Depression and Insomnia at Burapha University, Thailand 2019

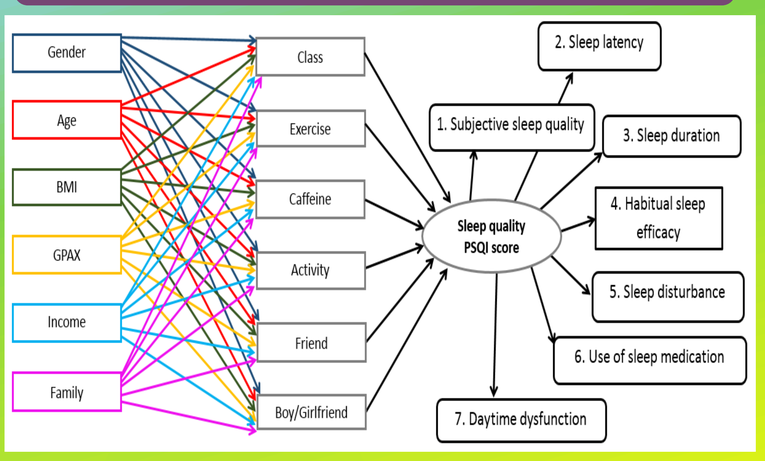
Auamnoy T[1*], Meepradit Y[1], Suriyong P[1], Kangwanrattanakul K[1]

[1] Burapha University, Chonburi, Thailand
*** Corresponding author: atitinun@gmail.com**

Abstract

Objectives: 1. To compare quality of sleep (insomnia) and depression between lecturers, student and employees at Burapha University. 2. To compare quality of sleep (insomnia) and depression between female and male at Burapha University. 3. To investigate relationship between depression and quality of sleep. 4. To explore drugs prescribe for quality of sleep (insomnia) and depress at Burapha University. Method: A cross-sectional survey study was conducted at Burapha University in Chonburi, Thailand in 2019. There were three groups of people in Burapha University-lecturer, student and employee. N=243, sample size was calculated by Jacob Cohen's table page 384, α =0.05, β=0.20, power=0.80, effect size=0.20, yielded n = 81 (in each group). Samples were randomly selected using quota sampling method. Instruments: Sleeping quality was measured by the validated Pittsburgh sleep quality index (PSQI). A self-rated questionnaire which assesses sleep quality and disturbances over a 2-weeks-time interval. This scale consisted of 7 constructs (19 observed variables). Depression was measured by The Hamilton Depression Rating Scale (HAM-D) Results: 243 (100%) questionnaires were completely collected. Cronbach's Alpha for PSQI and HAM-D were 0.74 and 0.78 respectively. 142 (58.44%) were female and 101 (41.66%) were male. The means of insomnia of lecturer, student and employee were 6.78>6.74>6.50. It was not significantly different (p=0.124, ANOVA). Lecturer, student and employee group score were >5, all three groups were in mild insomnia. The means of depression of student, lecturer and employee were 7.43>7.10>6.46 (p=0.174, ANOVA). Three groups were not significantly different in depress. Depression of all three groups were >7, they were in mild depress stage. The means of insomnia score of female and male were 6.47>6.14 (p=0.047* ANOVA). Men quality of sleep was better than women however both scores were >5, both gender were in mild insomnia stage. The means of depression of female and male were 7.71>6.12. (p=0.023* ANOVA). Women were significantly more depress than men. Pearson's Correlation confirmed a significant positive linear relationship between depression and quality of sleep (insomnia) (P=0.024*, r=+0.536, R^2=0.287). The more depress the more insomnia. Three major drugs used for insomnia were Lorazepam 0.5 mg, Lorazepam 1 mg, and Clonazepam 0.5 mg: 4.45%, 2.06% and 1.65% respectively. Three most prescribed drugs for depress were: Amitriptyline 10 mg, Fluoxetine 20 mg. and Clonazepam 0.5 mg. Conclusions: Quality of sleep and depress of lecturers, students and employees in Burpha University were not significantly different. However, Quality of sleep of men was better than women and women were more depress than man. Depress significantly positively correlated with insomnia. The more depress they were, the lower quality of sleep they had.

