



Excessive Daytime Sleepiness in Thai Aviation Personnel

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Excessive Daytime Sleepiness in Thai Aviation Personnel

■ INTRODUCTION AND STUDY OBJECTIVES:

■ METHODS

■ RESULTS

■ CONCLUSION AND DISCUSSION



Excessive Daytime Sleepiness in Thai Aviation Personnel

Excessive Daytime Sleepiness (EDS)

: The tendency to fall asleep during normal waking hours.

*Public health problem,
*Accidents in transport operations.

*** High prevalence
10%-25%.**

***Human errors →
jeopardize flight safety**

*Mental or physical performance.
*A risk of cardiovascular morbidity and mortality.

Excessive Daytime Sleepiness in Thai Aviation Personnel



Objectives

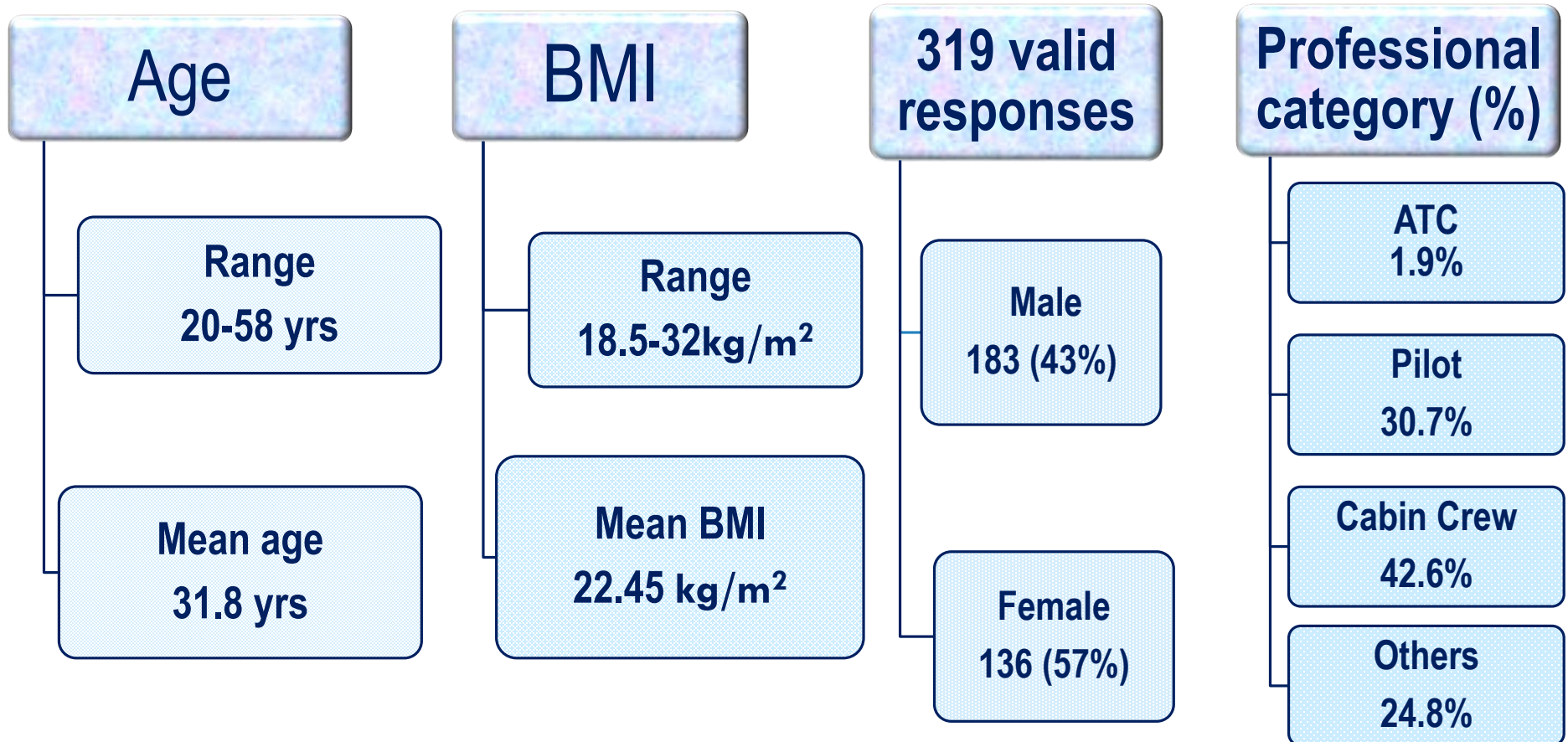
The prevalence of EDS in Thai aviation personnel

The factors that are associated with EDS in Thai aviation personnel.

