



Excessive Daytime Sleepiness

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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.

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Objectives

The prevalence of EDS in Thai aviation personnel

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

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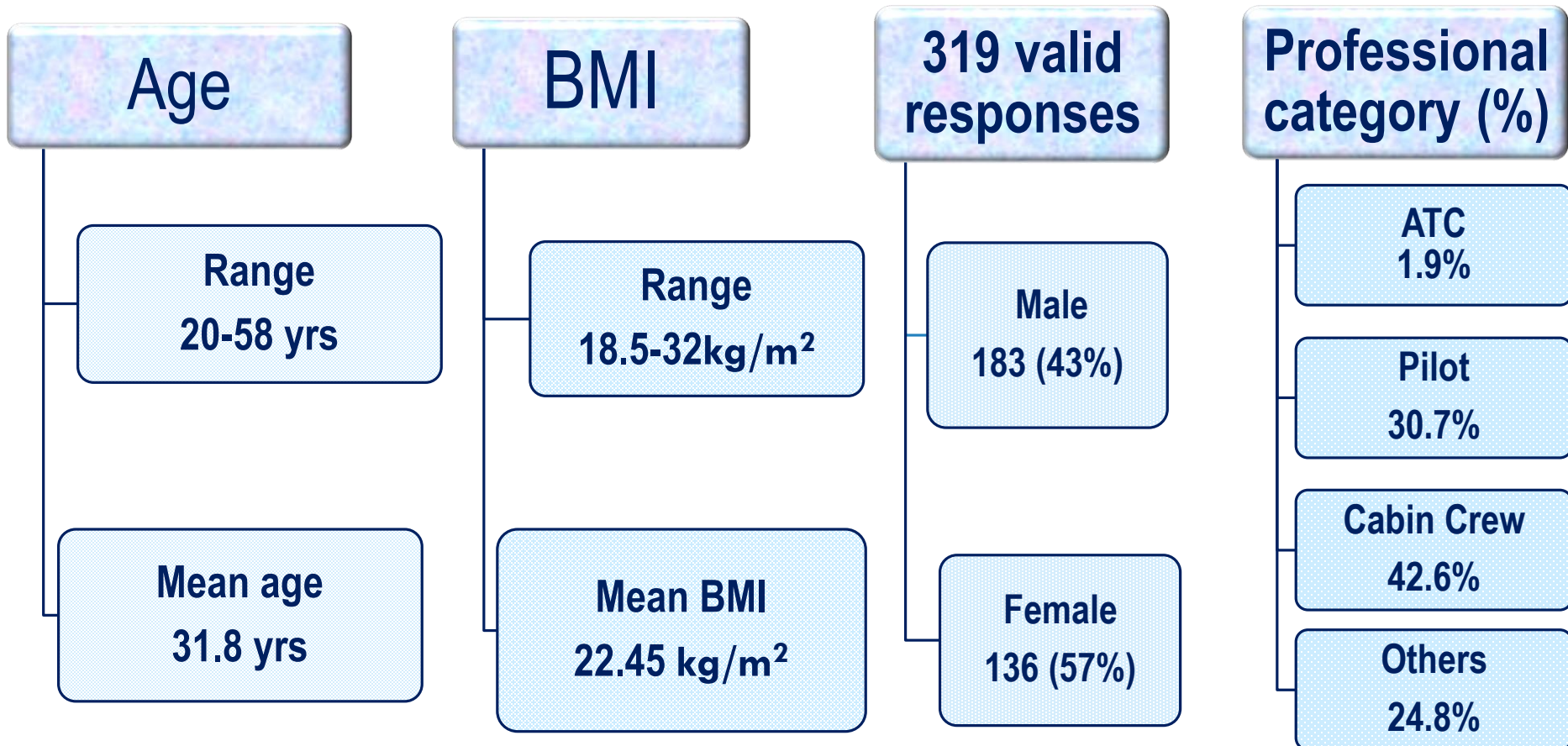
Methods

- ✓ A CROSS-SECTIONAL SURVEY OF THE PERSONNEL FROM THAI AVIATION COMMUNITY WAS PHYSICAL CHECKED-UP AT THE INSTITUTE OF AVIATION MEDICINE DURING MARCH 2018 TO JULY 2018.
- ✓ **319 VALID RESPONSES**
- ✓ THE DATA WAS COLLECTED BY SELF-ADMINISTERING THE QUESTIONNAIRE BY SCAN QR CODE.



