



香港大學民意研究計劃
The University of Hong Kong
Public Opinion Programme



Better Sleep Through Science.™

蓆夢思

Quality Sleep Series II :

**The Sleep Quality and Quantity of HK's
Working Population**

Presentation of Survey Findings

July 17, 2003

Presentation outline

Data analysis by Dr. Ting-Yiu Chung

- **Research methodology and contact information**
- **The sleeping habits and patterns of HK's working population**
- **Sleeping deprivation and its effects on HK's working population**
- **Knowledge on quality sleep in HK's working population**
- **Cross tabulation analysis (male VS female / sleeping with partner VS sleeping without partner)**

Presentation outline

Analyses and comments by Dr. Ka-Fai Chung

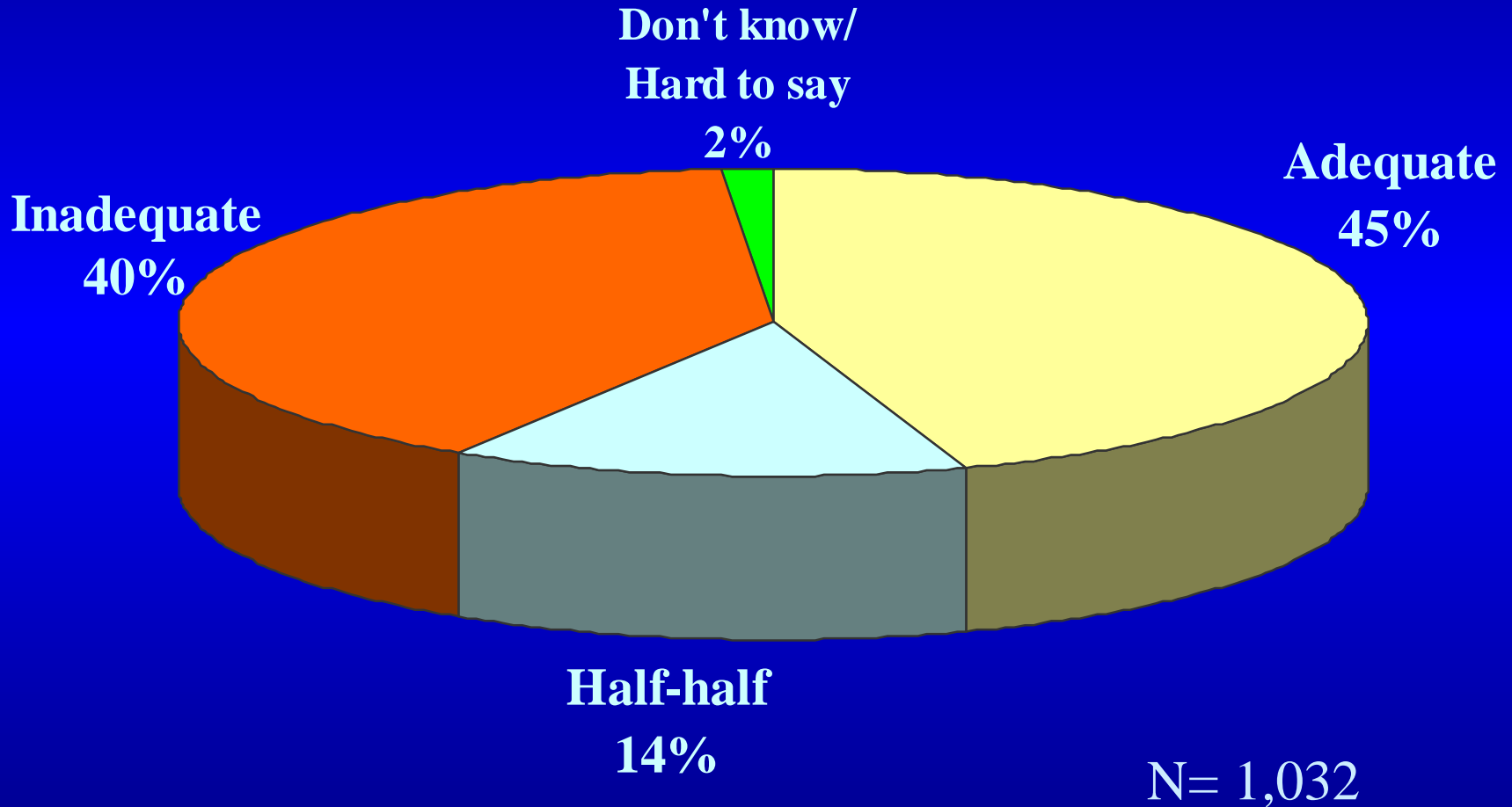
- **Signs of sleep deprivation in HK's working population**
- **Occurrence of insomnia and its effects in HK's working population**
- **The concept of "Quality Sleep"**
- **Size of mattress and sleeping habits**
- **Improving the quality of sleep**
- **Sleep IQ test**

Contact information

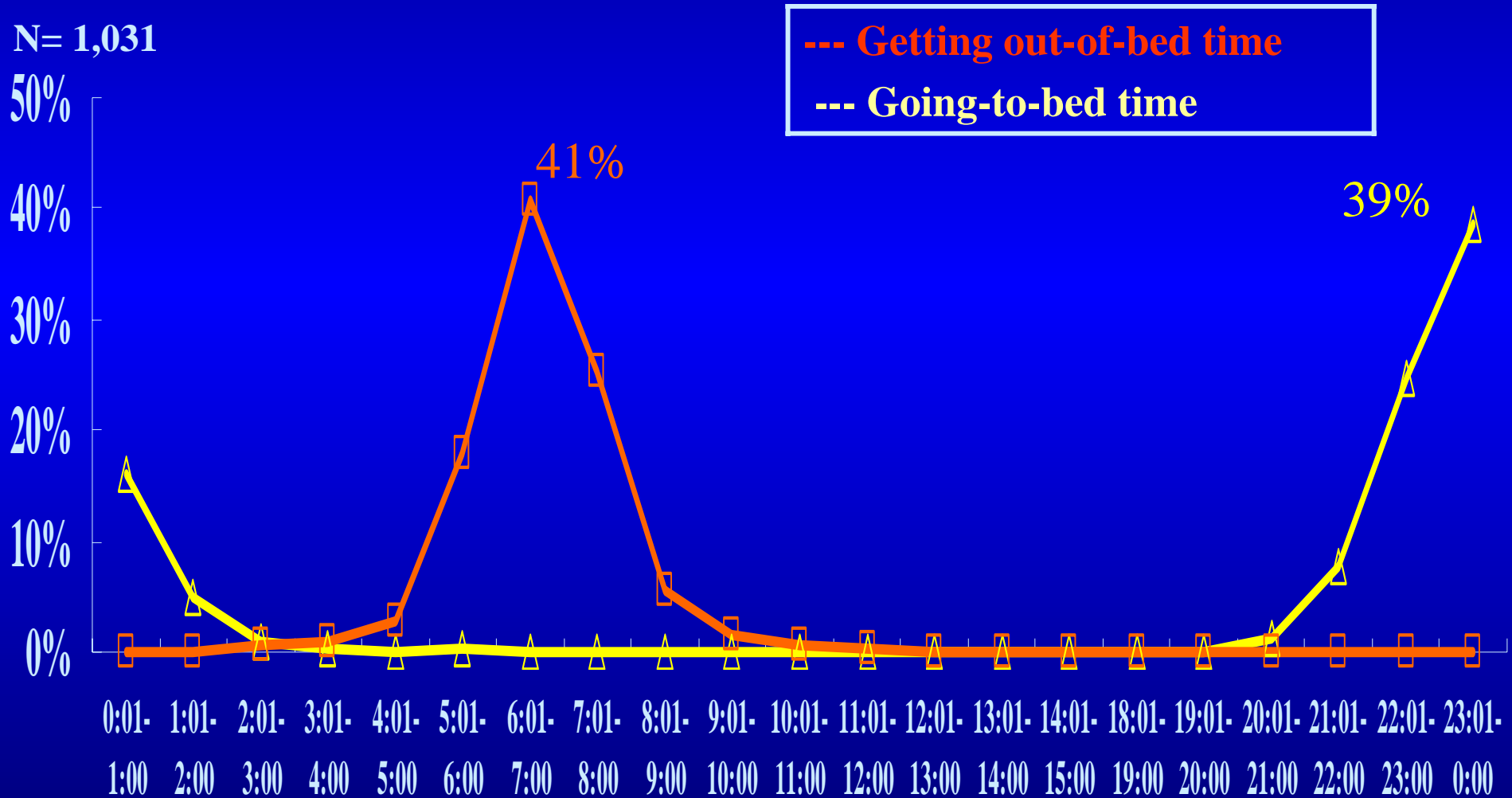
Date of survey:	June 9-13, 2003
Target population:	Local working population aged between 25-55
Survey method:	Telephone survey with interviewers
Sample size:	1,032 successful cases
Effective response rate:	76.8% (<i>Based on target population</i>)
Sampling error:	Less than 1.6%

**The sleeping habits and patterns
of HK's working population**

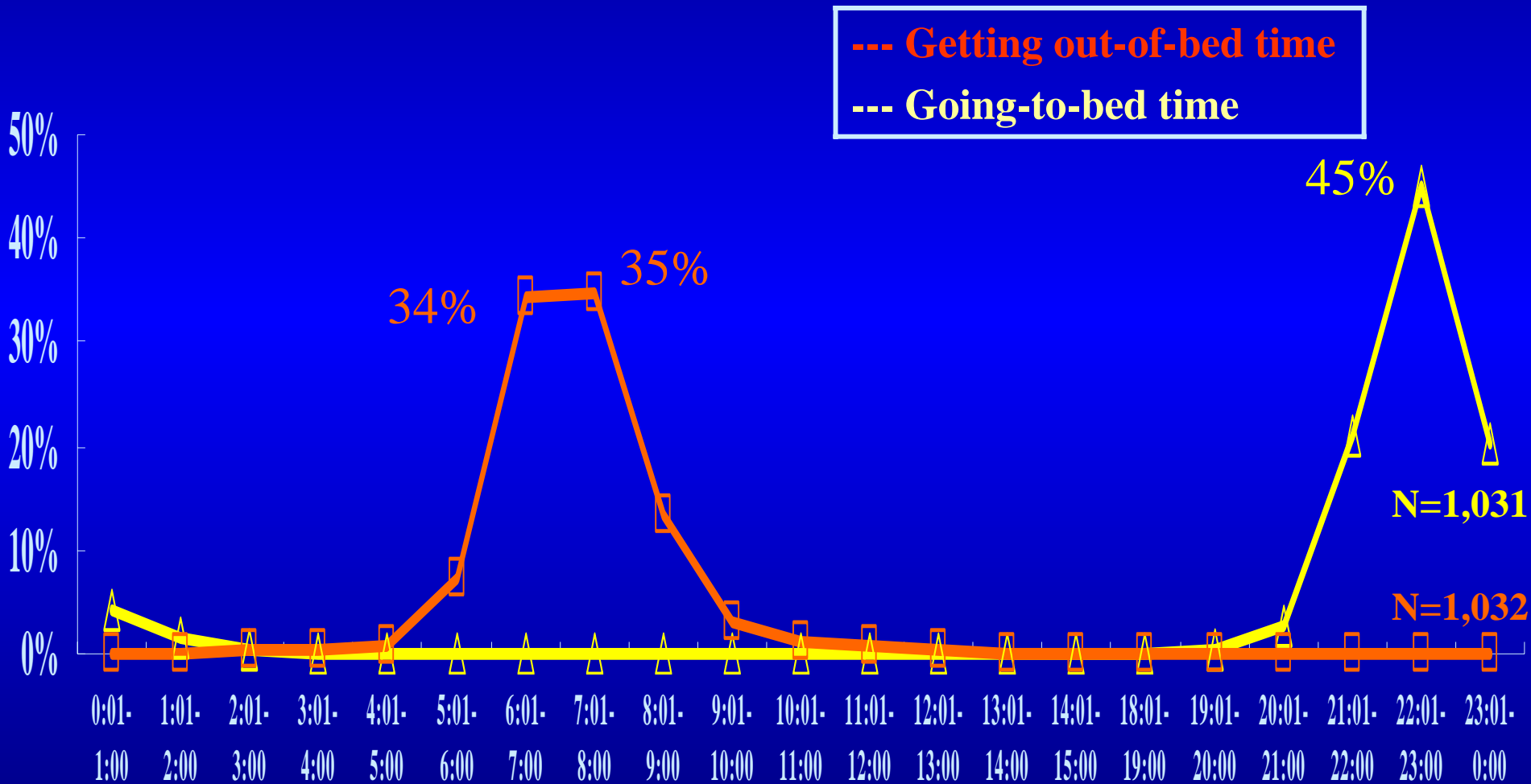
Self-reported adequacy of sleep quantity



Respondents' bedtime on working days (Combined data)

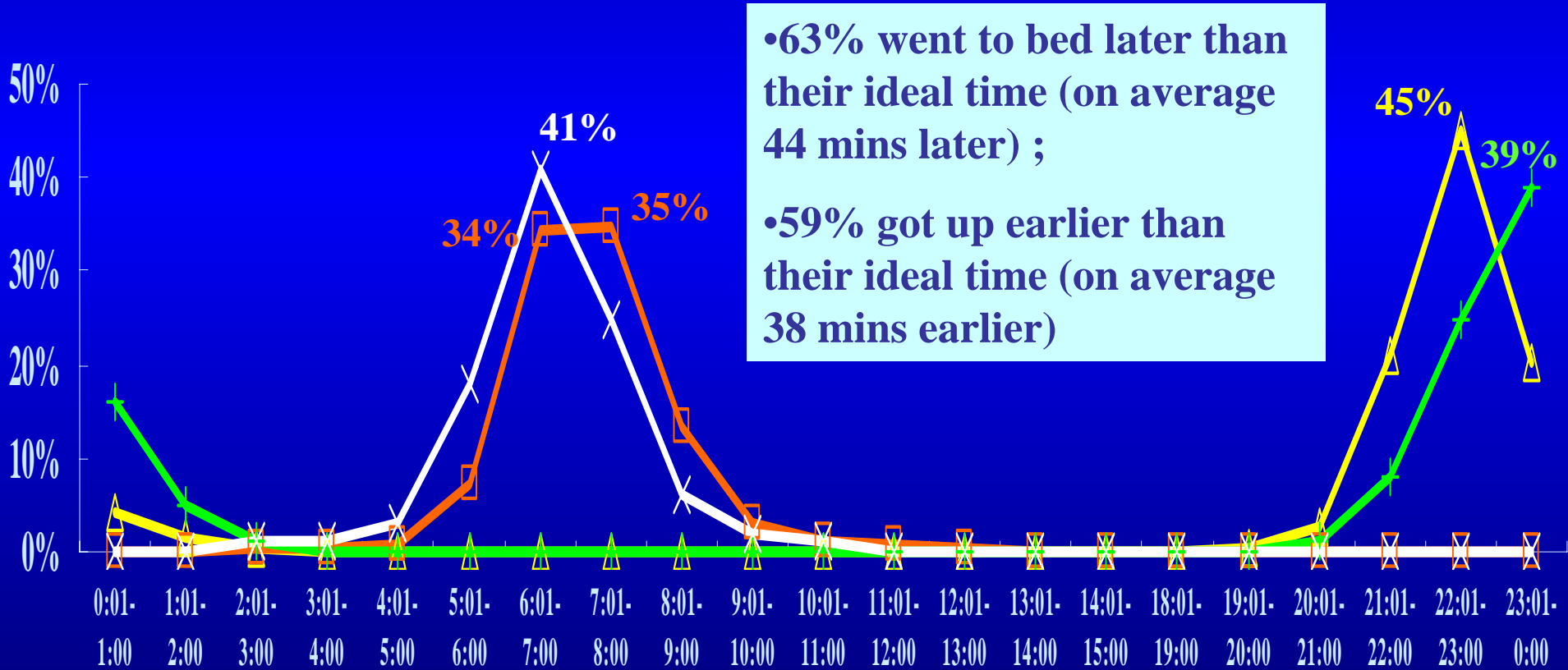


Respondents' ideal bedtime on working days (Combined data)