Conceptual framework



Objective

1. To compare quality of sleep (insomnia) and depression between lecturers, student and employees at Burapha University. 2. To compare quality of sleep (insomnia) and depression between female and male at Burapha University. 3. To investigate relationship between depression and quality of sleep. 4. To explore drugs prescribe for quality of sleep (insomnia) and depress at Burapha University.

Method

A cross-sectional survey study was conducted at Burapha University in Chonburi, Thailand in 2019. There were three groups of people in Burapha University-lecturer, student and employee. N=243, sample size was calculated by Jacob Cohen's table page 384, α =0.05, β=0.20, power=0.80, effect size=0.20, yielded n = 81 (in each group). Samples were randomly selected using quota sampling method. Instruments: Sleeping quality was measured by the validated Pittsburgh sleep quality index (PSQI). A self-rated questionnaire which assesses sleep quality and disturbances over a 2-weeks-time interval. This scale consisted of 7 constructs (19 observed variables). Depression was measured by The Hamilton Depression Rating Scale (HAM-D o calculated the entire data.

PSQI

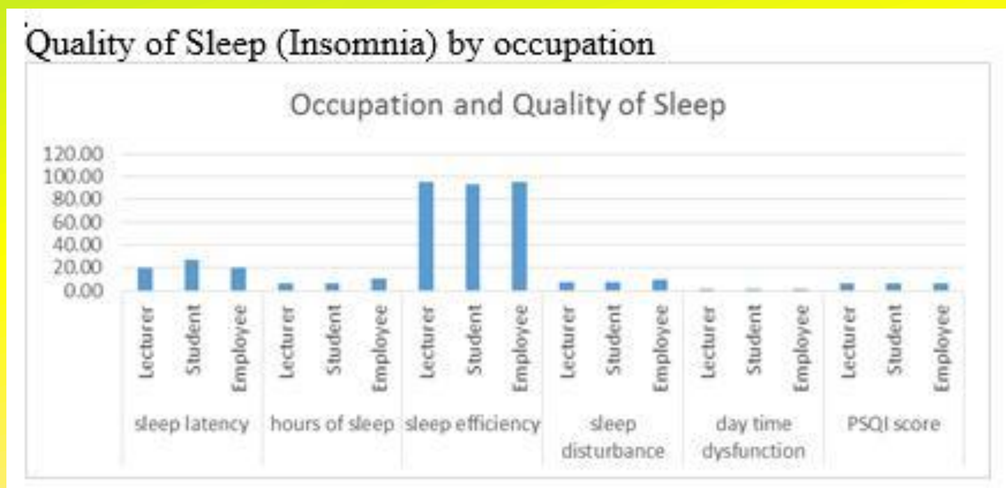
The Pittsburgh Sleep Quality Index was a self-report questionnaire that assesses a concept of sleep quality over a 1-month time interval. The measure consists of 19 individual items, creating 7 constructs namely; 1.) Subjective sleep quality 2.) Sleep latency 3.) Sleep duration 4.) Habitual sleep efficacy 5.) Sleep disturbances 6.) Use of sleeping medication and 7.) Daytime dysfunction, that produce one global gold standard score, and takes 5–10 minutes to complete. It was intended to be a standardized sleep questionnaire for clinicians and researchers in this planet.

Results

As of 243 respondents, 47 (58.02%) were female lecturers, 34 (41.98%) were male lecturers. 45 (55.56%) were female students, 36 (44.44%) were male students. 50 (61.73%) were female employee, 31 (38.27%) were male employees. Chi Square between gender and occupation was not significant at p=0.064. Gender and occupation were not associated.