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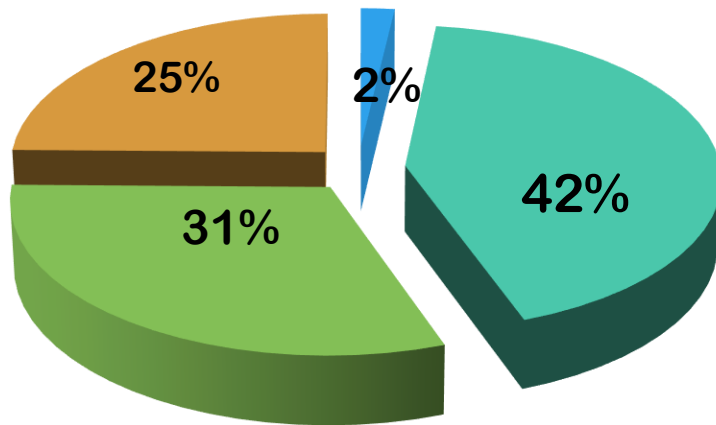
✓ STUDY POPULATION CHARACTERISTICS.



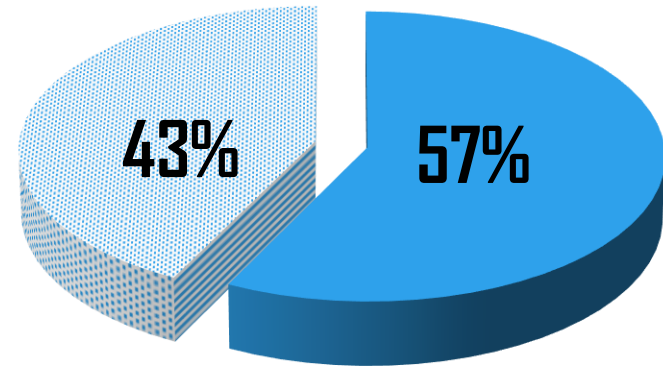
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✓ Study population characteristics

Professional category (%)



Gender (%)