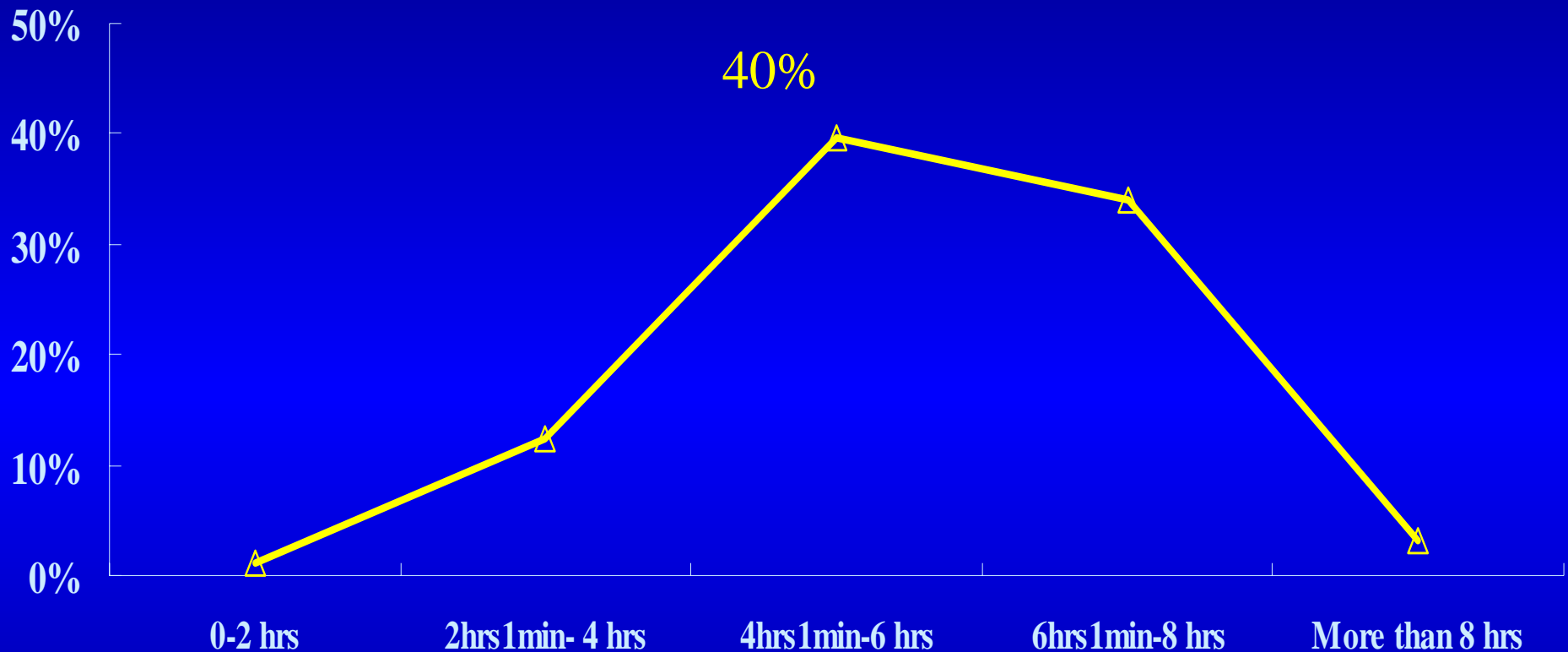
Comparison between actual and ideal bedtime (Combined data)

--- Ideal getting out-of-bed time (N=1,032) --- Actual getting out-of-bed time (N=1,032)
 --- Ideal going-to-bed time (N=1,031) --- Actual going-to-bed time (N=1,032)



Number of hours of sleep on working days

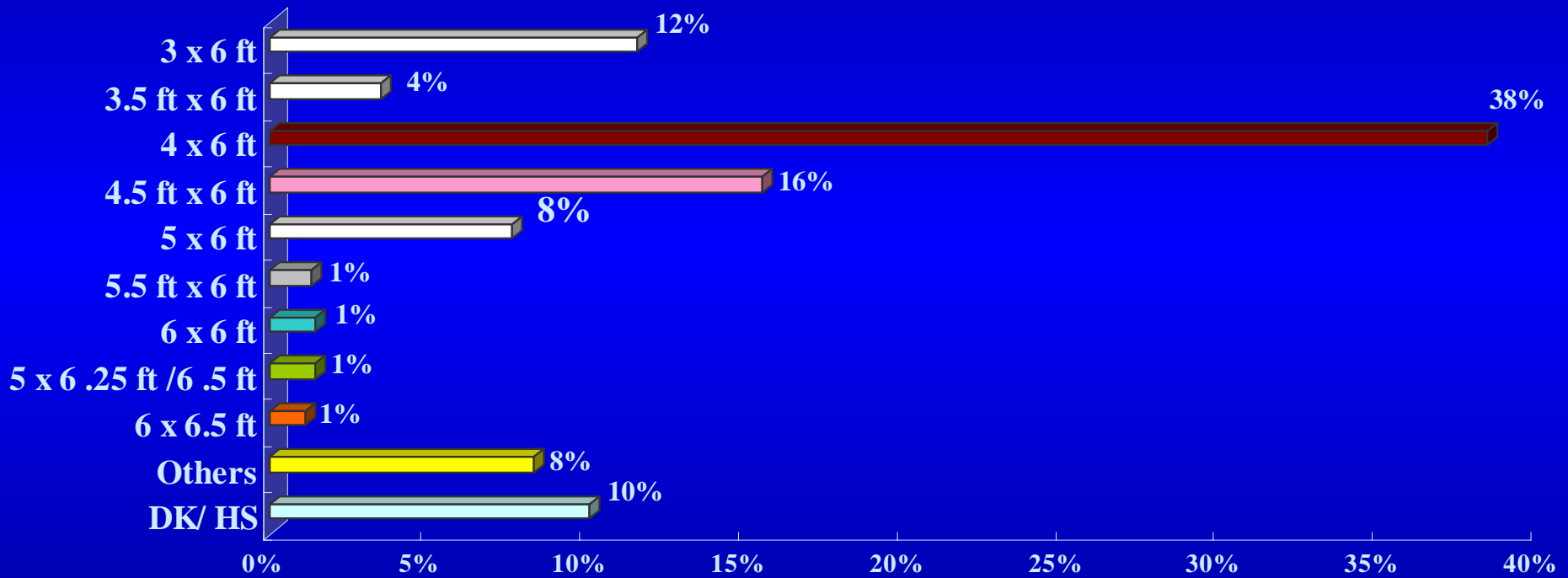
N= 1,032



Mean	Mean after round up	Standard error	Base
6hrs1min	6hrs	2mins	931

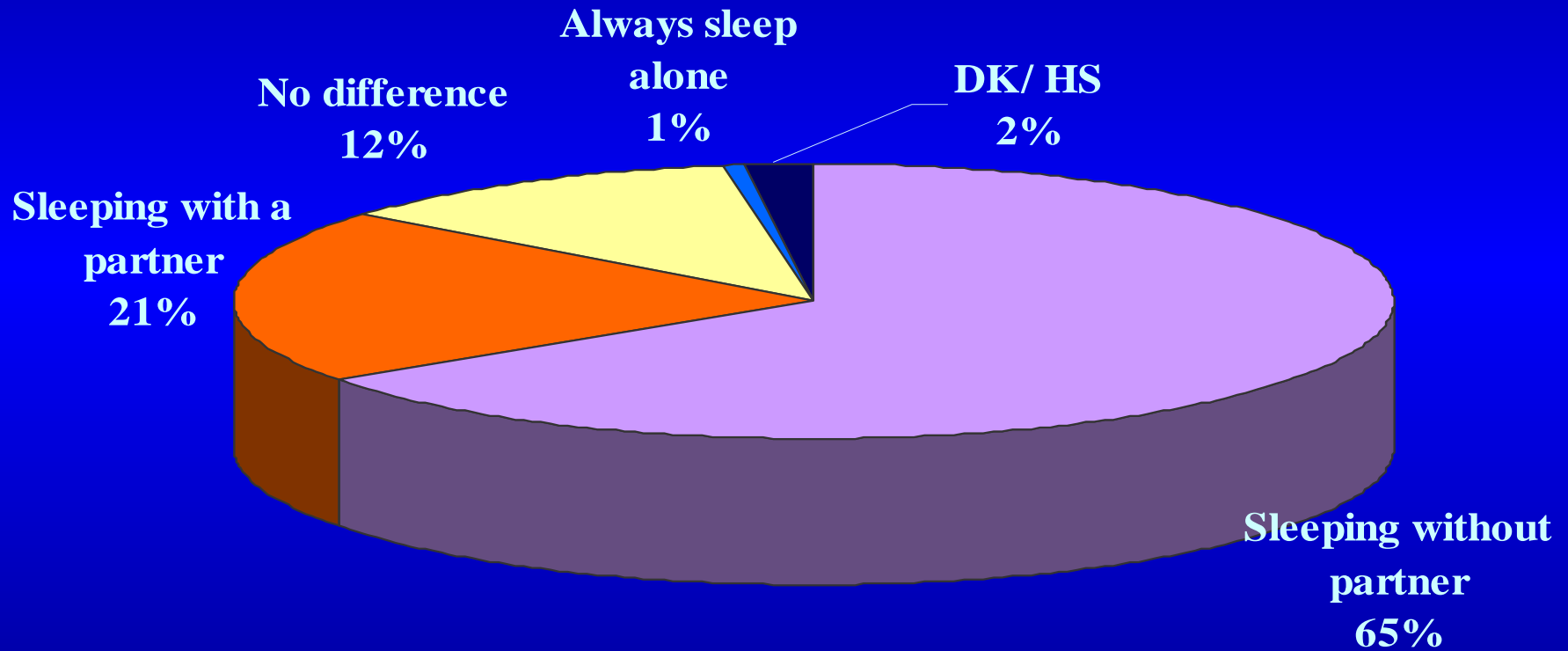
•On average, respondents slept 1 hours 23 minutes less than their ideal length of sleeping hours

Size of mattress



N= 1,029

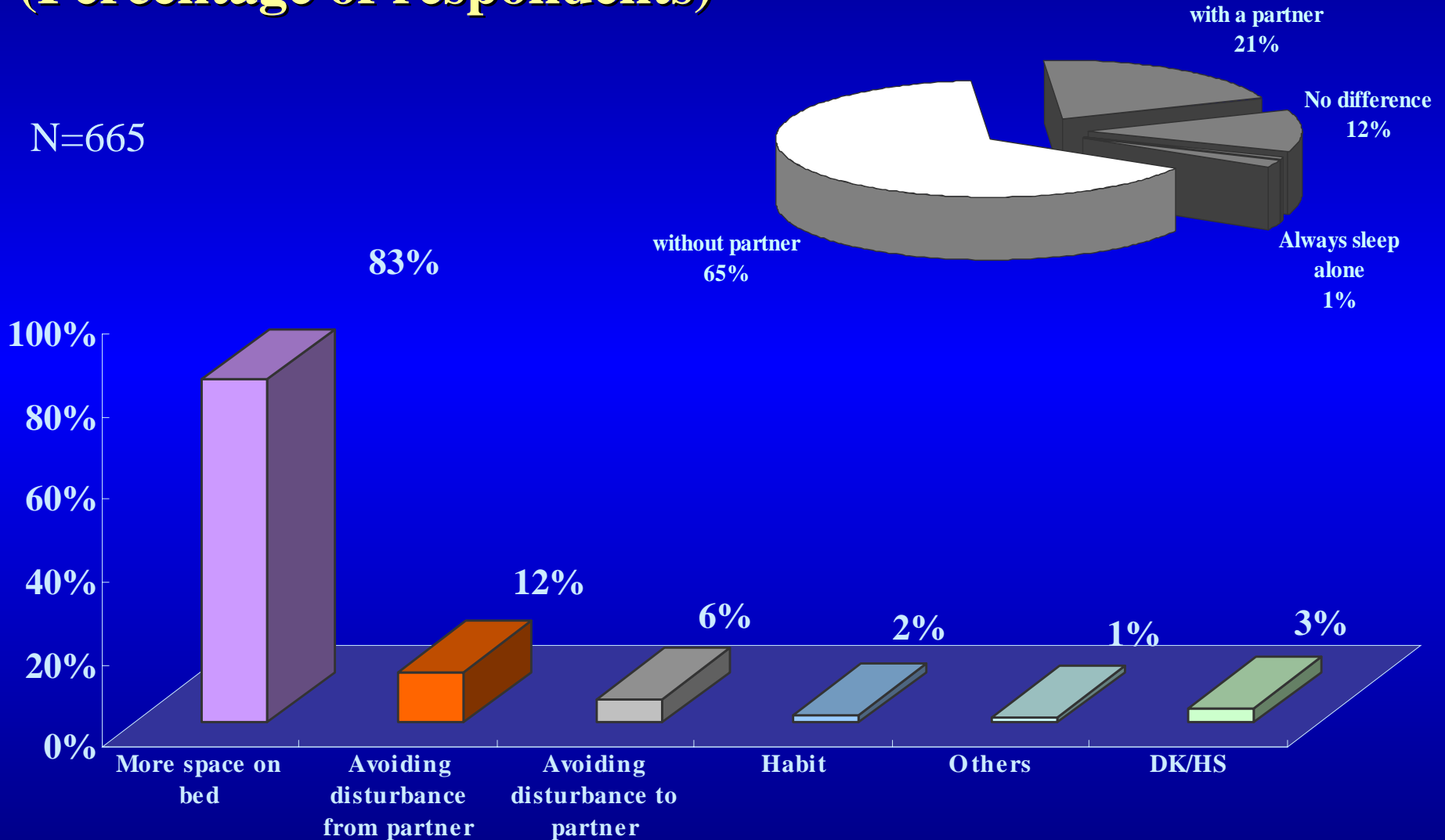
Respondents' preference of sleeping with/ without partner



N= 1,027

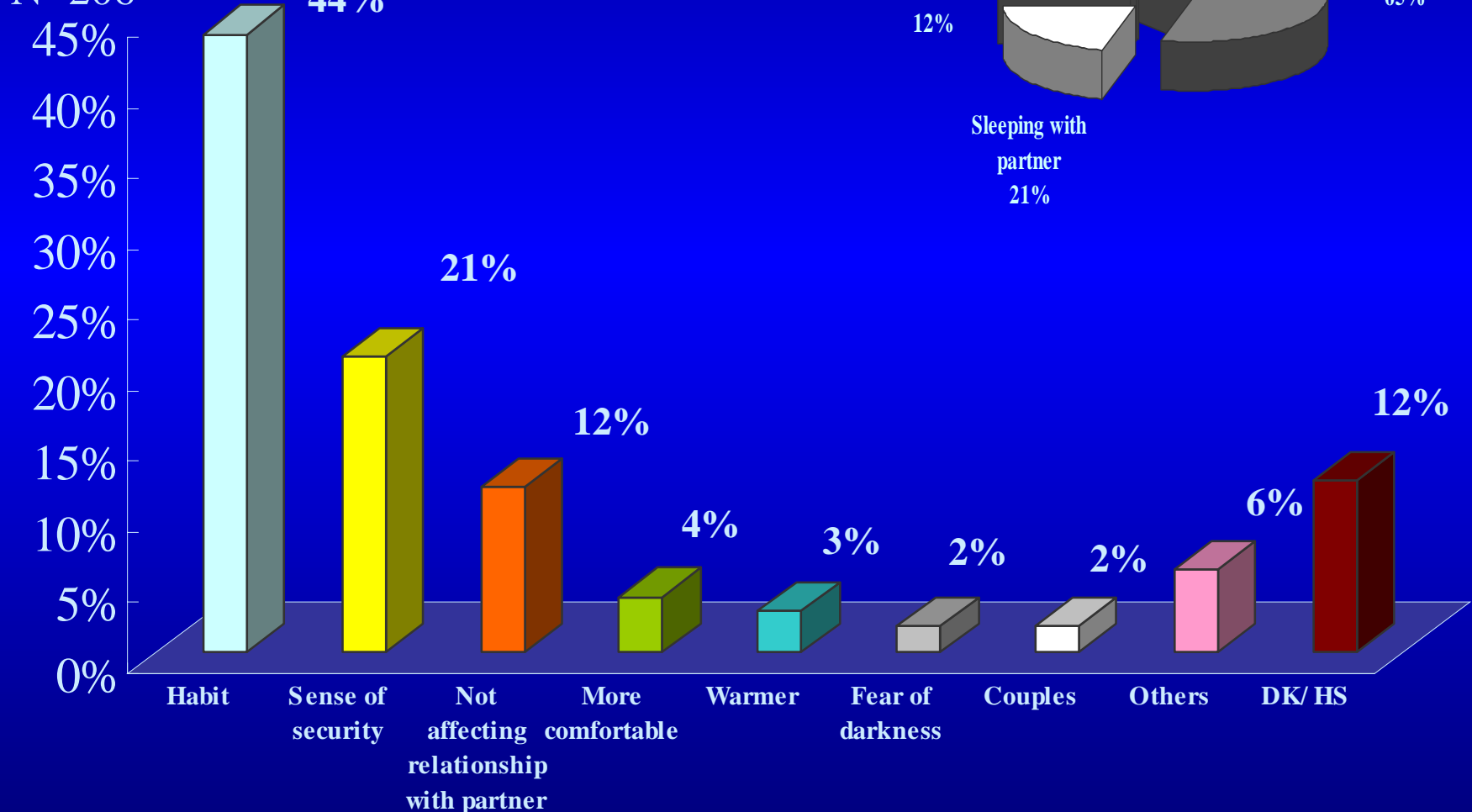
Reasons for preferring to sleep without partner (Percentage of respondents)