Excessive Daytime Sleepiness in Thai Aviation Personnel

Methods

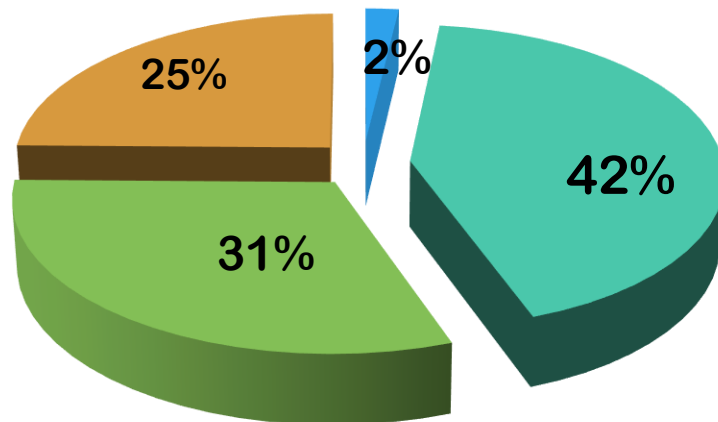
- ✓ A CROSS-SECTIONAL SURVEY DURING MARCH 2018 TO JULY 2018.
- ✓ STUDY POPULATION CHARACTERISTICS.



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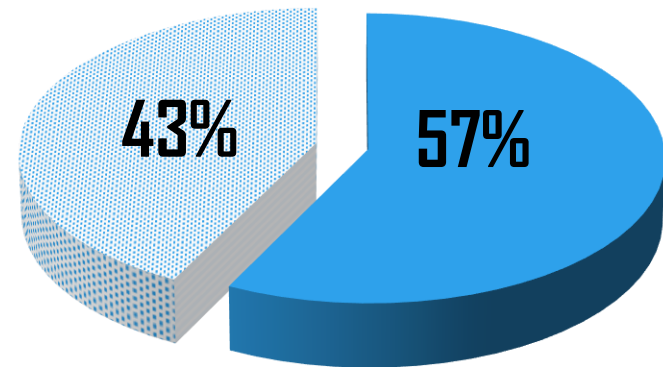
✓ Study population characteristics

Professional category (%)