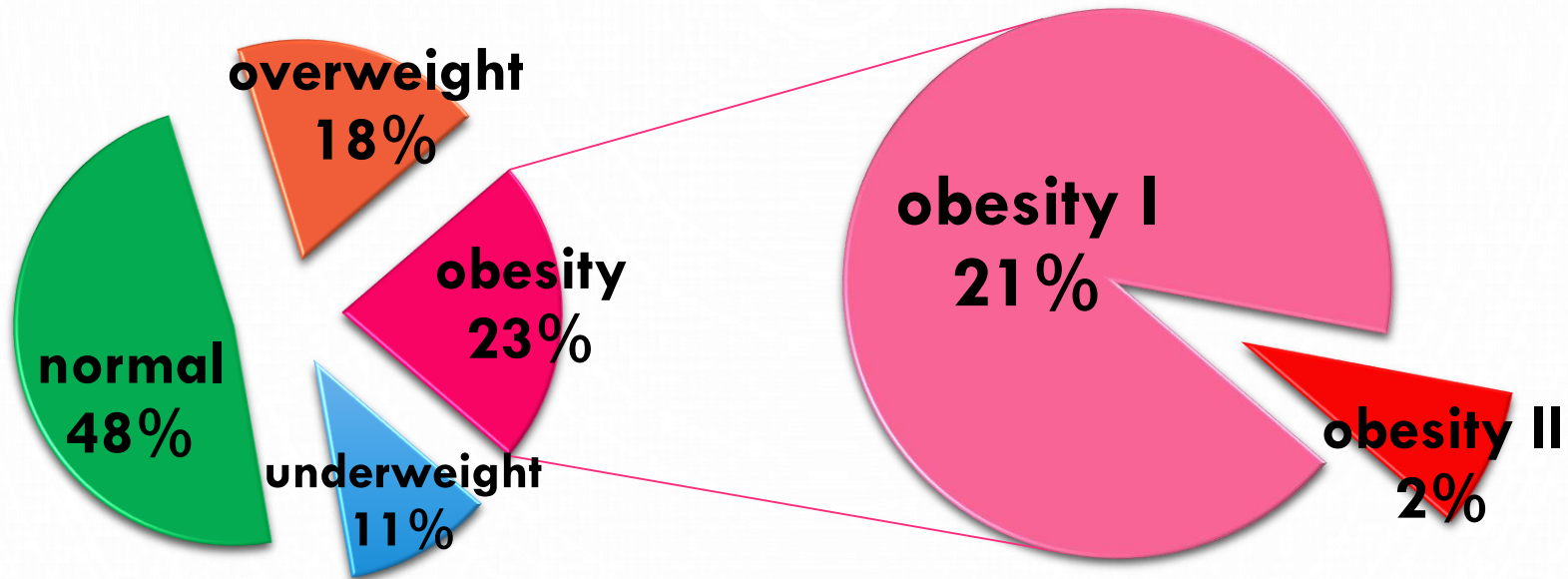


■ ATC ■ cabin crew ■ pilot ■ other

■ Male ■ Female

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✓ Study population characteristics



BMI < 18.5 : underweight

BMI 18.5 - 22.9 : normal

BMI 23 - 24.9 : overweight

BMI 25 - 29.9 : obesity I

BMI > 30 : obesity II

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QUESTIONNAIRE

#EDS--- THE EPWORTH SLEEPINESS SCALE (ESS).

EDS:--ESS ≥ 11

SPECIFICITY=46.9%

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	1	2	3
no chance	slight chance	moderate chance	high chance
			0 1 2 3
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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RESULTS

Prevalence: 23%

Mean BMI is 22.45(SD=3.40)

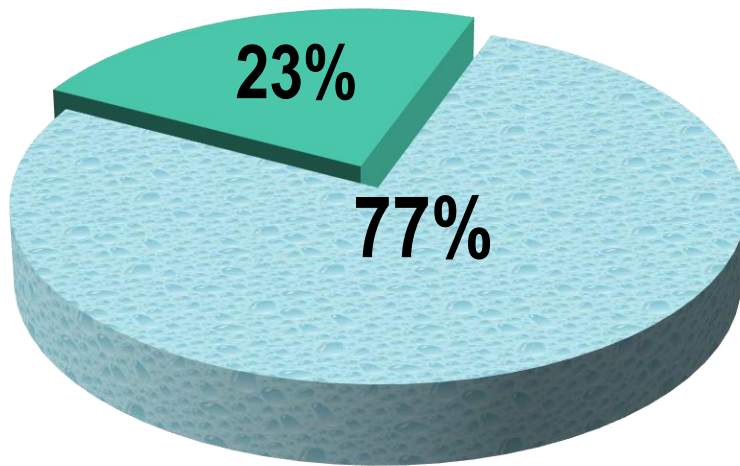
Mean ESS is 8.12(SD=3.77)

ESS score is associated with BMI.

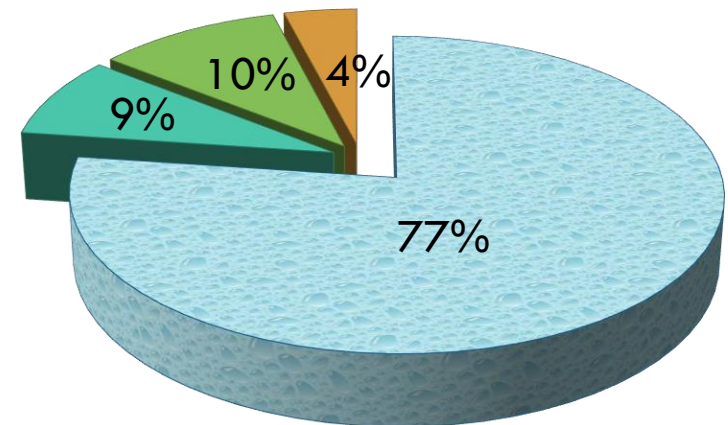
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PREVALENCE OF EDS