N=665

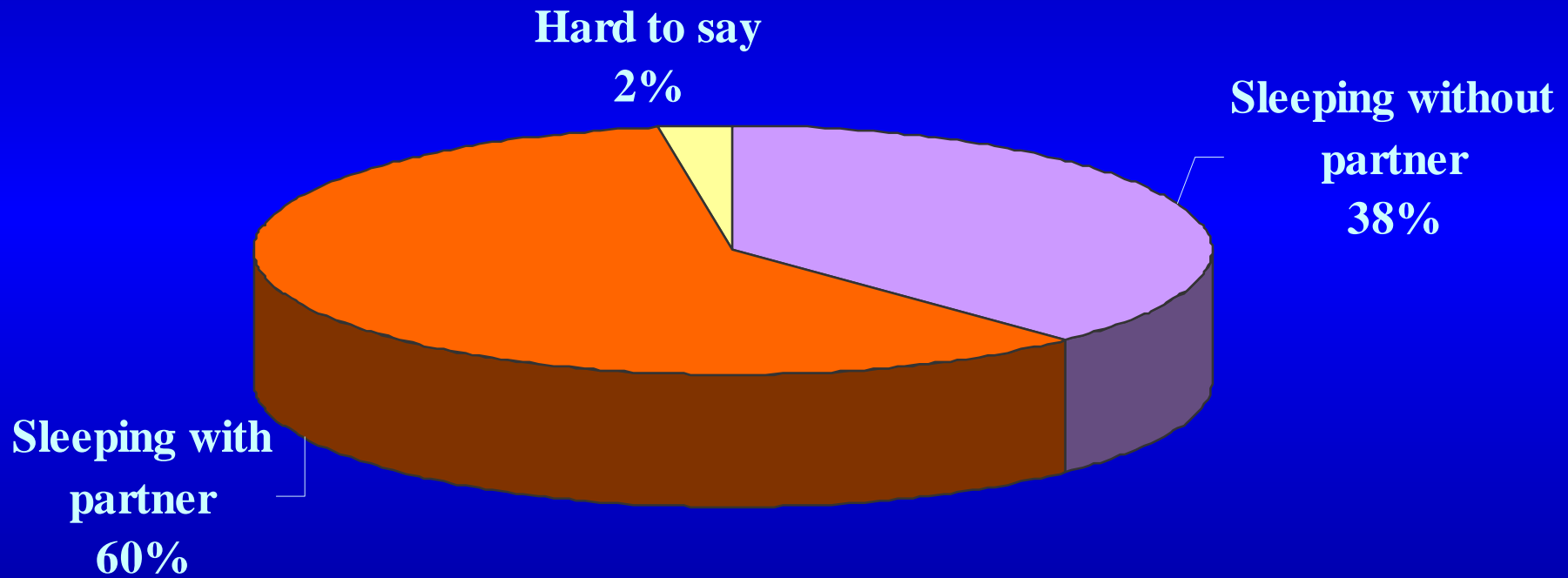


Reasons for preferring to sleep with partner (Percentage of respondents)

N=206

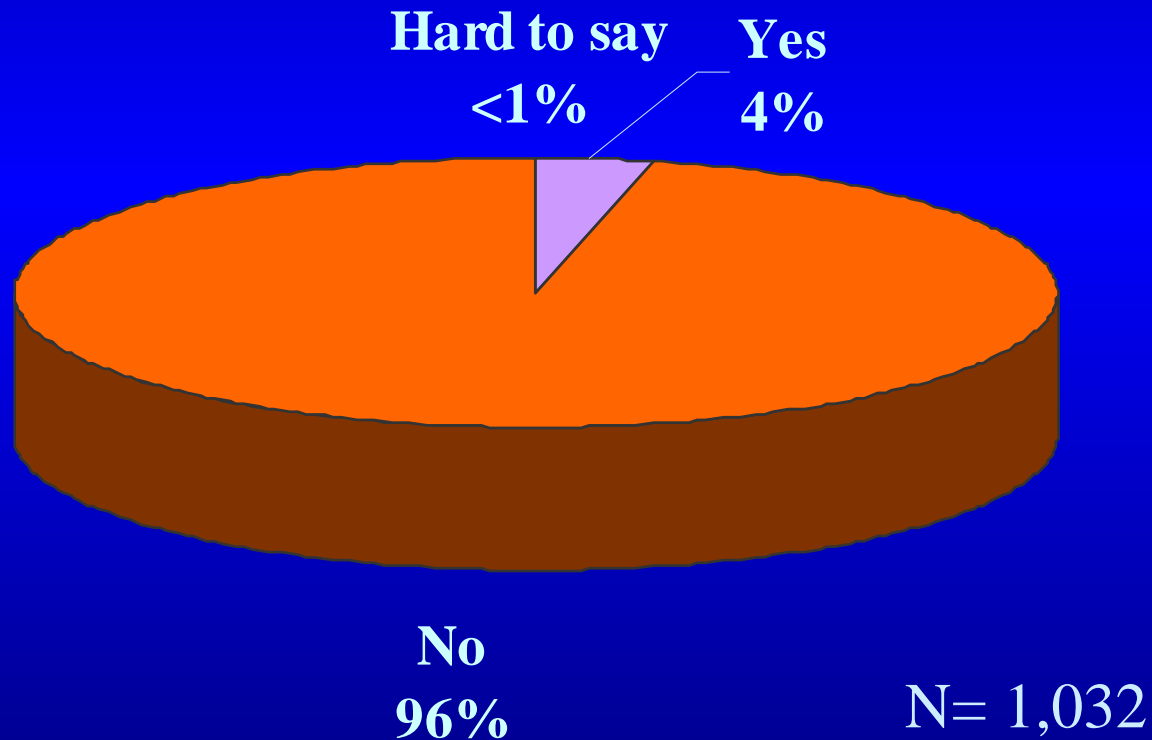


Respondents' current habit of sleeping with/ without partner

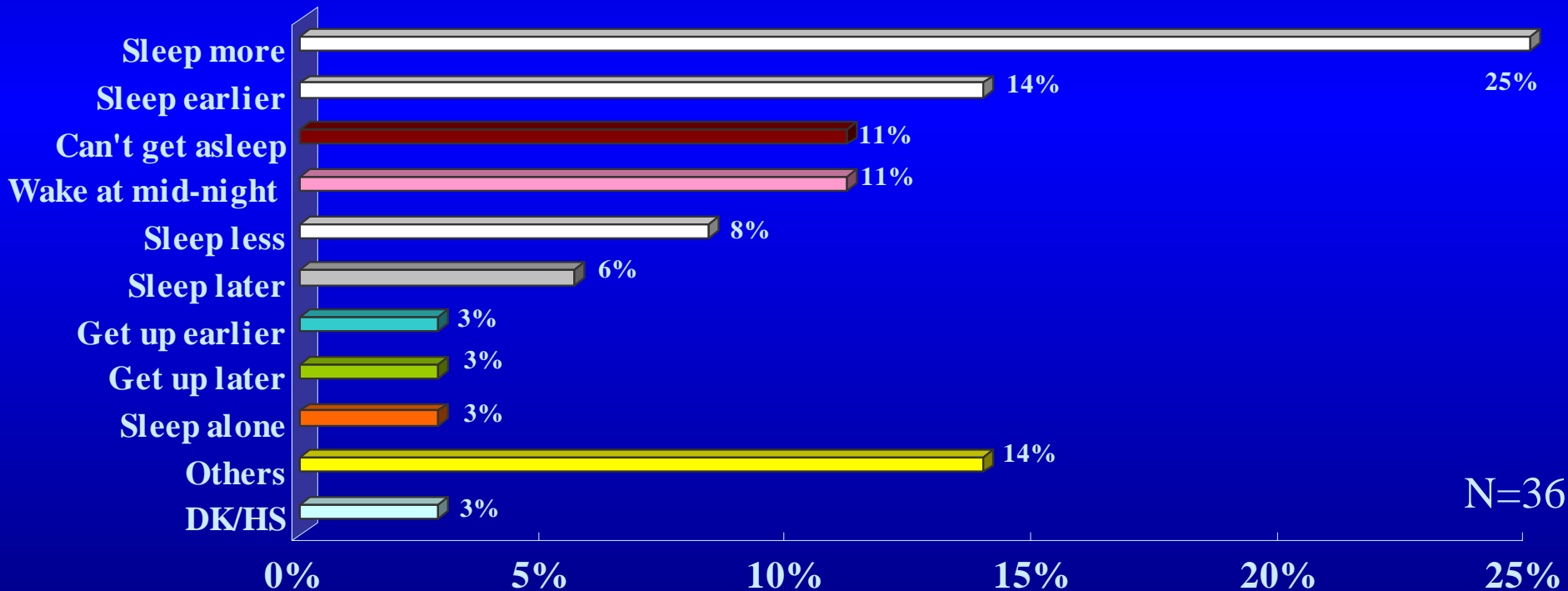
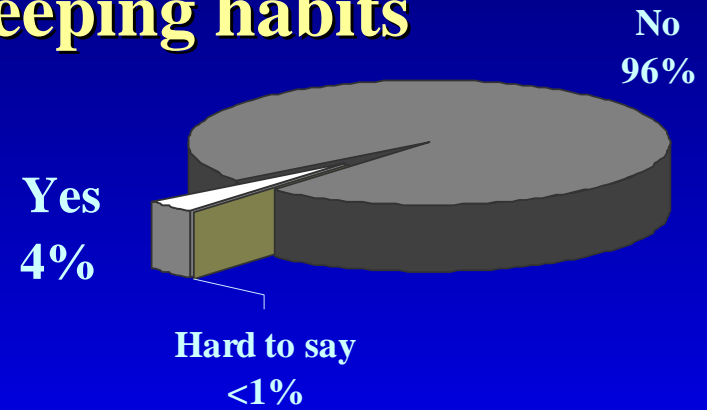


N= 1,027

Change of sleeping patterns because of atypical pneumonia

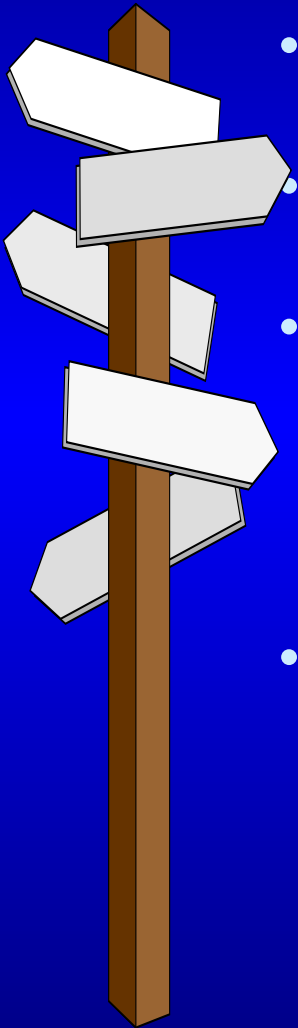


AP's effects on respondents' sleeping habits (Percentage of respondents)



N=36

A recapitulation



- Most respondents went to bed between 11pm-00am, and got up between 6am-7am.
- On average, respondents slept for 6 hours on working days.
- “10pm-11pm” was the most commonly cited ideal going-to-bed time. Yet, only one quarter of them could go to bed at the time mentioned above. On average, respondents slept 1 hours 23 minutes less than their ideal length of sleeping hours.
- Respondents preferred sleeping alone to sleeping with partner because it was more comfortable to sleep alone, whereas the latter said they had already formed the habit. Yet, in reality, the number of respondents sleeping with partner far exceeded that of sleeping alone.

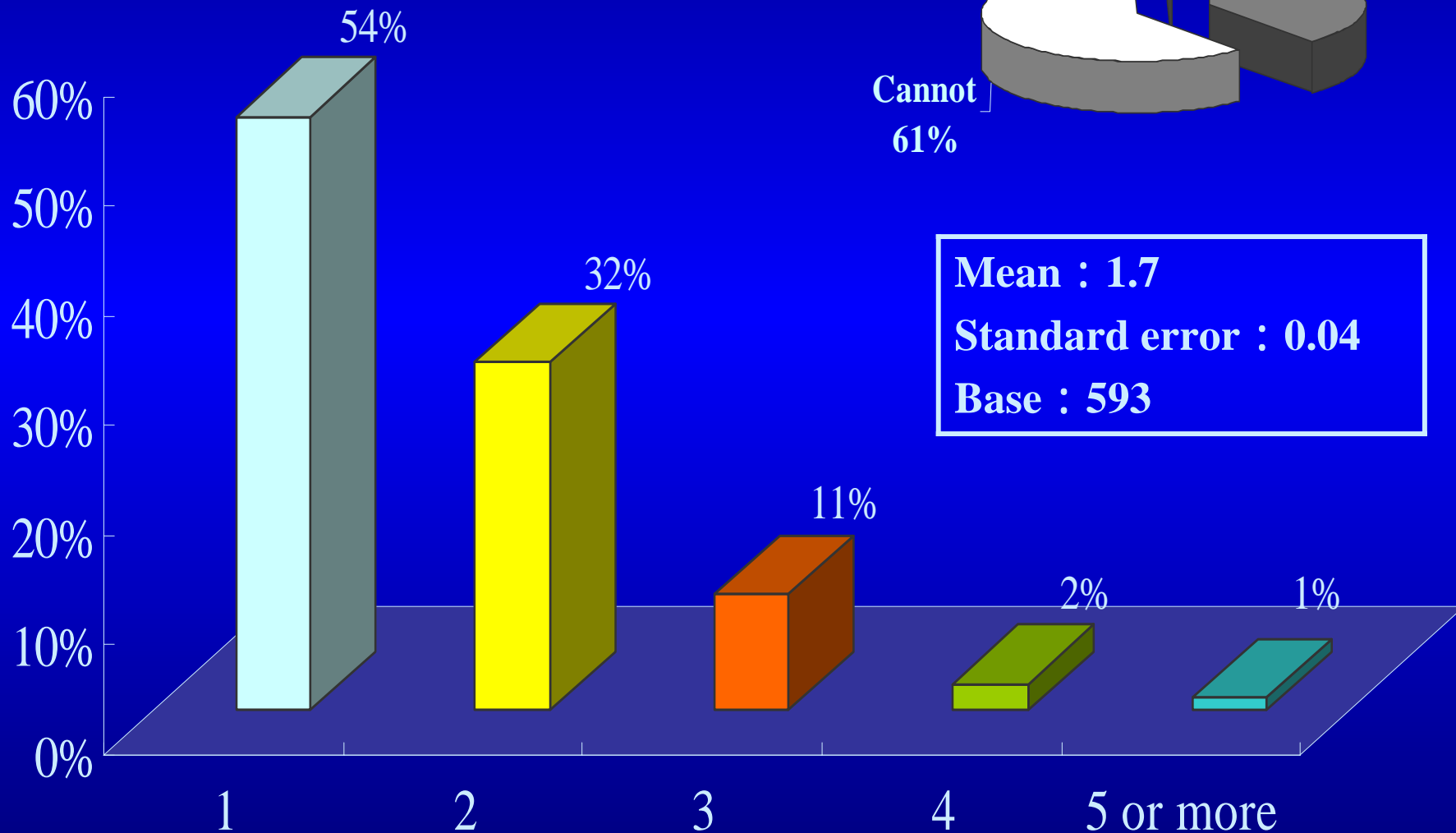
Sleeping deprivation and its effects on HK's working population

Ability of having uninterrupted sleep in the past 7 days

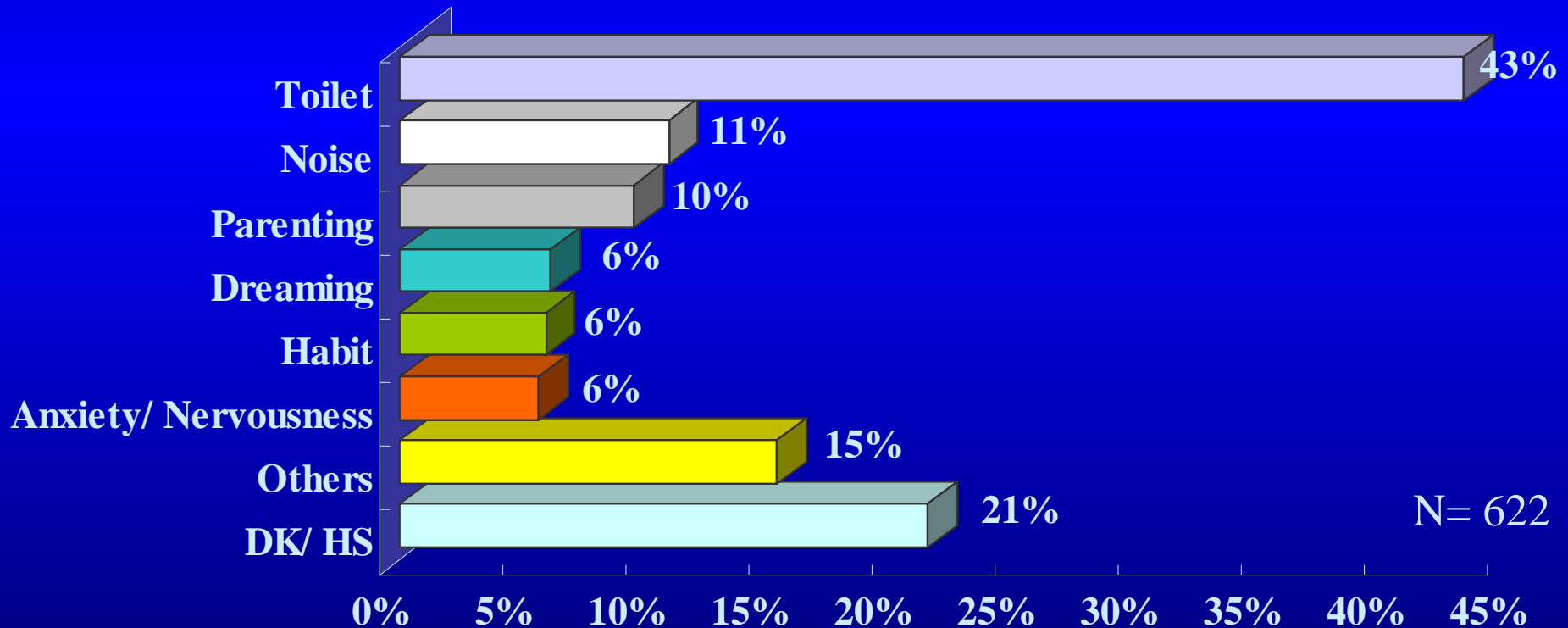
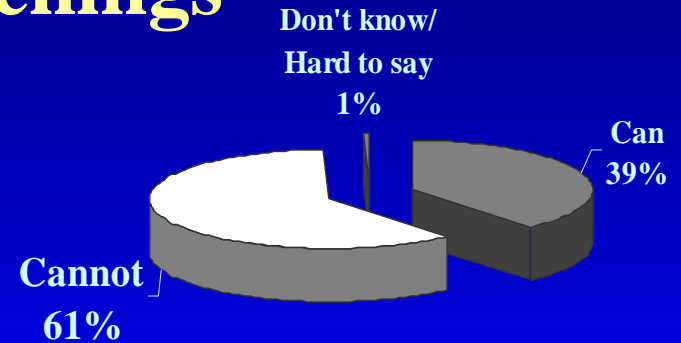