■ ATC ■ cabin crew ■ pilot ■ other

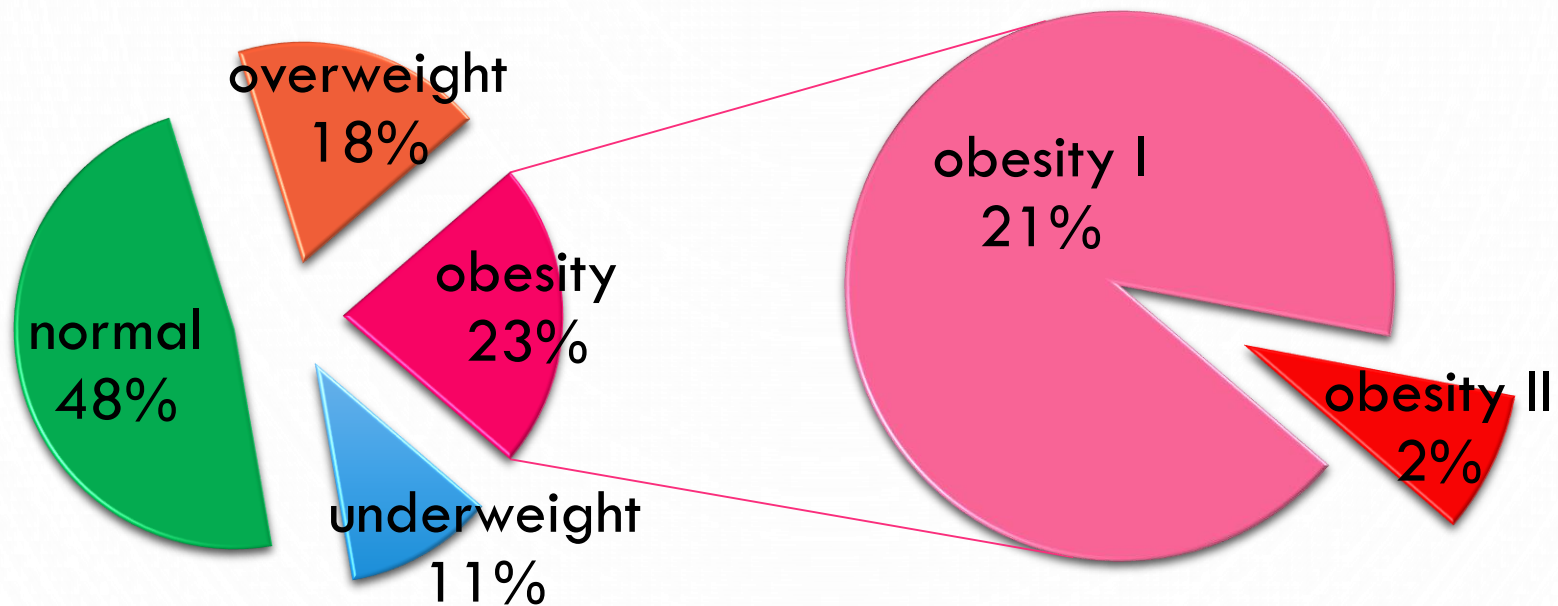
Gender (%)



■ ชาย ■ หญิง

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✓ Study population characteristics



Excessive Daytime Sleepiness in Thai Aviation Personnel

- INSTANCES OF EDS WERE IDENTIFIED USING ESS.

- QUESTIONNAIRE : ESS SCORE

 - Ω THE EPWORTH SLEEPINESS SCALE

 - : LOW COST AND EFFECTIVE MEASURE OF ASSESSING SLEEPINESS IN CERTAIN SITUATIONS.

 - Ω CUT OFF POINT

 - : ESS $\geq 11 \Rightarrow$ EDS

 - Ω SPECIFICITY=46.9%

 - Ω SENSITIVITY=69.2%



Epworth Sleepiness Scale

How likely are you to doze off or fall asleep in the following situations?
Use the following scale to choose the most appropriate number:

0
no chance

1
slight chance

2
moderate chance

3
high chance

Sitting and reading

0 1 2 3

Watching television

0 1 2 3

Sitting inactive, in a public space

0 1 2 3

Lying down to rest in the afternoon when circumstances permit

0 1 2 3

Sitting and talking to someone

0 1 2 3

Sitting quietly after a lunch without alcohol

0 1 2 3

As a passenger in car for an hour without a break

0 1 2 3

In a car, while stopped for a few minutes in traffic

0 1 2 3

Total Score:

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INTERPRETATION OF EPWORTH SLEEPINESS SCORES

NORMAL

0-5 Lower Normal Daytime Sleepiness

6-10 Higher Normal Daytime Sleepiness

MILD-MODERATE

11-12 Mild Excessive Daytime Sleepiness

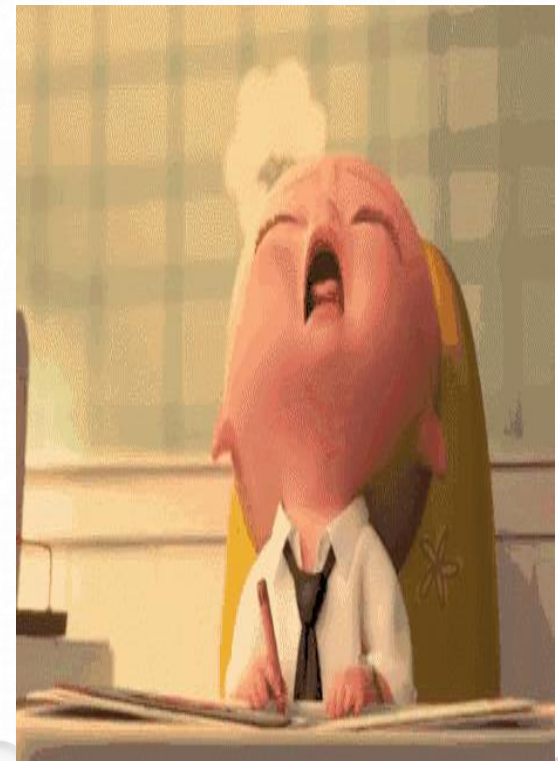
13-15 Moderate Excessive Daytime Sleepiness

SEVERE

16-24 Severe Excessive Daytime Sleepiness

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■ A self-administered ESS questionnaire by scanning QR code.



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RESULTS

Prevalence: 23%

Mean BMI is 22.45(SD=3.40)

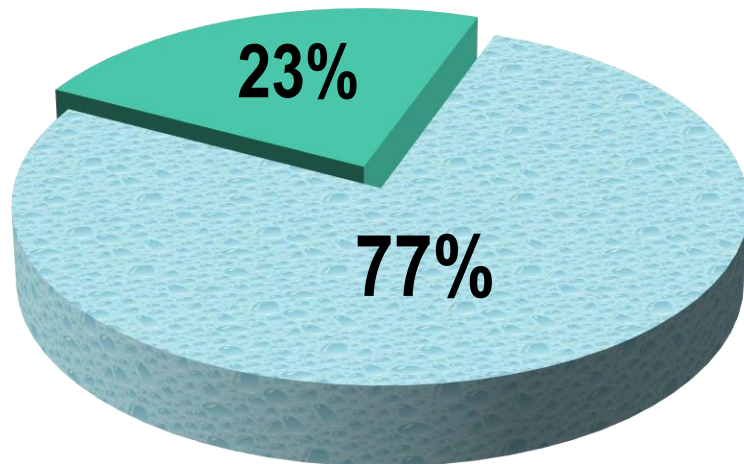
Mean ESS is 8.12(SD=3.77)

**ESS score is associated
with BMI.**

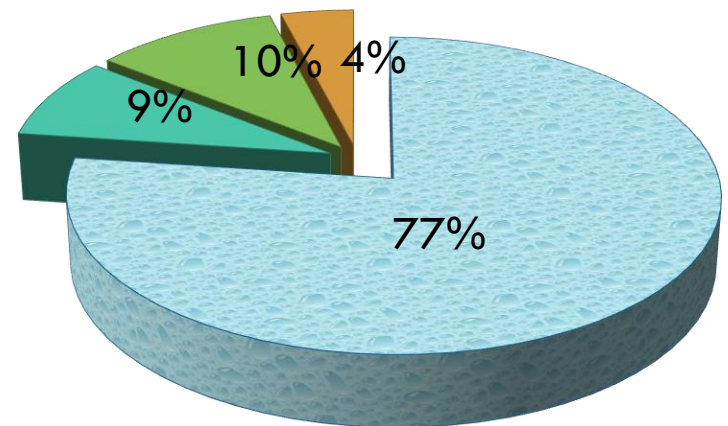
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 **Prevalence of EDS = 23%**