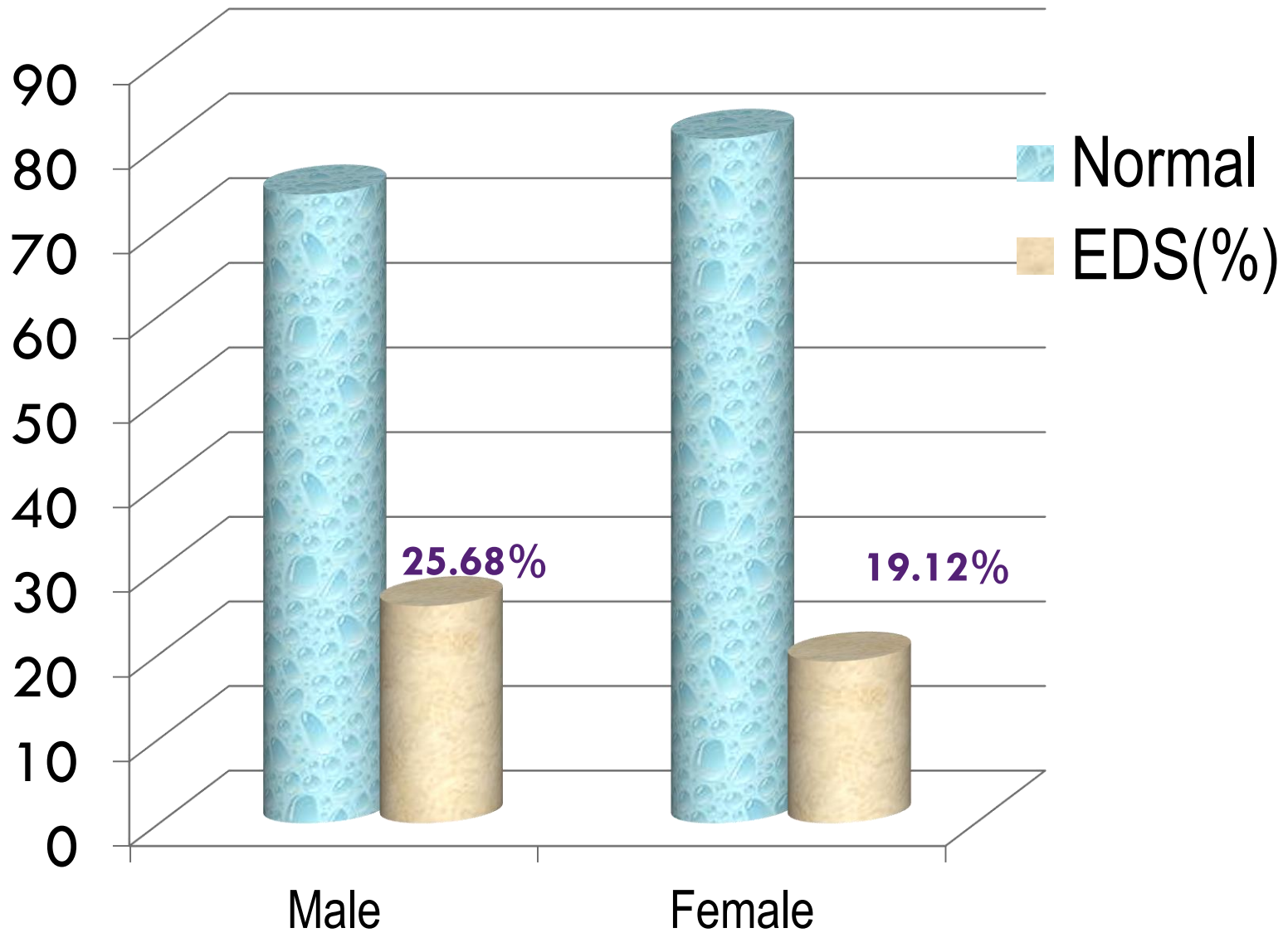
- Normal
- EDS



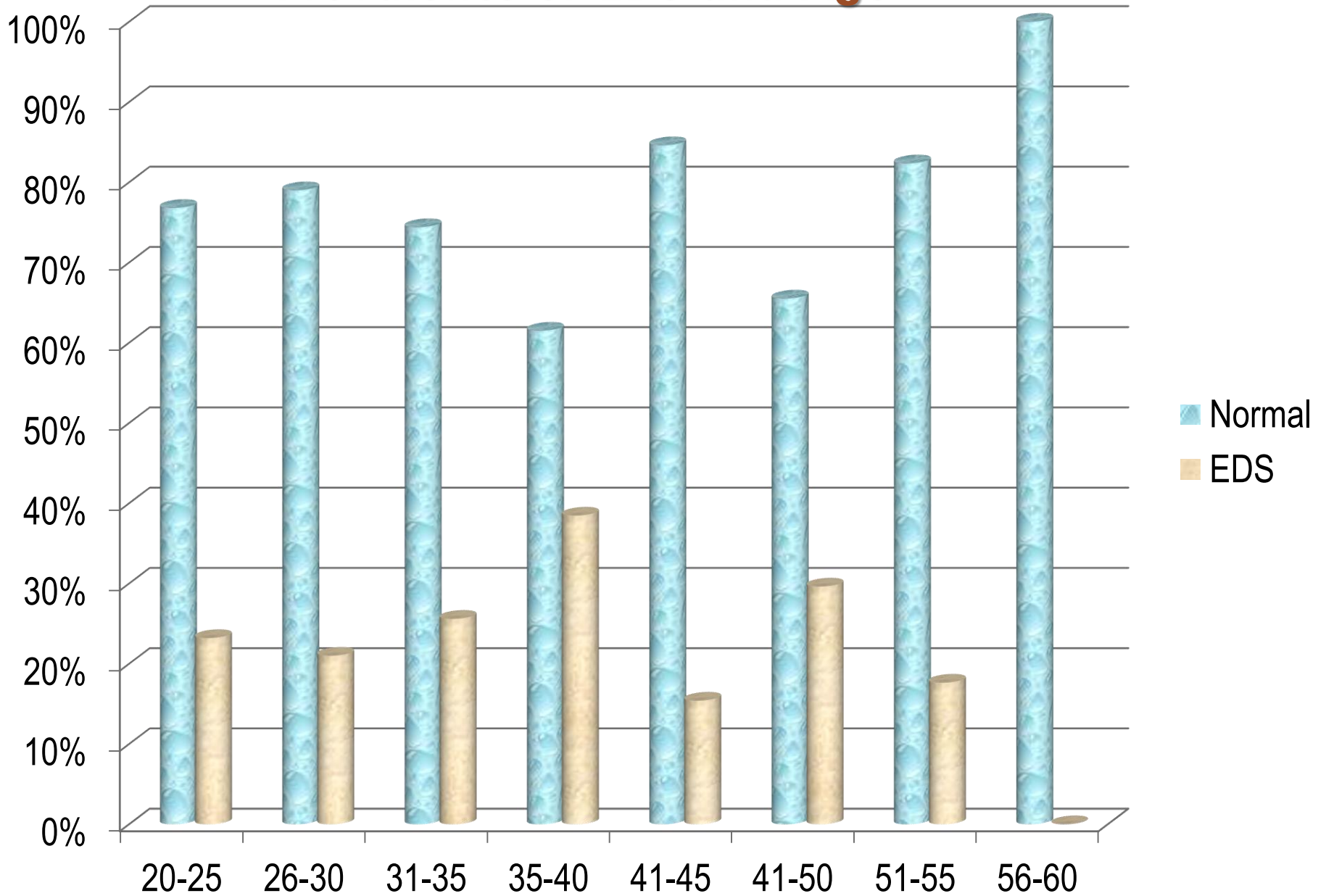
- Normal
- 11-12:Mild EDS
- 13-15:Mod EDS
- 16-24:Severe EDS