N= 1,032

Frequency of mid-night awakenings (Percentage of respondents)



Reasons for mid-night awakenings (Percentage of respondents)

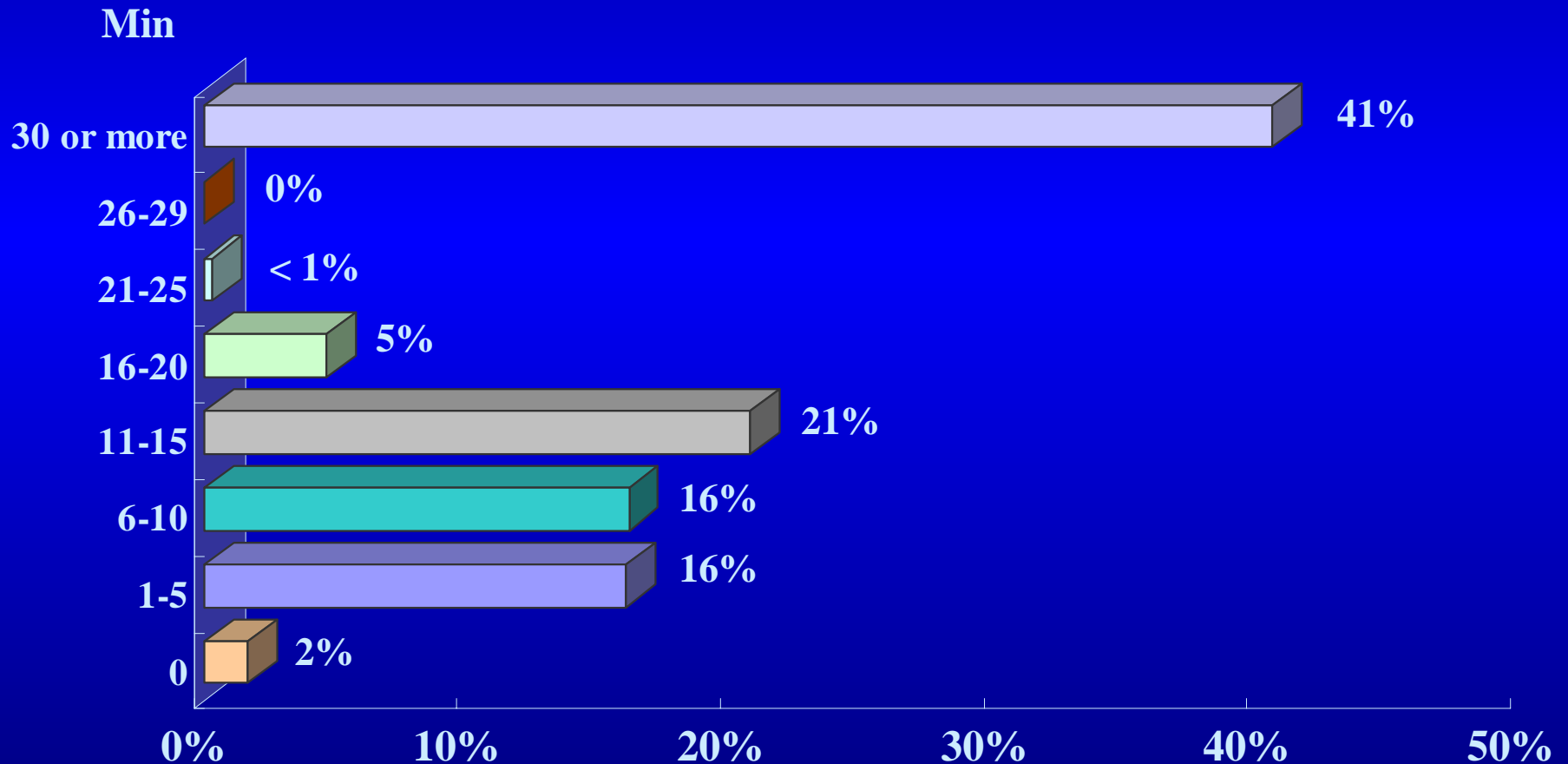


Time needed for falling asleep

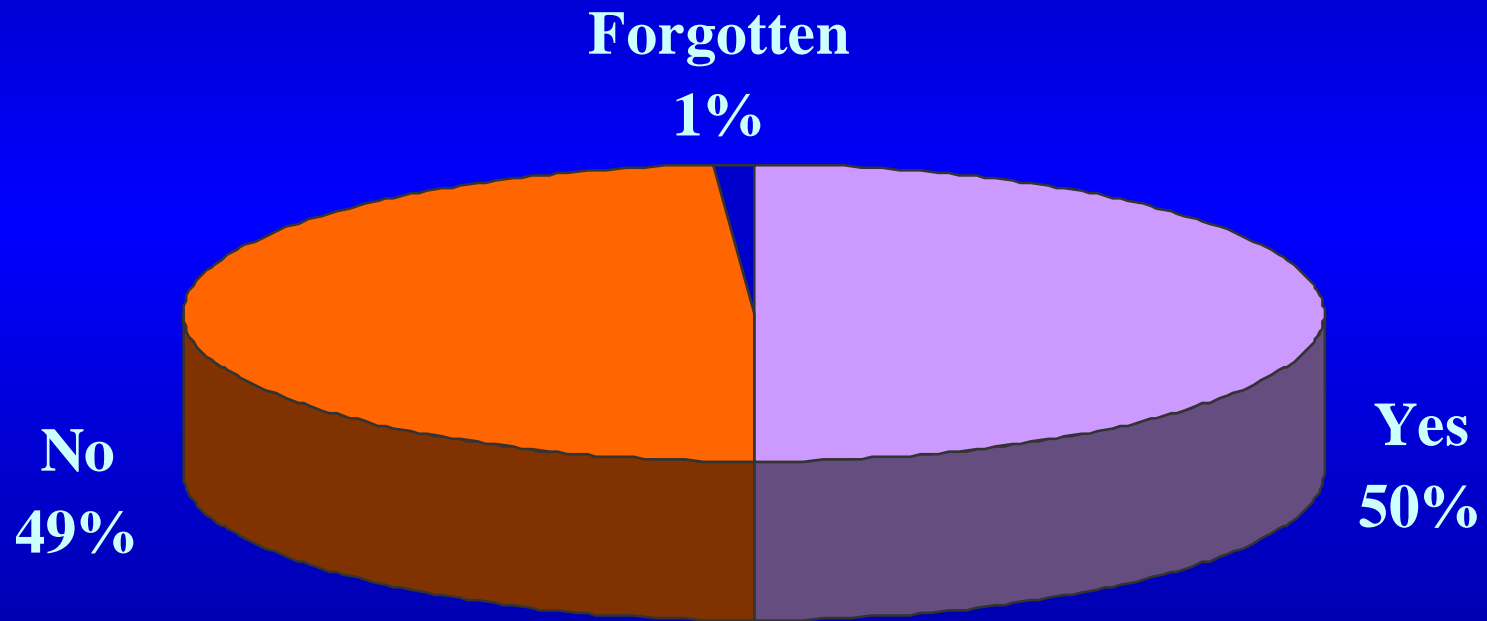
Mean : 22 mins

Standard error : 0.62 min

Base : 929

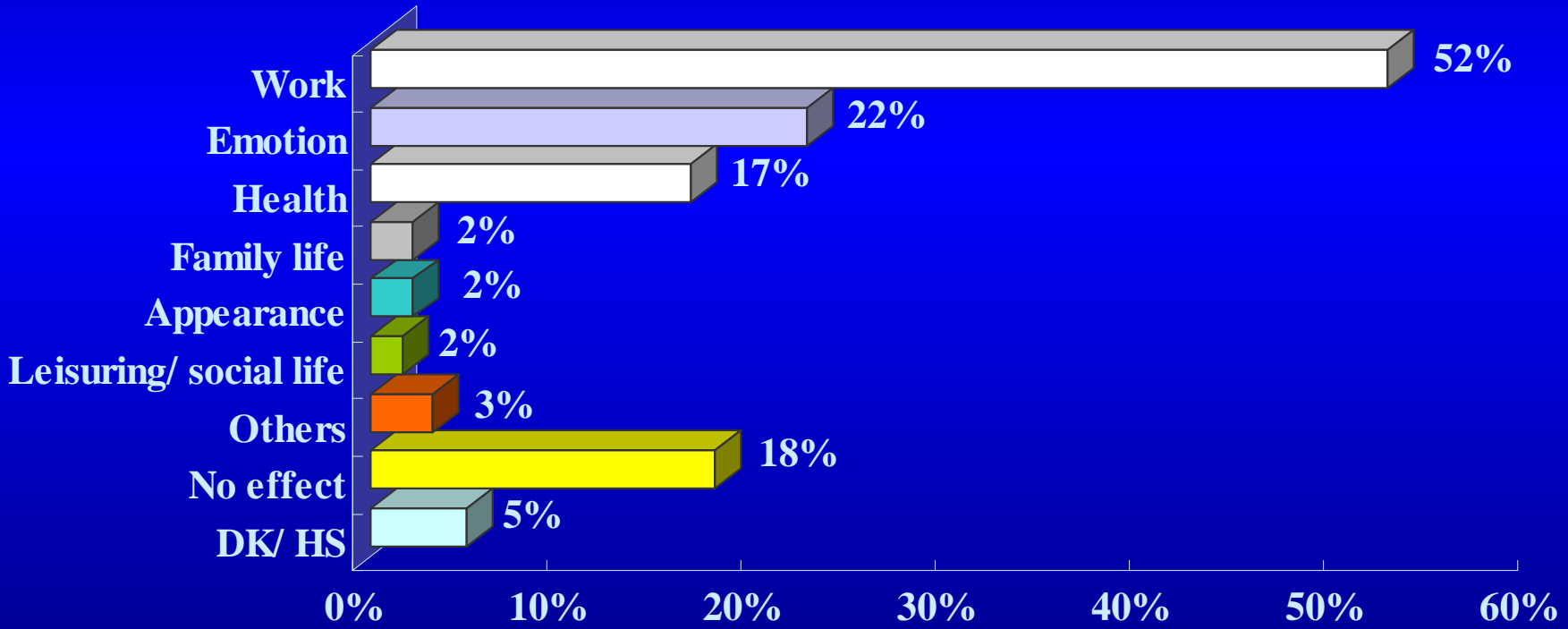
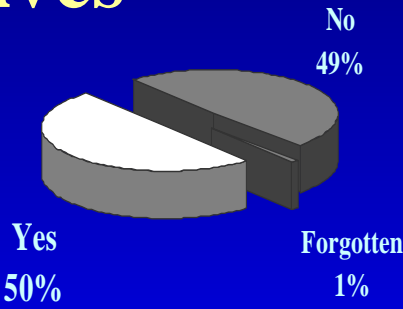


Experience of bad-quality sleep for 3 consecutive days or more



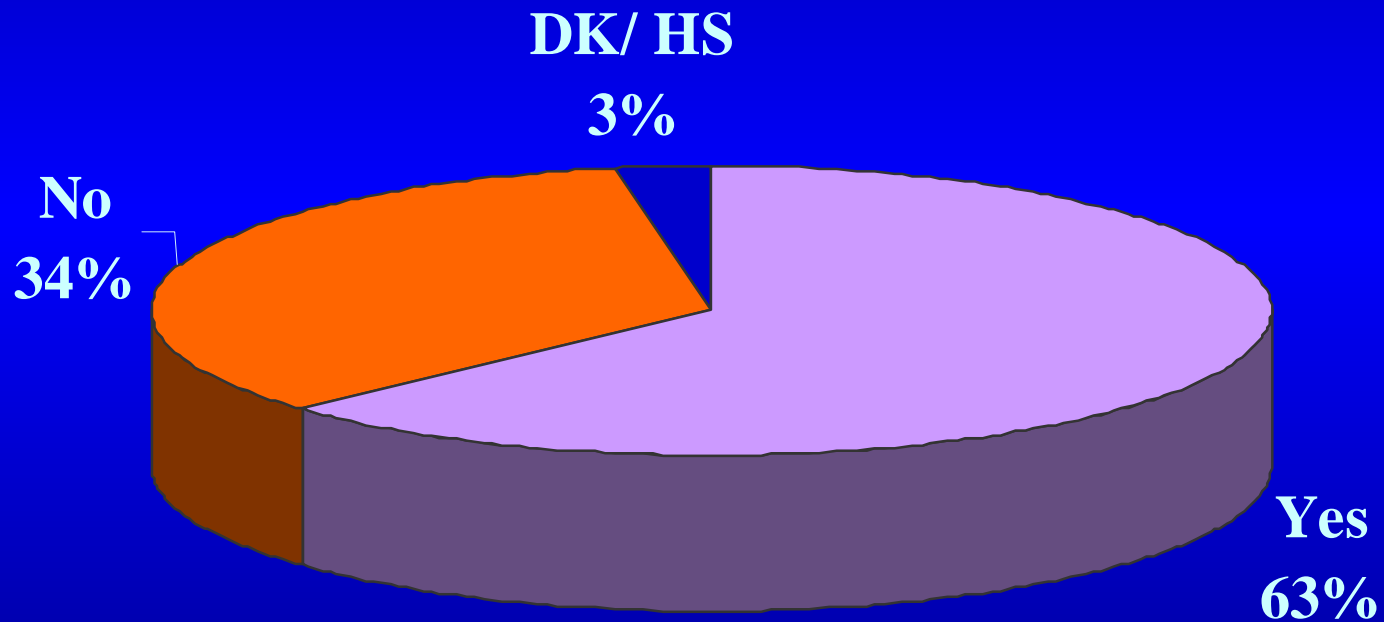
N= 1,032

Effects of bad-quality sleep on daily lives (Percentage of respondents)



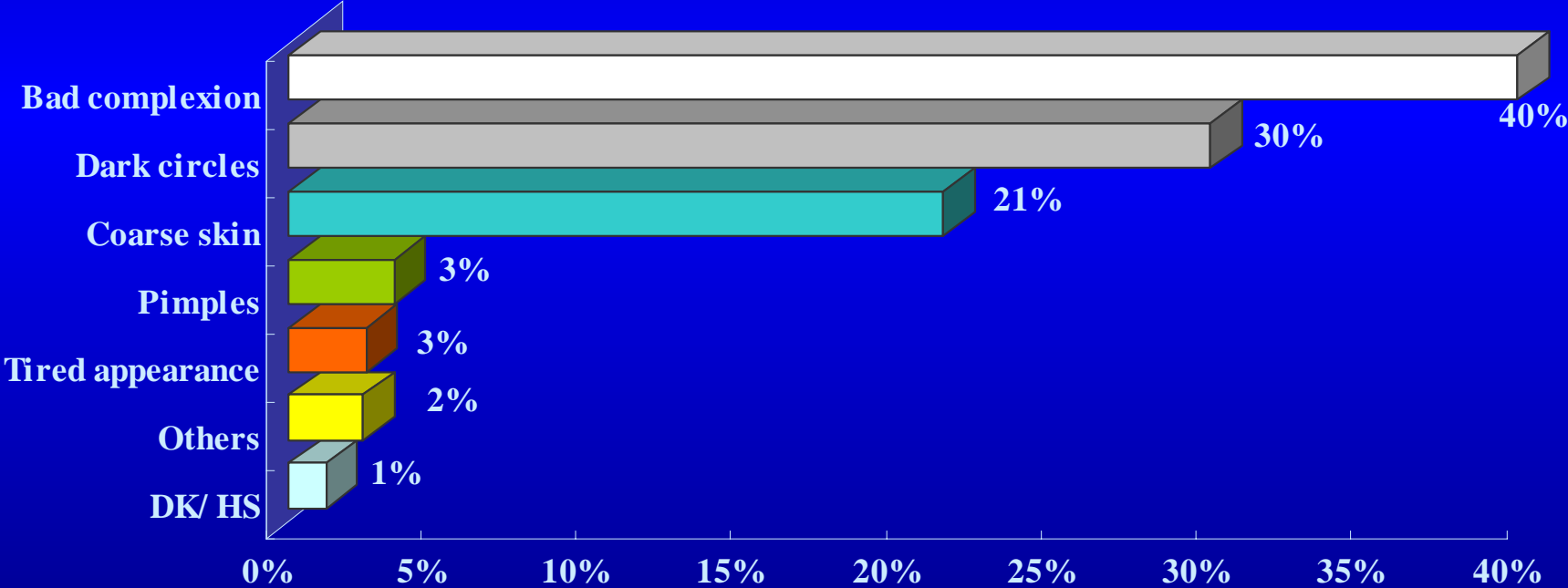
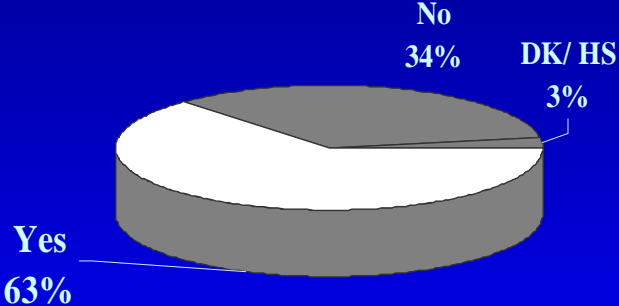
N= 514