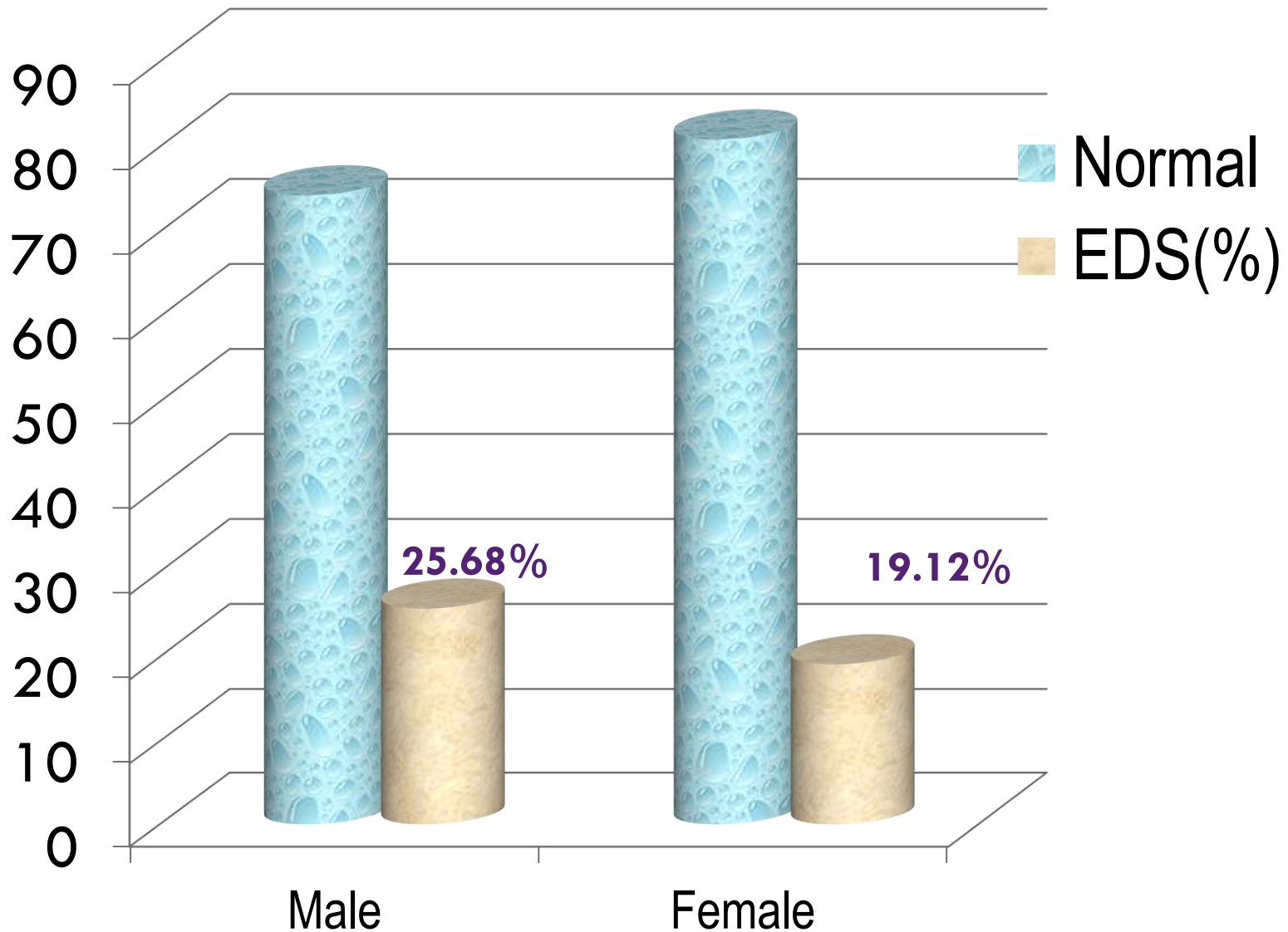
■ Normal
■ EDS



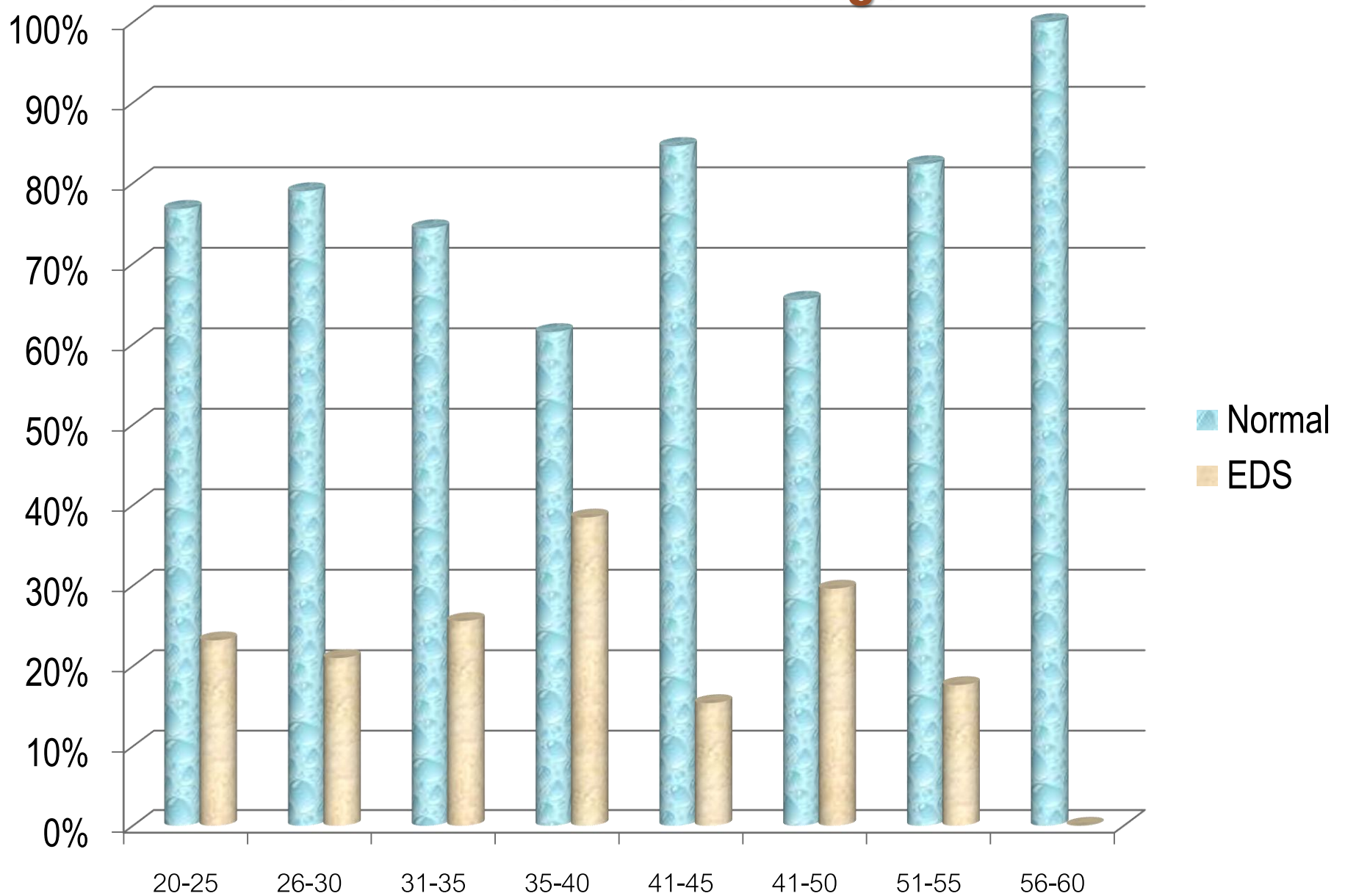
■ Normal
■ 11-12:Mild EDS
■ 13-15:Mod EDS
■ 16-24:Severe EDS