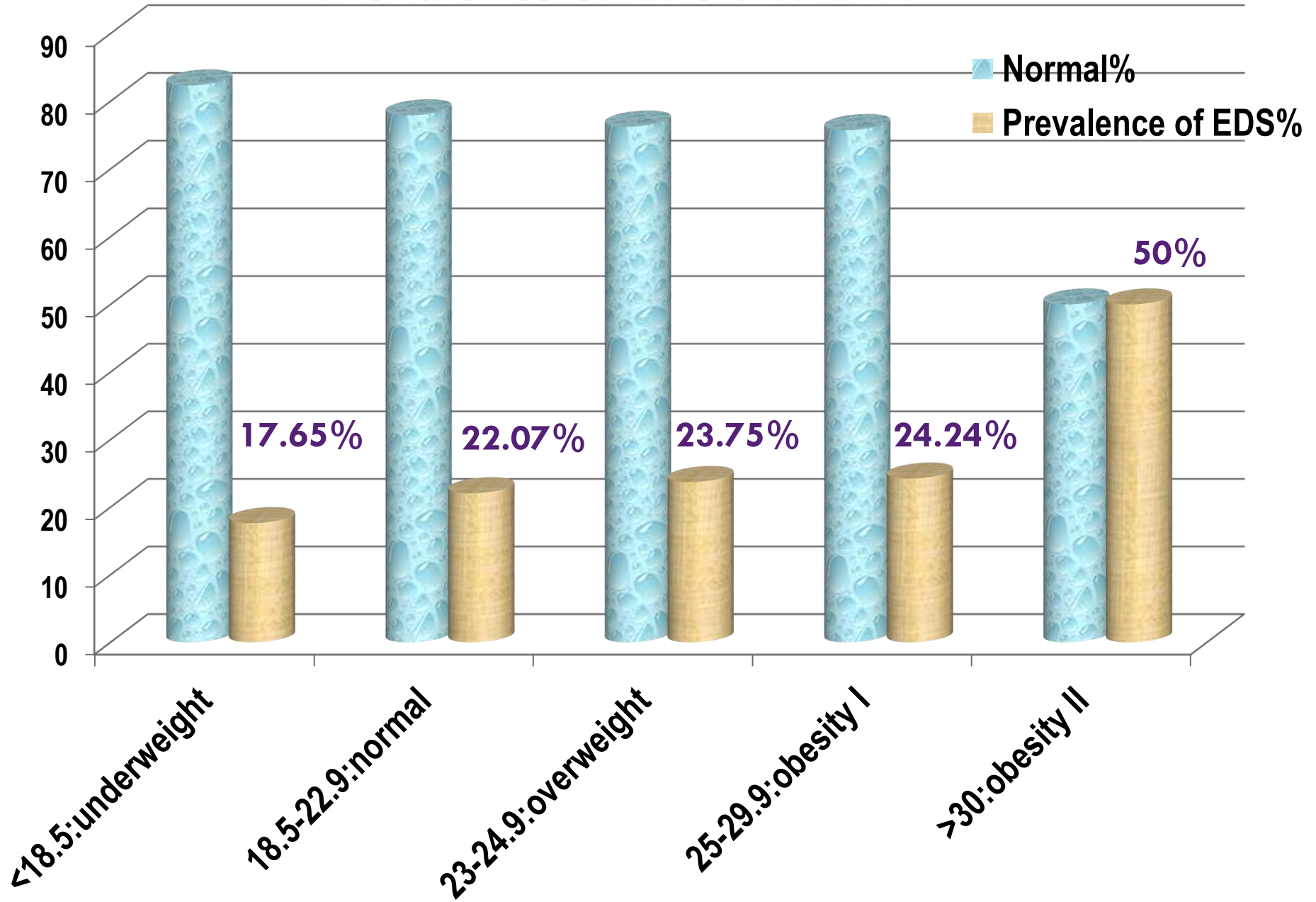
Prevalence of EDS and gender



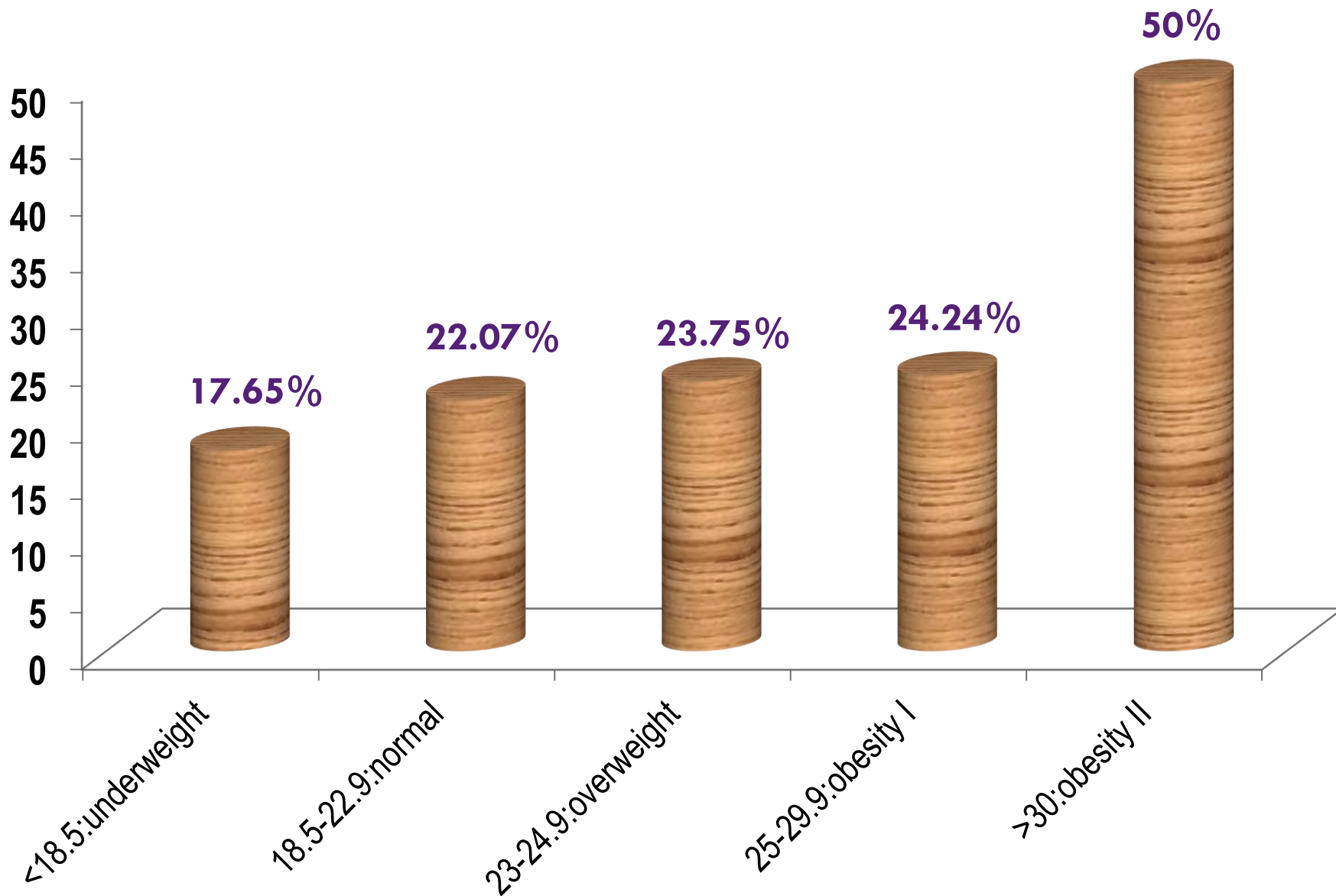
Prevalence of EDS and Age



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) as a screening tool for EDS

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

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DISCUSSION

Focus on the causes of EDS.

Evaluate and treat ESD like any other symptom.

Establishing good sleep hygiene.

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