Effects of bad-quality sleep on appearance



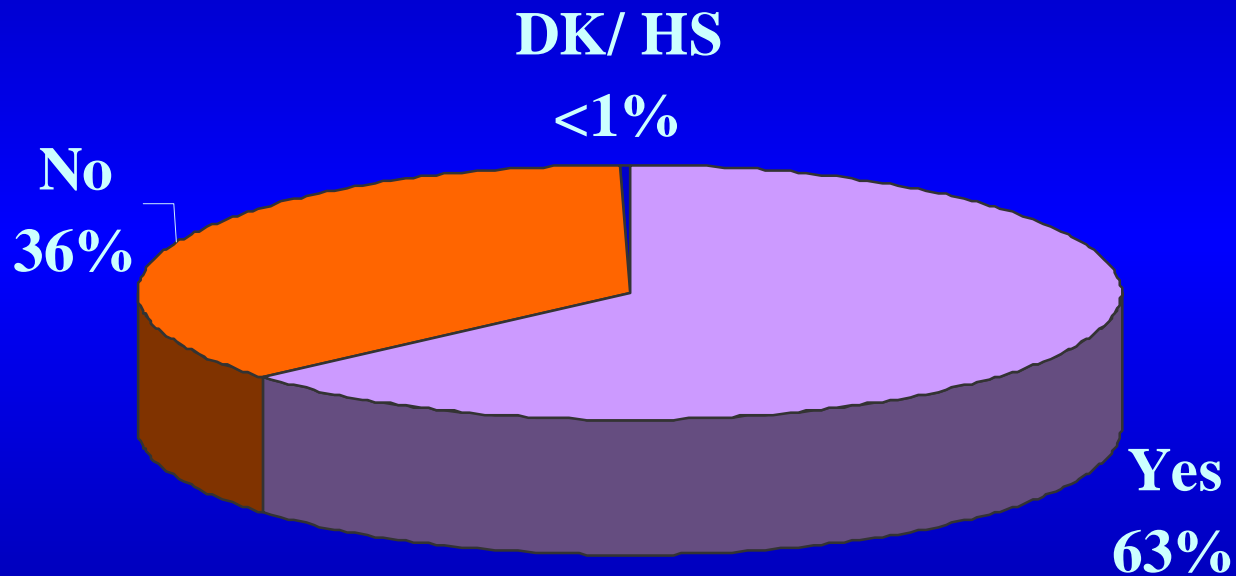
N= 516

Effects of bad-quality sleep on appearance (Percentage of respondents)



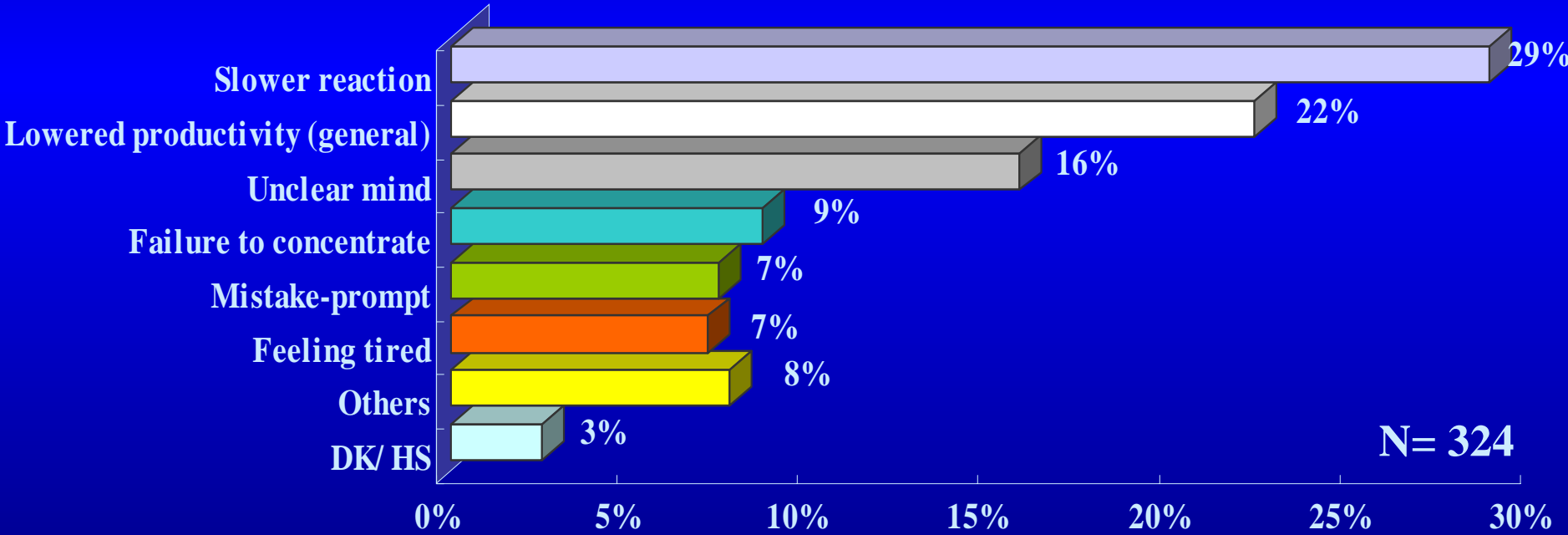
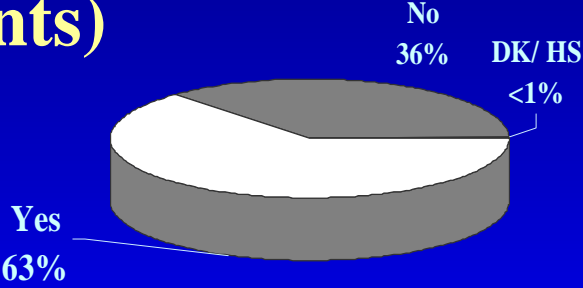
N= 323

Effects of bad-quality sleep on work performance



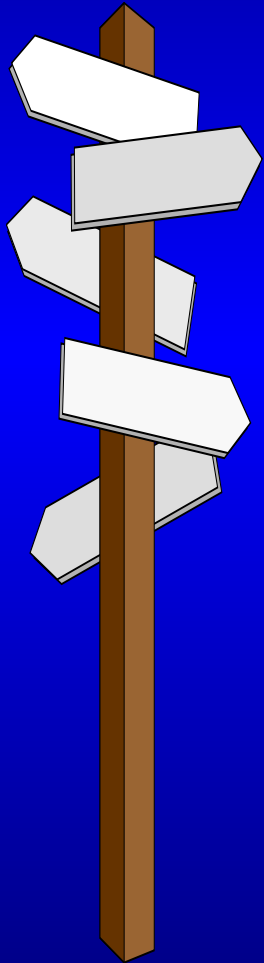
N= 516

Effects of bad-quality sleep on work performance (Percentage of respondents)



N= 324

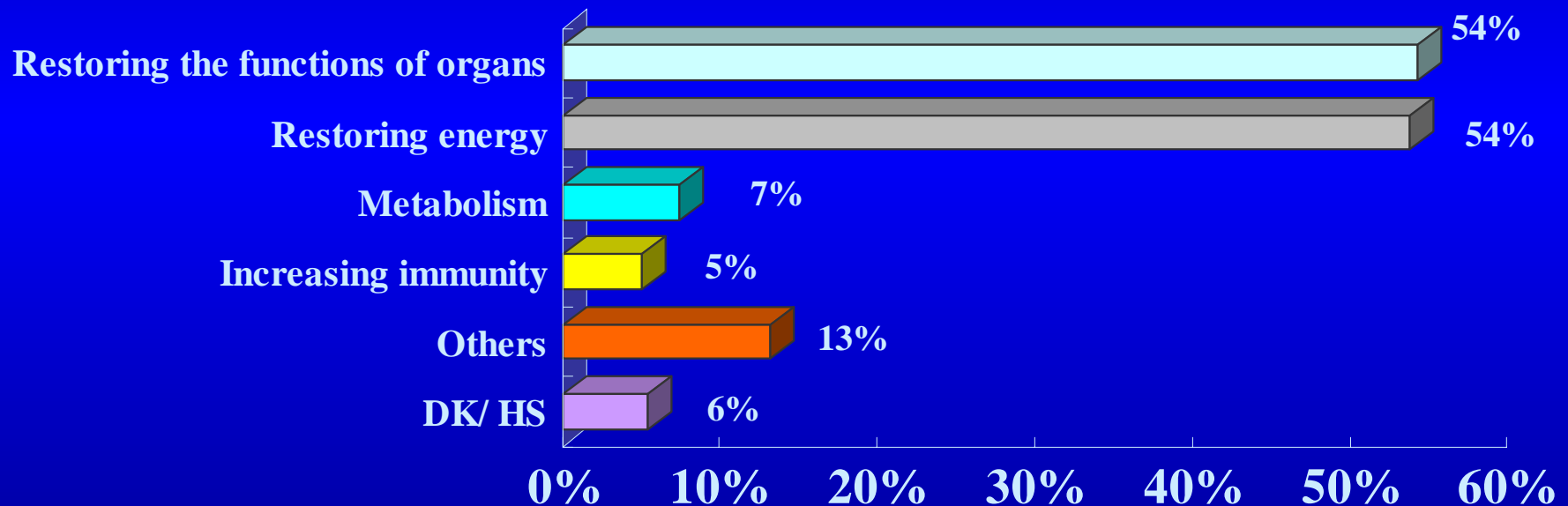
A recapitulation



- 61% had the experience of midnight-awakenings in the past 7 days.
- 46% of the sub-sample woke up twice or more every night, “going to toilet” was the main reason.
- 41% needed 30 minutes or more to fall asleep.
- Half of the respondents had the experience of bad-quality sleep for more than 3 consecutive days, most of them believed their performance at work was affected.
- Findings on the effects of bad-quality sleep on respondents’ daily life showed that 63% of the sub-sample believed that bad-quality sleep had affected their appearance and work performance.

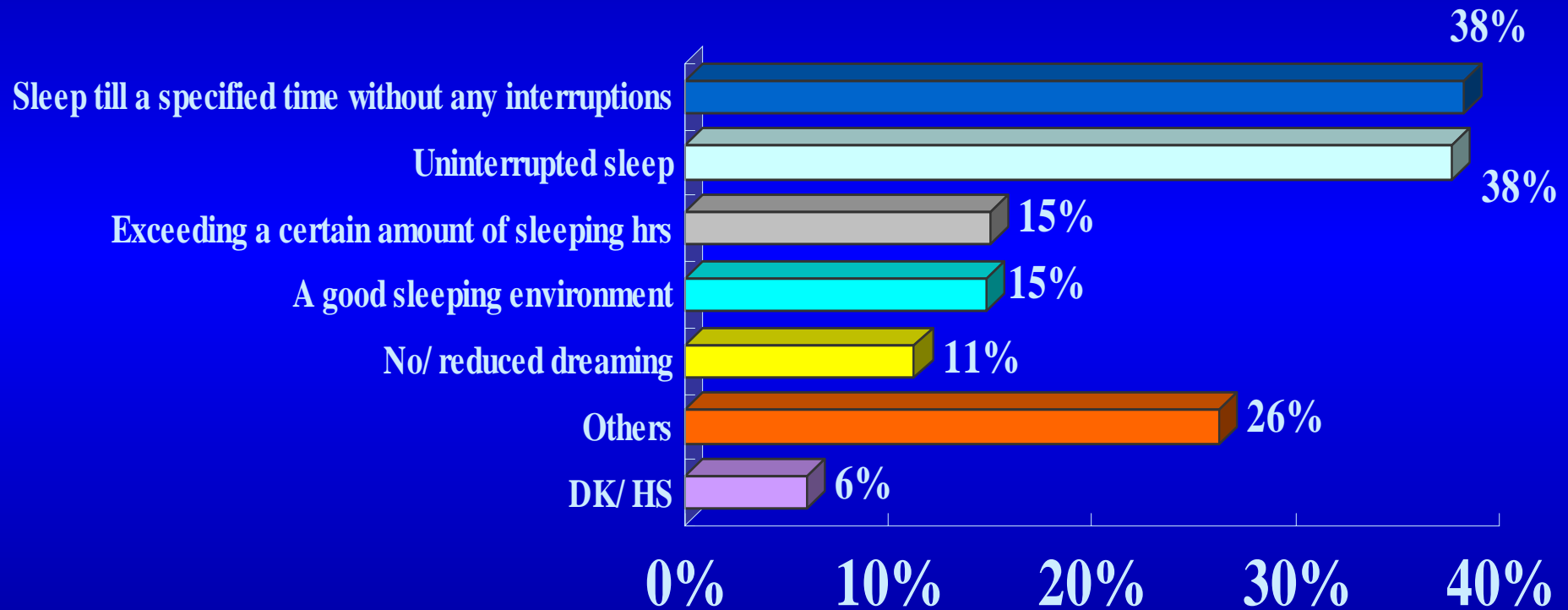
**Knowledge on quality sleep in HK's
working population**

Knowledge on functions of sleep (Percentage of respondents)



N= 1,030

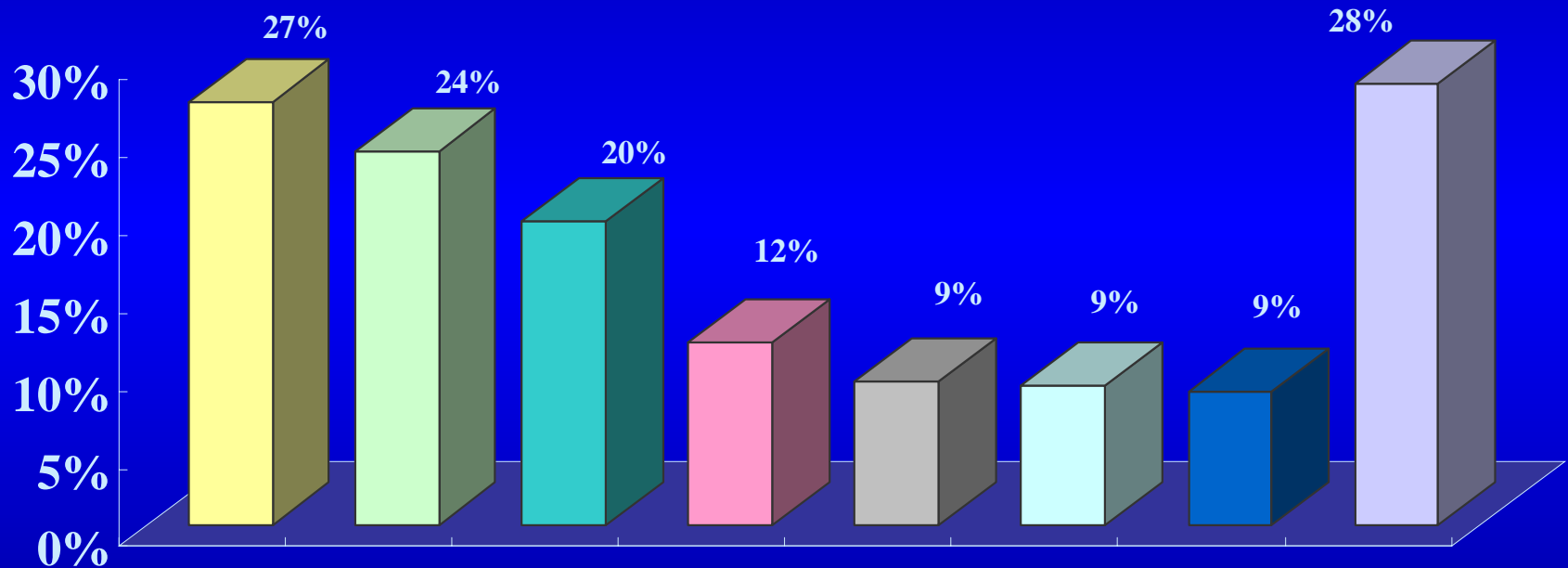
Criteria for quality sleep (Percentage of respondents)



N= 1,026

Ways of improving the quality of sleep (Percentage of respondents)