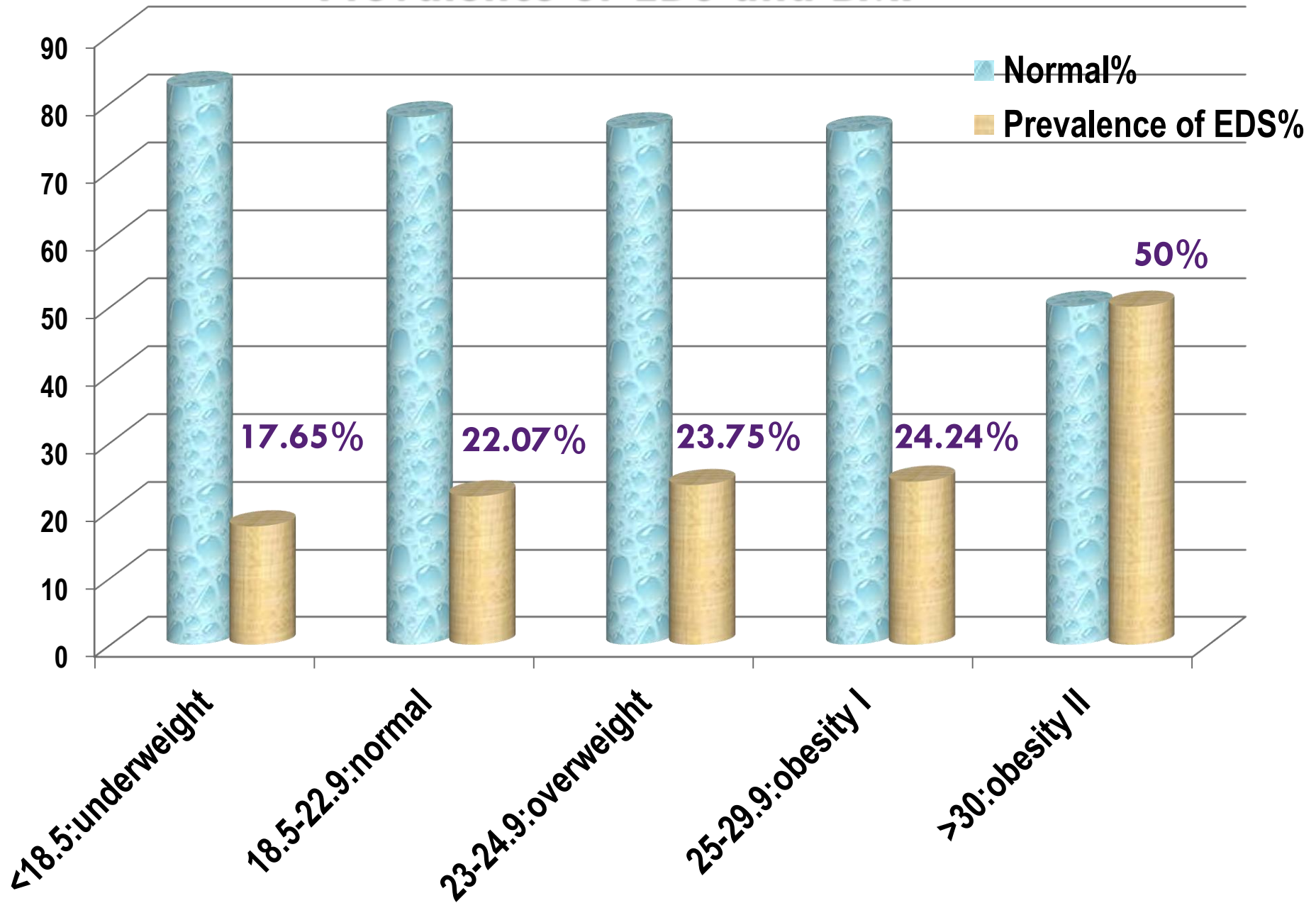
Prevalence of EDS and gender



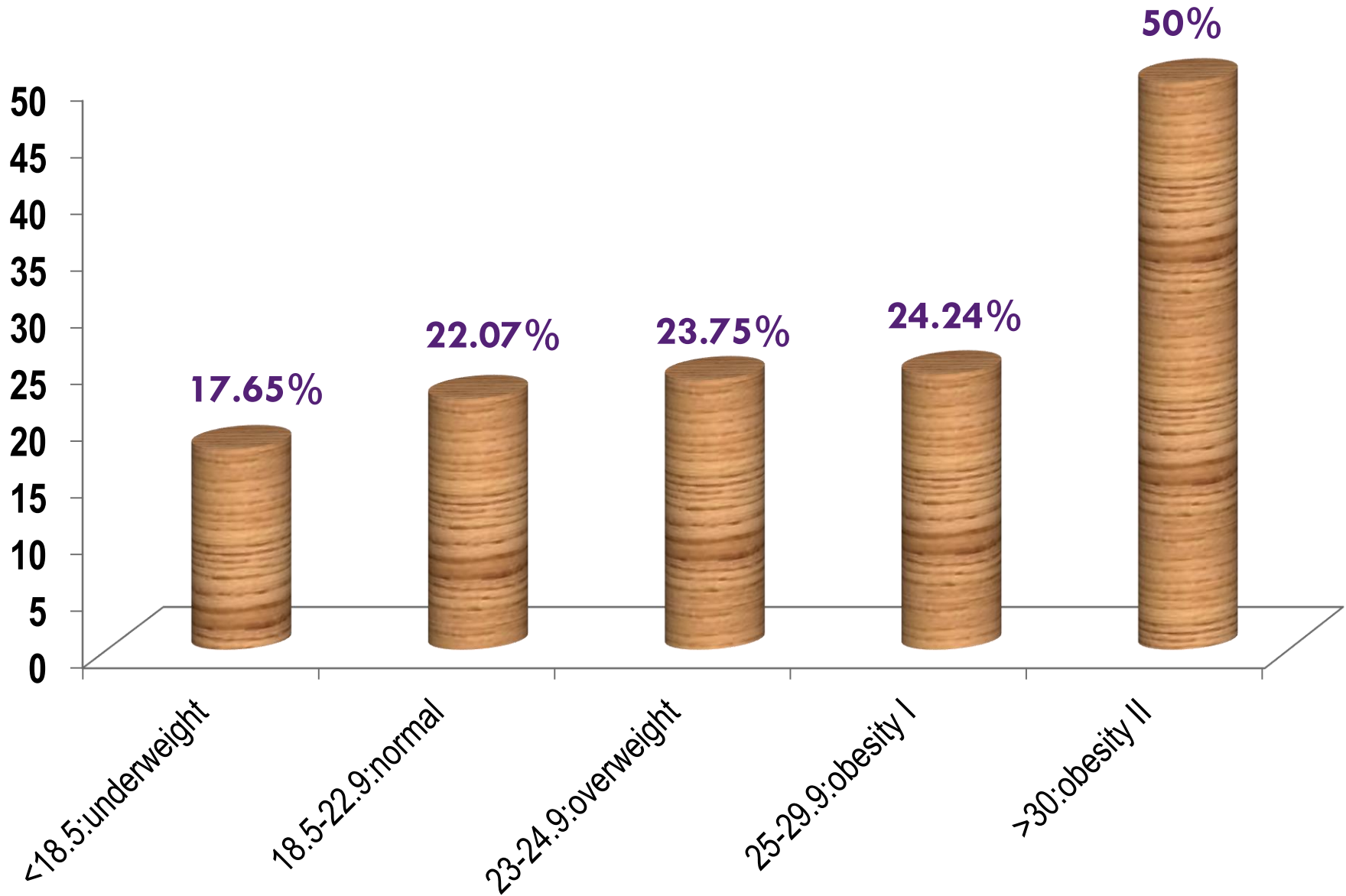
Prevalence of EDS and Age



Prevalence of EDS and BMI



Prevalence of EDS(%) / BMI



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CONCLUSION



THE HIGH PREVALENCE OF EDS (23%)
IN THAI AVIATION PERSONNEL.



ESS IS ASSOCIATED WITH BMI.



WEAK RELATIONSHIP
BETWEEN AGE AND ESS.



NO RELATIONSHIP
BETWEEN GENDER AND EDS

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■ DISCUSSION

High prevalence of EDS (23%)

- Risk for health and safety.

The Epworth sleeping scale (ESS)

- Be employed to aviation personnel for early detect EDS to promote health and safety in aviation community.
- EDS ≥ 11
 - => polysomnographic (PSG)
 - => the underlying causes.

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■ DISCUSSION

Focus on the causes of EDS.

Evaluate and treat ESD like any other symptom.

Establishing body weight control and good sleep hygiene.

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