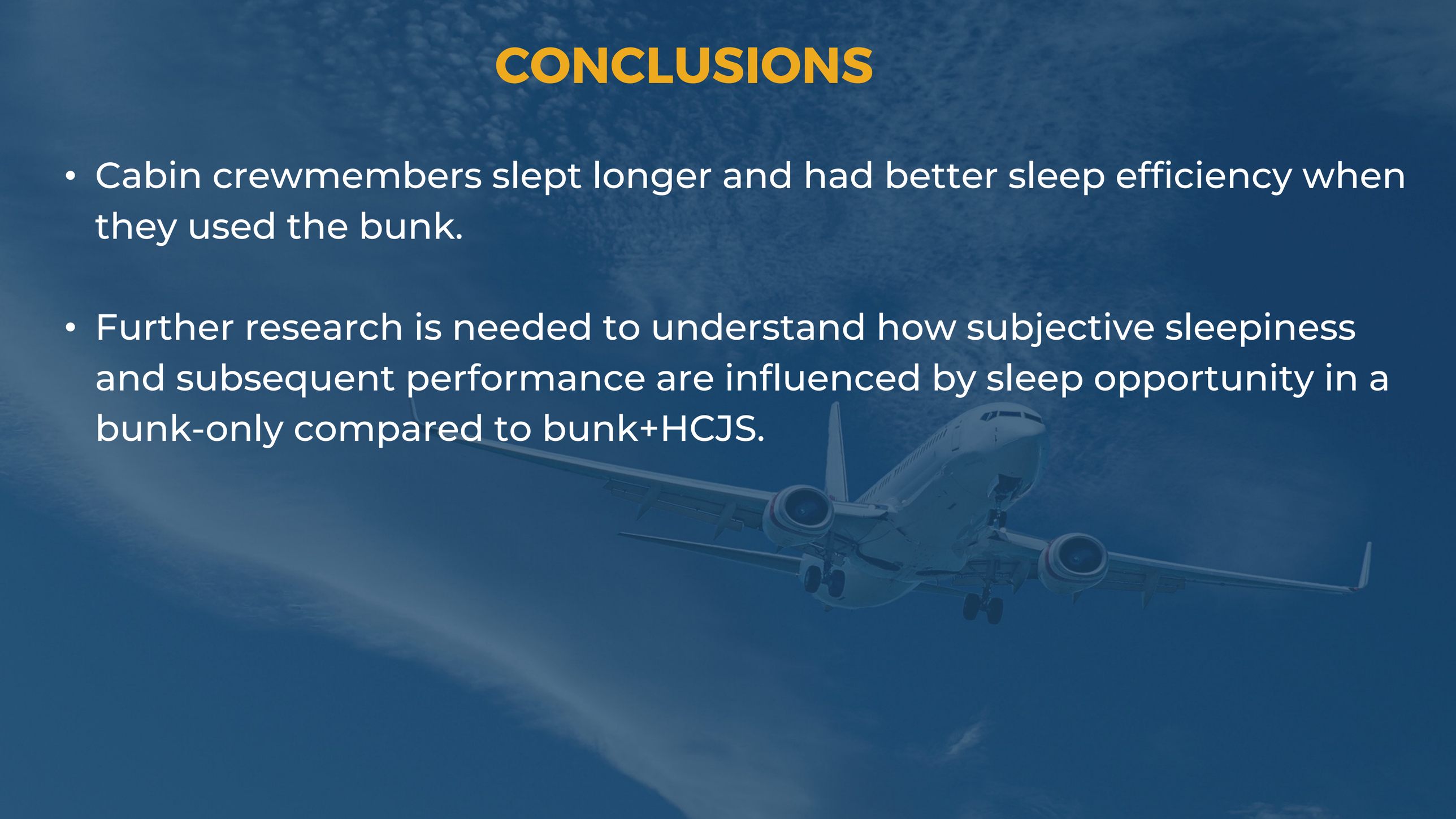


*p = .02, ***p = .001

CONCLUSIONS

- Cabin crewmembers slept longer and had better sleep efficiency when they used the bunk.

- Further research is needed to understand how subjective sleepiness and subsequent performance are influenced by sleep opportunity in a bunk-only compared to bunk+HCJS.



THANK YOU

CABIN CREWMEMBERS

AIRLINE STAFF

email: lucia.arsintescu-1@nasa.gov

NASA Airspace Operations and Safety Program, System-Wide Safety Project