N= 1,025



Improving the bedroom environment

Choosing a good quality mattress

Regular exercises

Balanced diet

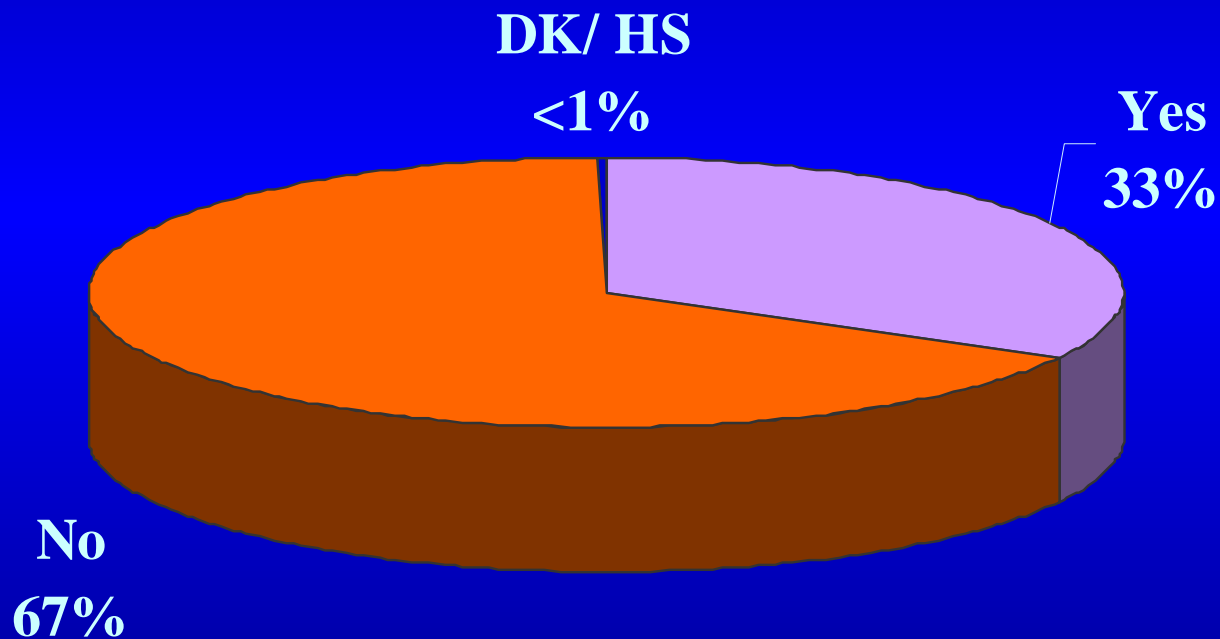
Total relaxation before bedtime

Maintaining a moderate bedroom temperature

Regular cycle of resting

DK/ HS

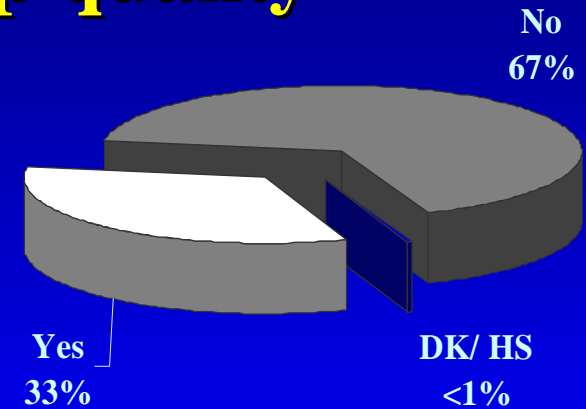
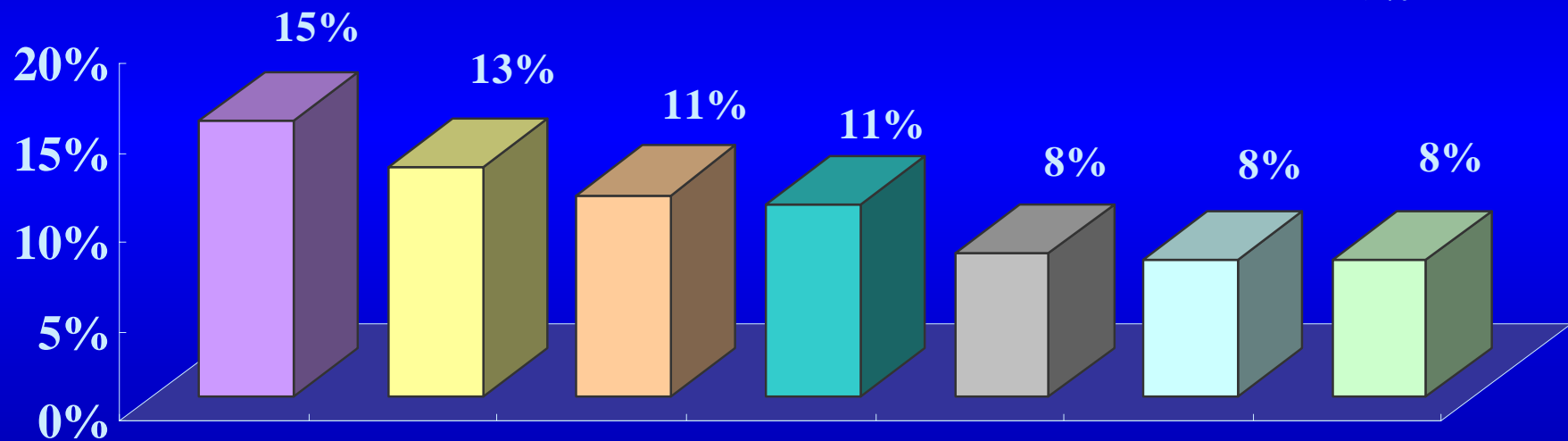
Experience of improving the quality of sleep



N= 1,032

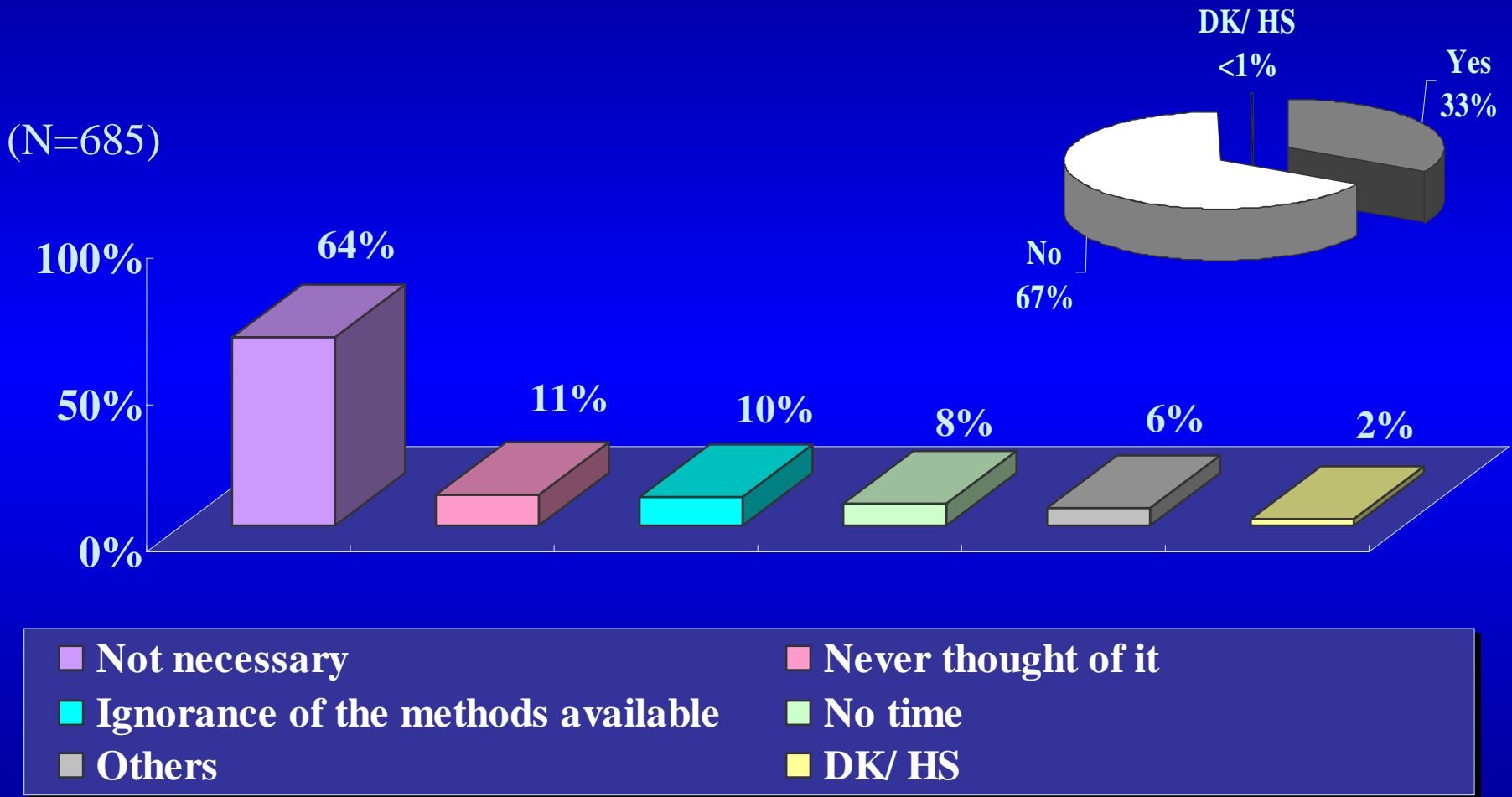
Methods used to improve sleep quality (Percentage of respondents)

(N=337)

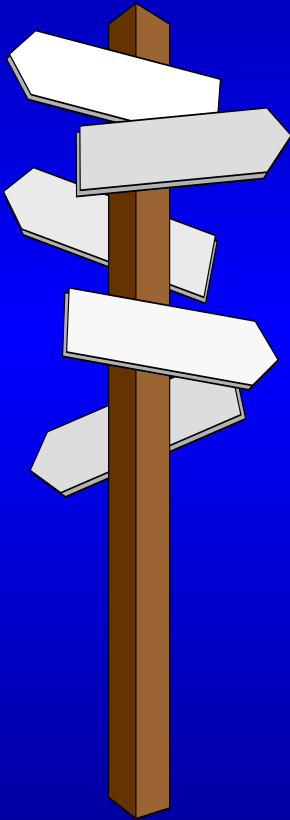


- Using quality pillows
- Relaxation exercises
- Regular exercises
- Using quality mattress
- Regular cycle of resting
- Balanced diet
- Mediation

Reasons for not attempting to improve the sleep quality (Percentage of respondents)



A recapitulation



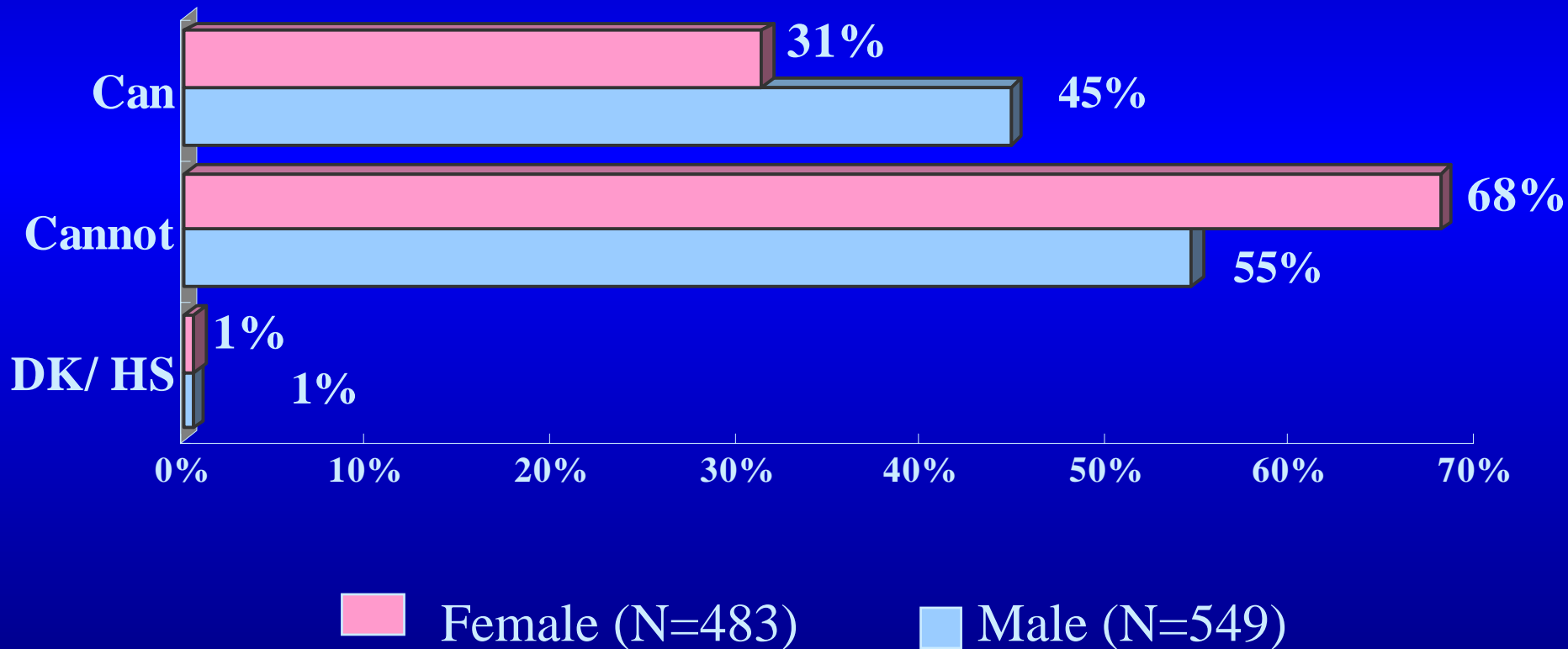
- “ Restoring the functions of organs” and “restoring energy” were the most commonly mentioned functions of sleep.
- A significant number of respondents regarded uninterrupted sleep till a specified time as the key criterion of quality sleep.
- Two-thirds have never tried to improve the quality of sleep, in which 64% of them (43% of the overall sample) believed it was not necessary, another 10% (6% of the overall sample) did not know how to improve the quality of sleep.

Cross tabulation analyses

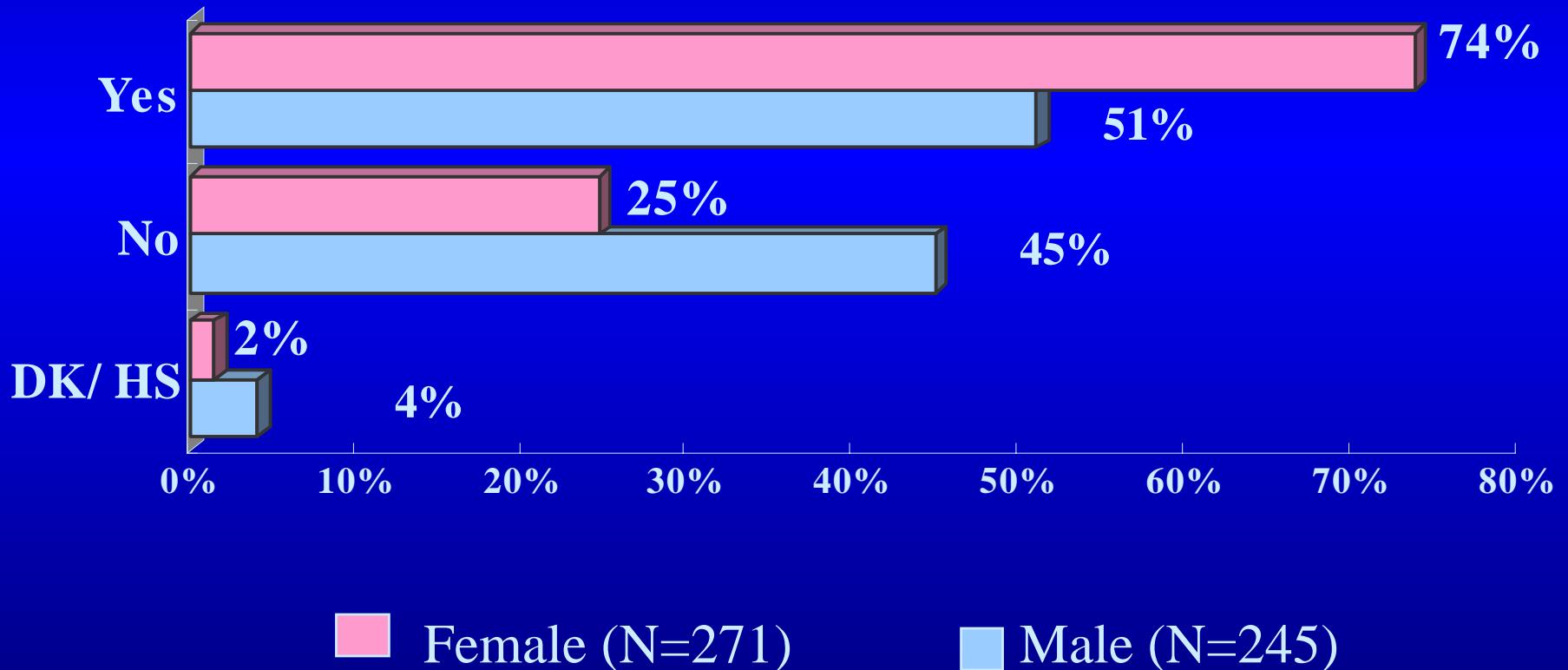
I. Male VS Female

**II. Sleeping with partner VS
sleeping without partner**

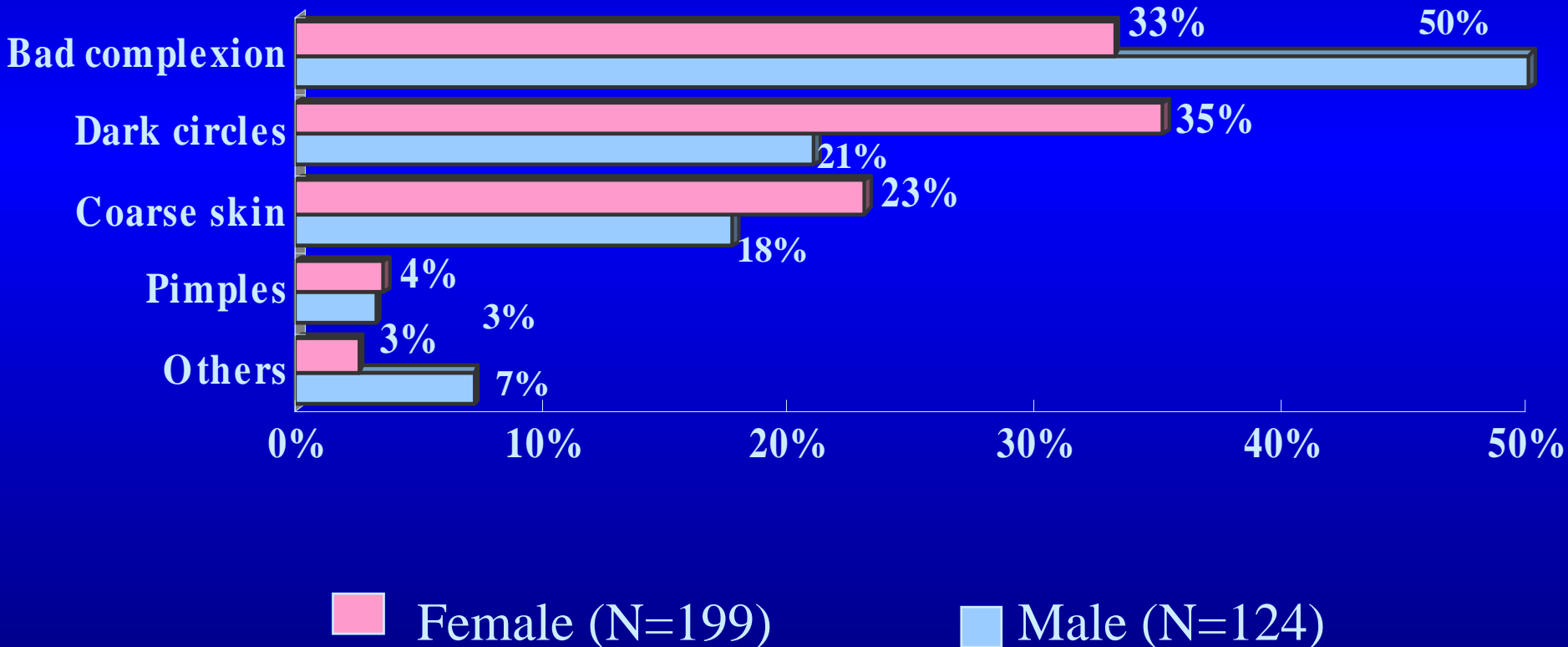
Ability of having uninterrupted sleep in the past 7 days (Gender difference)



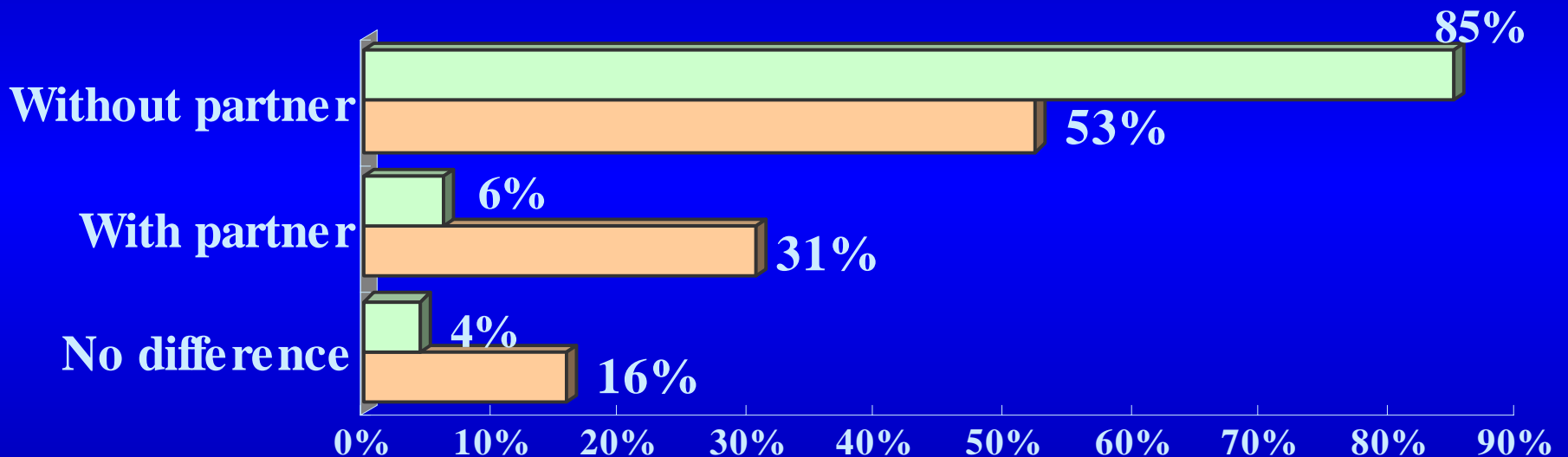
Effects of bad-quality sleep on appearance (Gender difference)



Effects of bad-quality sleep on appearance (Gender difference)



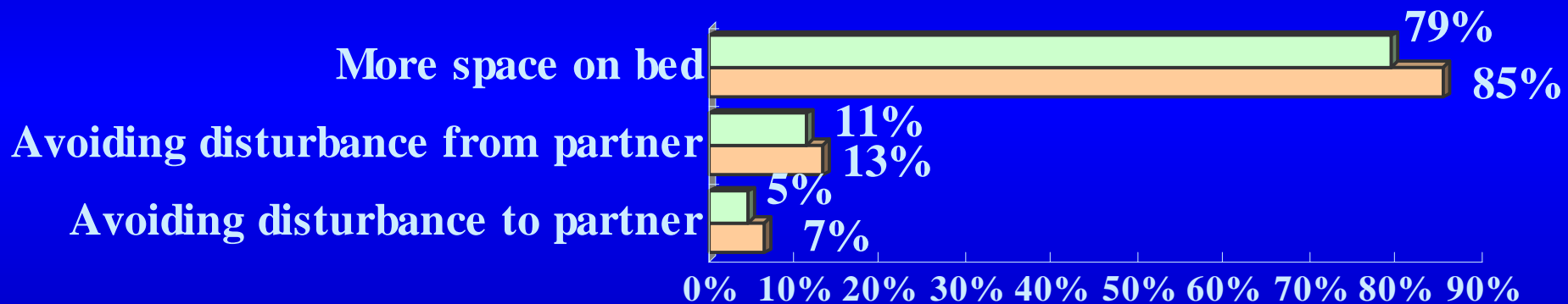
Respondents' preference of sleeping with/ without partner



■ Respondents sleeping
without partner (N=387)

■ Respondents sleeping
with partner (N=611)

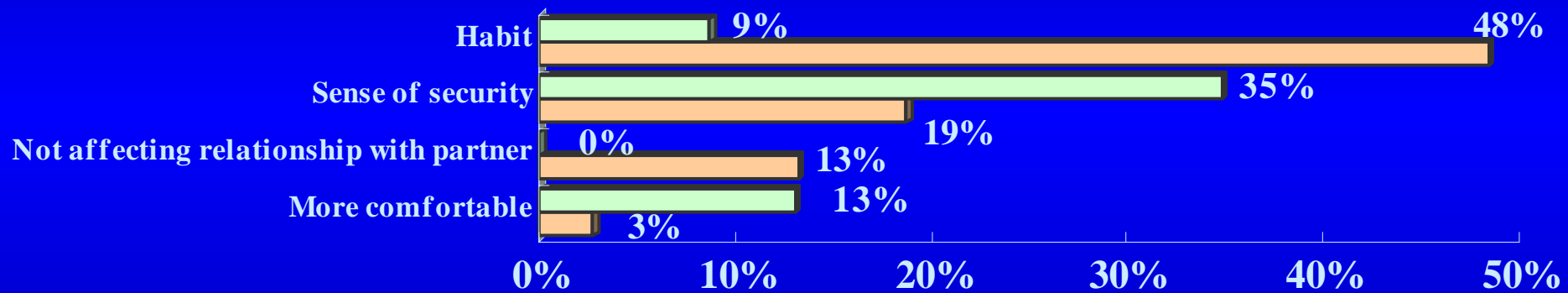
Reasons for preferring to sleep without partner (Percentage of responses)



■ Respondents sleeping without partner (N=325)

■ Respondents sleeping with partner (N=321)

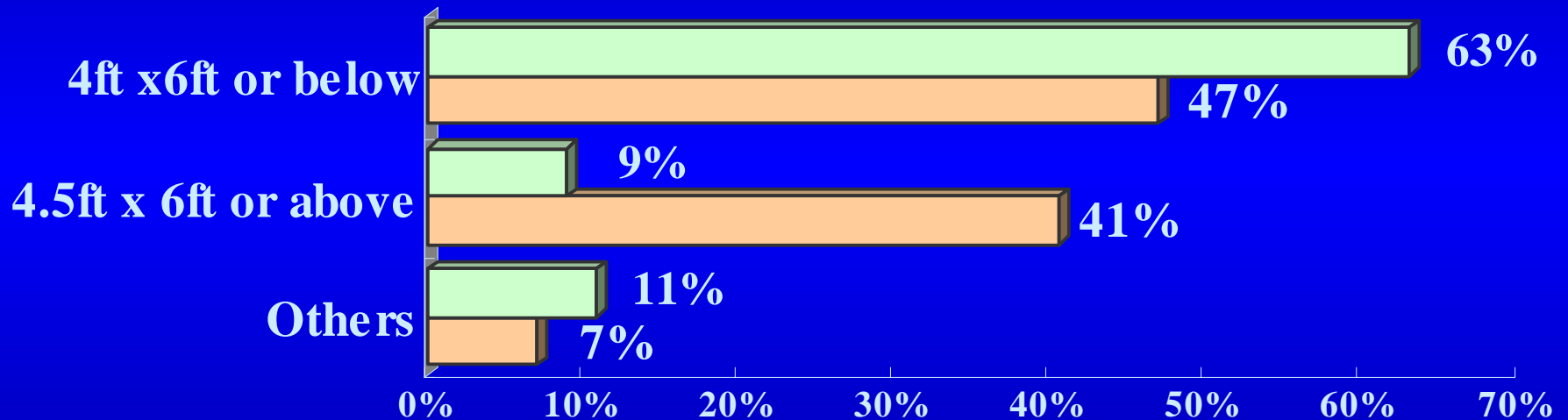
Reasons for preferring to sleep with partner (Percentage of responses)



■ Respondents sleeping
without partner (N=23)

■ Respondents sleeping with
partner (N=182)

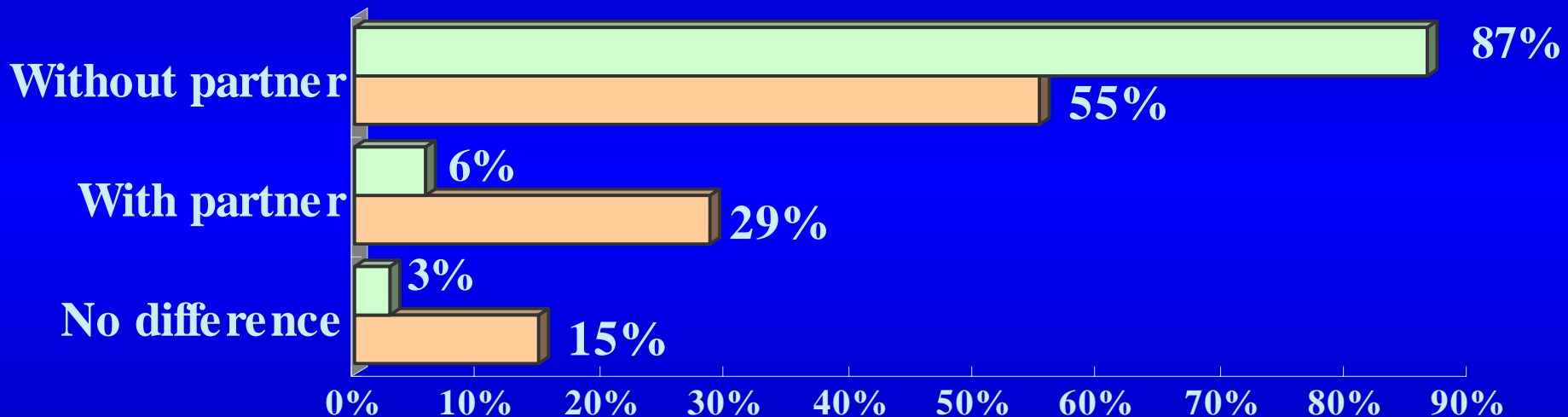
Size of mattress



■ Respondents sleeping without partner (N=388)

■ Respondents sleeping with partner (N=611)

Sleep preference for respondents currently using small beds (4'x6' or below)



■ Respondents using small beds and sleeping without partner (N=244)

■ Respondents using small beds and sleeping with partner (N=287)

Comments on research findings

By Dr. Ka-Fai Chung,

Assistant Professor

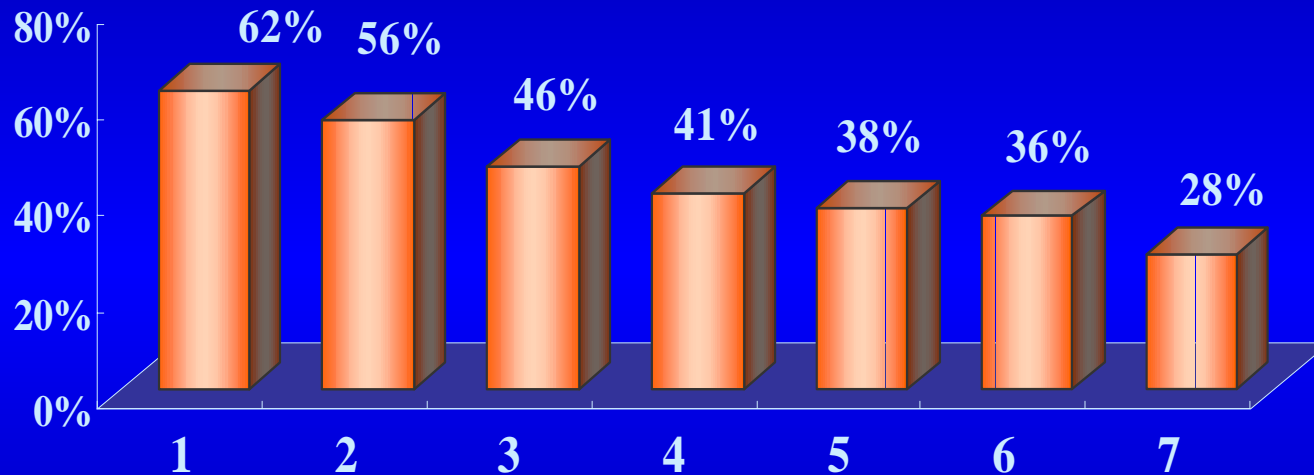
Department of Psychiatry, HKU

Amount of sleep is insufficient in HK's working population (1)

- 40% agreed that their amount of sleep is insufficient

Percentage of respondents

(Excluding those who answered "not applicable")



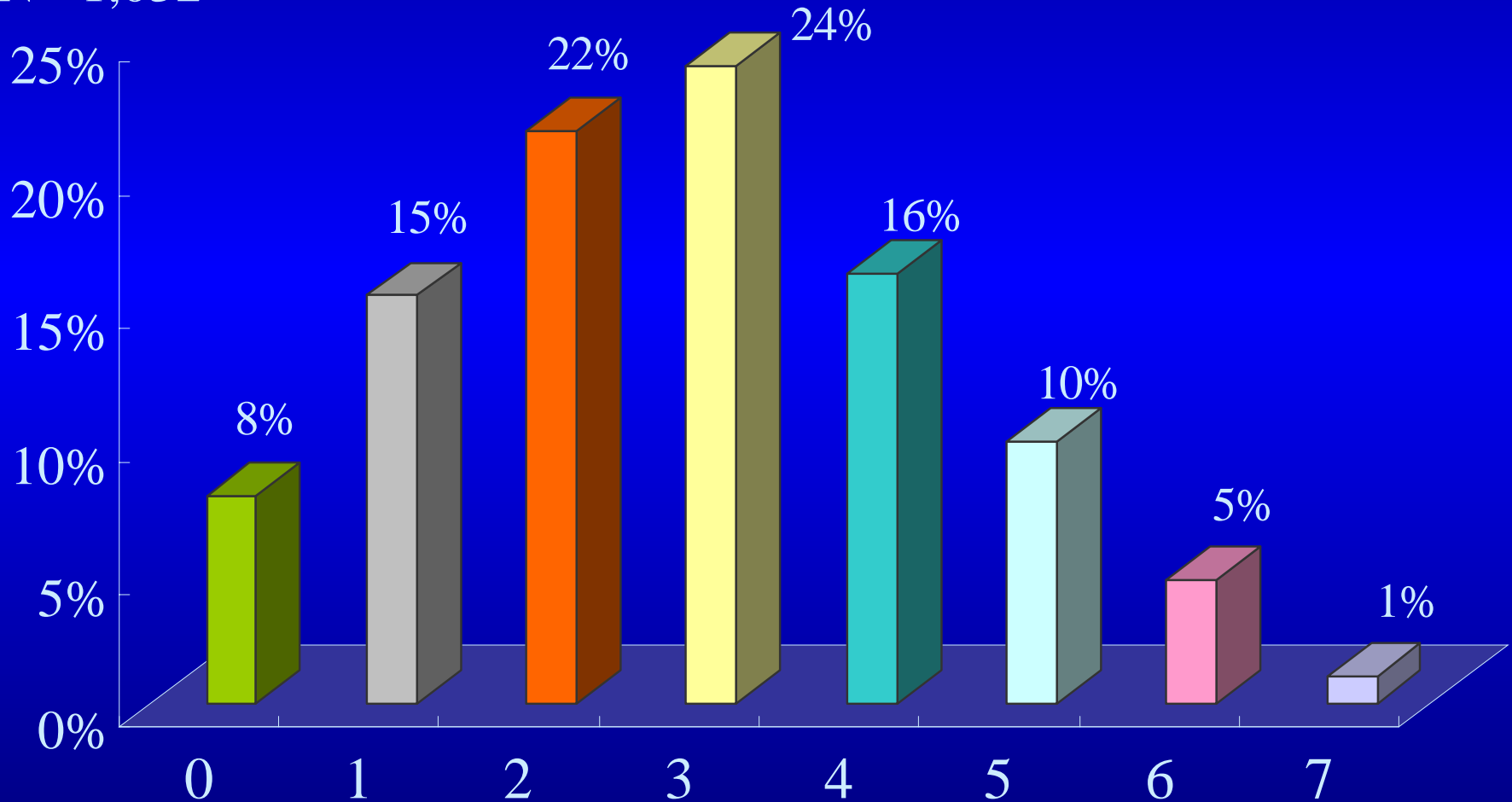
1. I often sleep extra hours on weekend mornings.
2. I often need an alarm clock or other people to wake me up at the appropriate time.
3. I sometimes feel drowsy while driving.
4. It's a struggle for me to get out of bed in the morning.
5. I often fall asleep in boring meetings or lectures.
6. I often fall asleep watching TV.
7. I often fall asleep while relaxing after lunch or dinner.

Amount of sleep is insufficient in HK's working population (2)

- **61% often needed to sleep longer during weekends. 56% often needed alarm clock or someone to wake them up in each morning and 41% had to struggle hard to wake up each morning.**
- **36% often dozed off while watching TV, 38% often dozed off at meetings. 28% often dozed off during rest after lunch or dinner.**
- **Of particular importance, 46% of those who drove agreed that they sometimes were very sleepy while driving.**
- **A high proportion of HK's working population (92%) had 1 or more signs indicative of insufficient sleep.**

Test on the signs of sleep deprivation (collapsed data)

N= 1,032



Effects of insufficient sleep

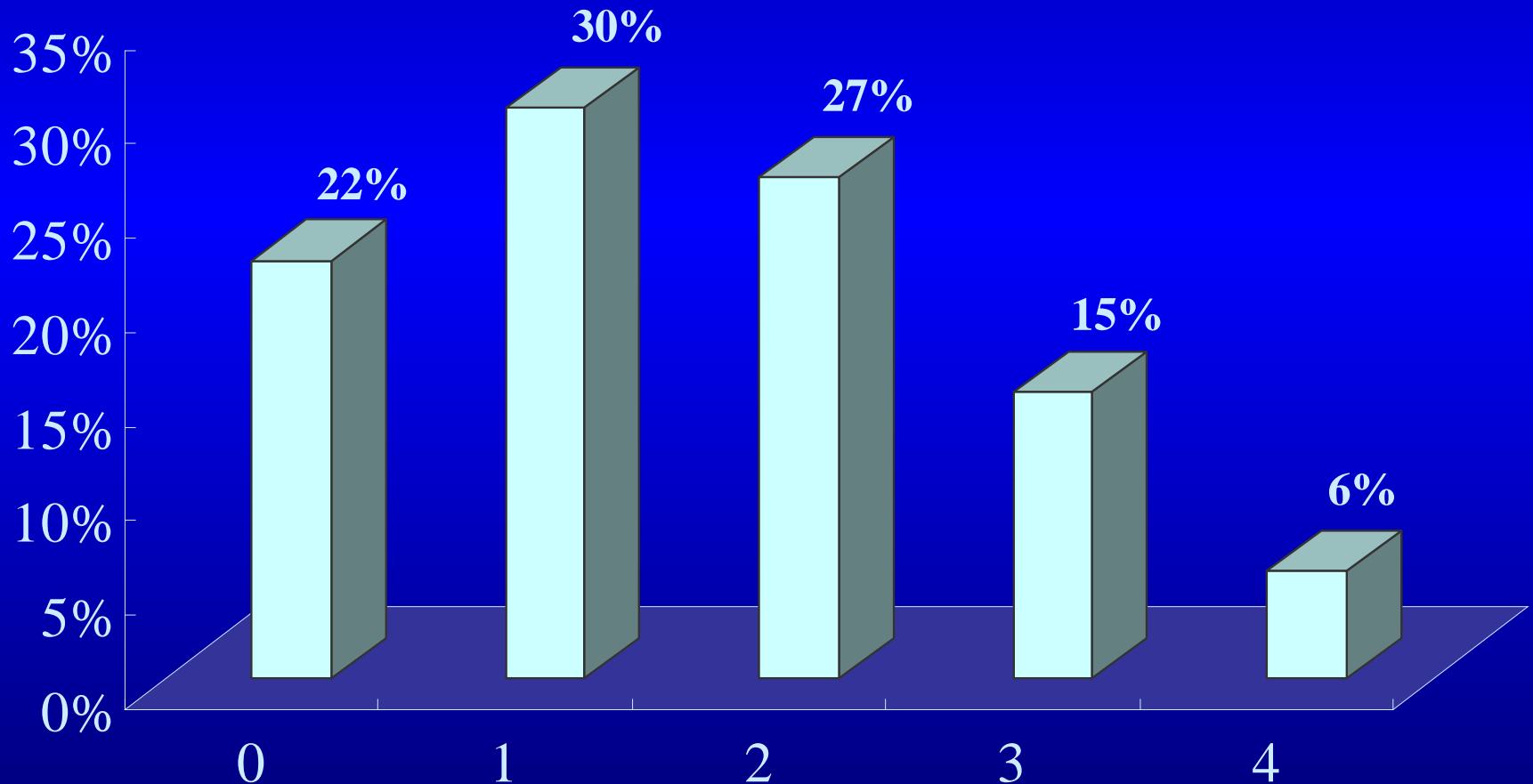
- Of course there is an individual variation in sleep requirement, some may require less and some more. This study showed that the majority of respondents were sleep-deprived, on average, respondents slept 1 hours 23 minutes less than their ideal length of sleeping hours.
- Although insufficient sleep does not cause harm to our health directly, the result of insufficient sleep, i.e. sleepiness can lead to:
 - neuropsychological dysfunctions, such as decreased creativity, logical thinking; emotional instability
 - motor vehicle and work-related accidents, impaired performance
 - poor quality of life
- Sleeping is essential to us, it is not a waste of time.

Insomnia is common in HK's working population

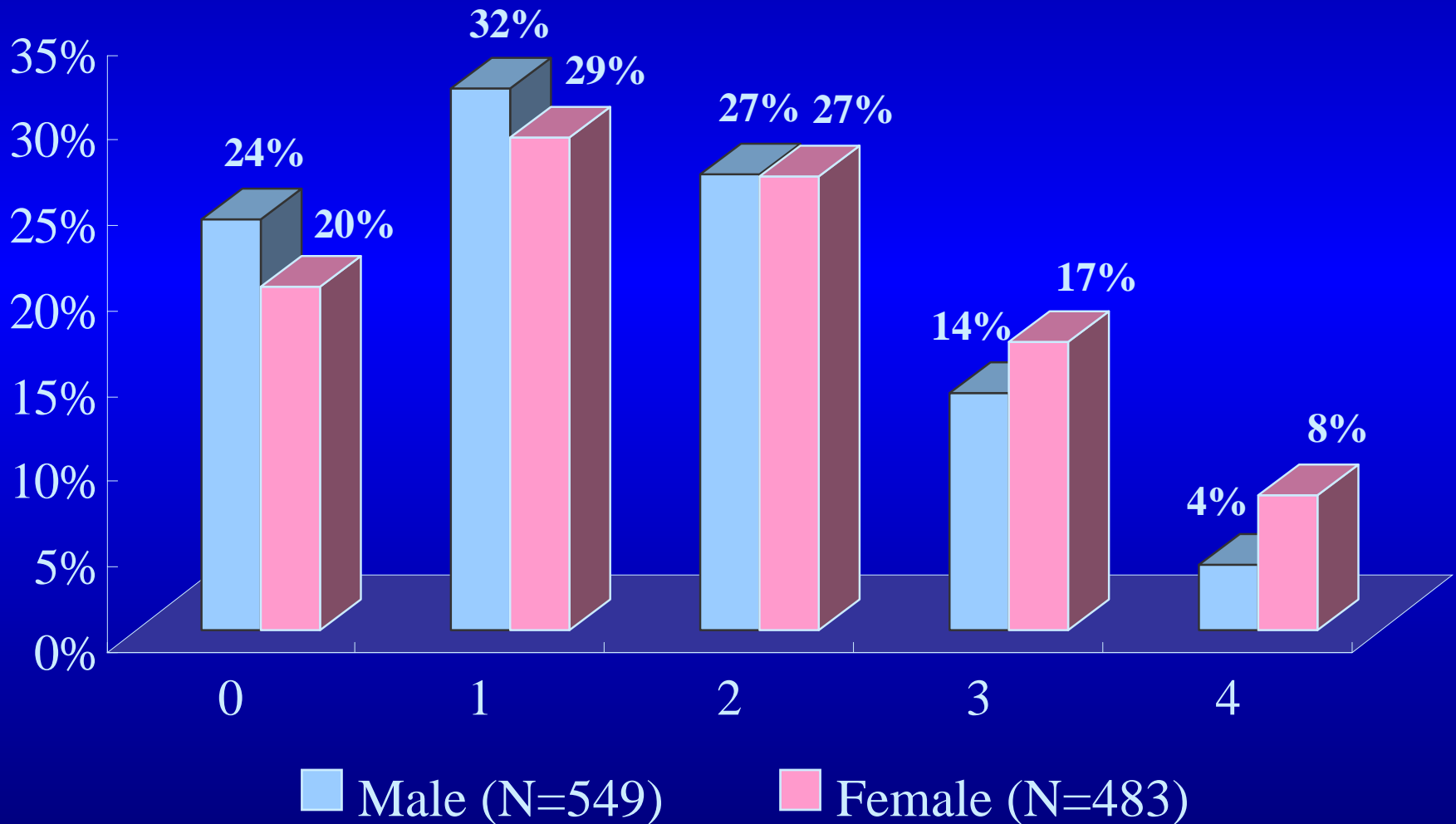
- **41% of the respondents often require 30 minutes or more to fall asleep.**
- **The majority of the respondents (60%) could not enjoy uninterrupted sleep, in which 26% of them often woke up 2 times or more during sleep.**
- **Only 53% of the respondents reported that they could sleep more than 85% of the time in bed.**
- **Half of the respondents had experienced bad-quality sleep for 3 or more consecutive days.**

Insomnia in HK's working population (Collapsed data)

N= 1,032



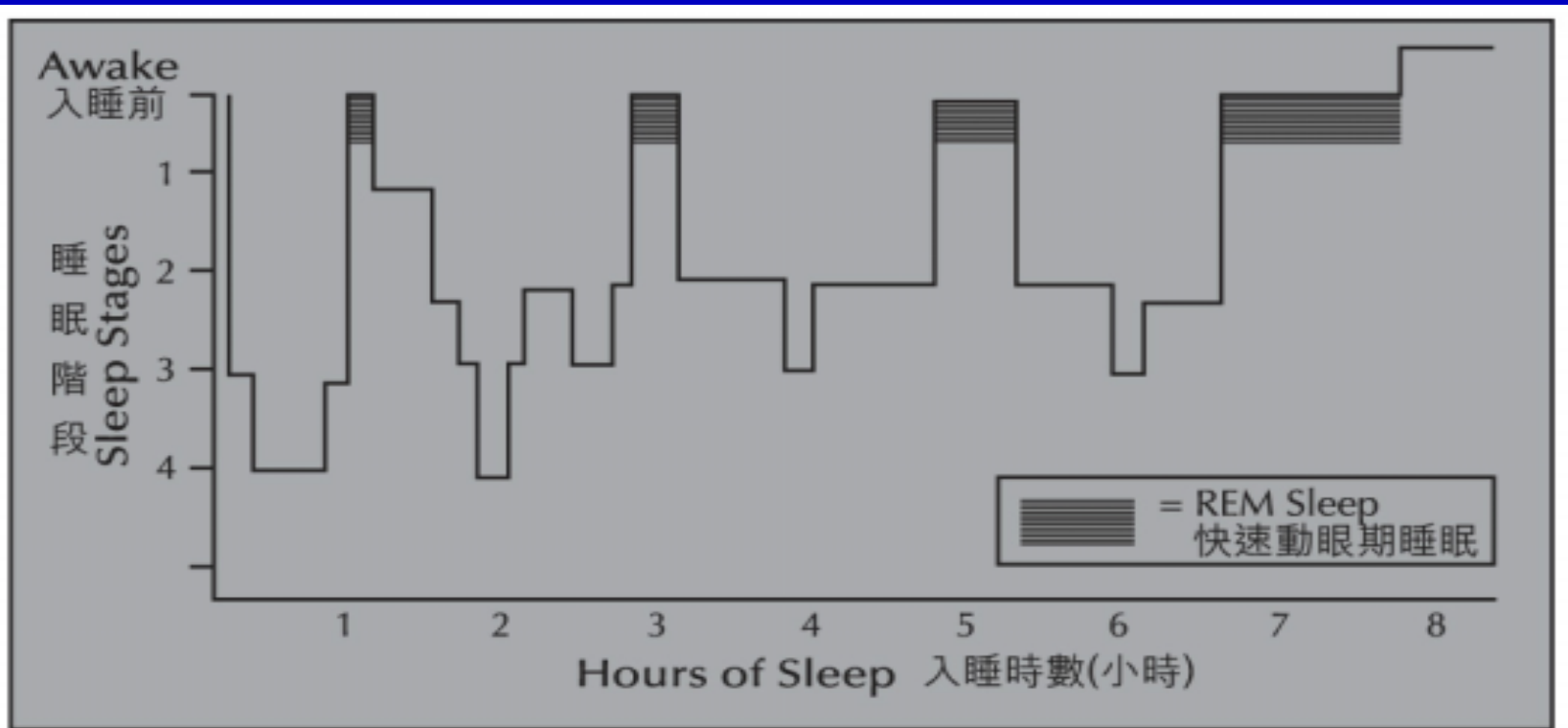
Insomnia in HK's working population (Male VS female, collapsed data)



What is a quality sleep?

- **An uninterrupted sleep**
- **Appropriate sleeping time and hours**
- **The sleep cycle**
- **Most importantly, reducing disturbances from inside and outside during sleep**

The sleep cycle



The architecture of a night's sleep (eight hours).

睡眠工程結構(以八小時睡眠為例)

Bed sizes and sleeping habits

- **About half of the respondents sleeping with partner (47%) were using small-size beds (4ft x 6ft or below); and more than half of them (55%) prefer sleeping alone.**
- **Although this survey showed that people's preference of sleeping alone and insomnia were not significantly related to bed sizes, apparently most of the respondents wanted more space in bed.**

Bad quality sleep and its remedies

- **More than a half of the respondents who suffered from bad quality sleep (63%) reported that their work performance was affected.**
- **Many respondents (67%) had never tried to improve their sleep quality.**

Conclusion

- **Sleep deprivation is a widespread phenomenon.**
- **Bad quality sleep and insomnia are also common.**
- **Respondents generally lacked initiative and awareness in improving their sleep quality:**
 - **slept 1 hours 23 minutes less than their ideal length of sleeping hours.**
 - **92% had signs indicative of insufficient sleep, but only 40% were aware that they were sleep deprived.**
 - **67% had never tried to improve their sleep quality, in which 43% of them believed it was unnecessary.**

What can we do to improve our sleep?

- **Similar to having a good diet habit, a healthy sleep habit is important and easy to obtain:**
 - **adequate and regular sleep**
 - **regular relaxation activities - exercise, music, etc**
 - **devoted the sleeping hours to “sleep”**
 - **reducing possible disturbances during sleep, e.g., less water intake before going to bed, drawing a curtain, using a larger bed, sleeping on a mattress that can minimize motion transfer across bed, etc.**

The End

**(Survey findings soon be available
at <http://hkupop.hku.hk>)**