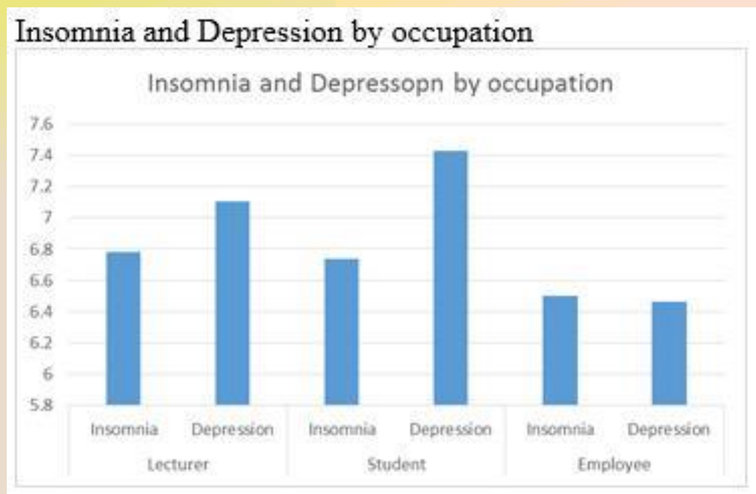
Objective 1: ANOVA of Quality of Sleep between lecturer, student and employee

Variables	Occupation	mean	SD.	P-value
Sleep latency (minutes)	Lecturer	19.40	4.98	0.042*
	Student	27.04	5.21	
	Employee	19.80	6.44	
Hour of sleep per night (Question 4)	Lecturer	6.56	0.84	0.036*
	Student	6.14	1.30	
	Employee	10.23	2.45	
Habitual sleep efficiency %	Lecturer	95.30	3.64	0.064
	Student	93.17	3.64	
	Employee	95.06	2.44	
Sleep disturbance	Lecturer	7.81	3.85	0.078
	Student	7.73	2.66	
	Employee	9.14	4.65	
Day time dysfunction	Lecturer	1.03	0.67	0.082
	Student	1.40	0.96	
	Employee	0.90	0.55	
Global PQSI Score	Lecturer	6.78	1.45	0.124
	Student	6.74	1.71	
	Employee	6.50	1.47	



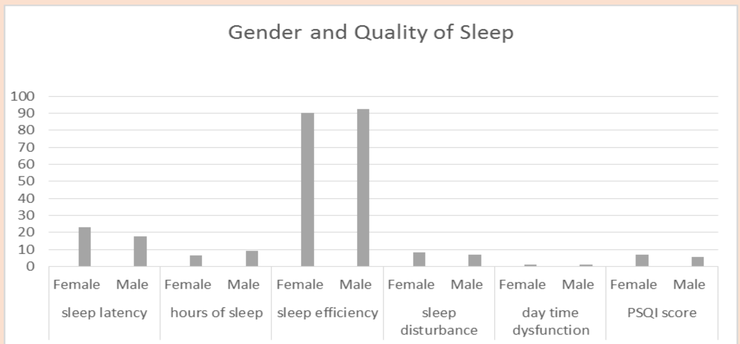
Objective 1: ANOVA of insomnia and depression between lecturer, student and employee

		mean	SD	p-value
Insomnia	Lecturer	6.78	1.45	0.124
	Student	6.74	1.71	
	Employee	6.50	1.47	
Depression	Lecturer	7.10	1.07	0.174
	Student	7.43	1.94	
	Employee	6.46	1.85	



Objective 2: ANOVA of Quality of Sleep between female and male

Variables	Gender	Mean	SD.	P-value
Sleep latency (minutes)	Female	24.24	3.66	0.028*
	Male	20.01	3.12	
Hour of sleep per night (Question 4)	Female	6.34	1.21	0.044*
	Male	9.17	2.26	
Habitual sleep efficiency %	Female	90.33	2.58	0.036*
	Male	92.47	3.94	
Sleep disturbance	Female	8.33	3.35	0.074
	Male	7.14	2.24	
Day time dysfunction	Female	1.27	2.81	0.083
	Male	1.06	1.82	
Quality of Sleep (Insomnia)	Female	6.47	3.80	0.047*
	Male	6.14	3.90	



Objective 3: To investigate relationship between depression and quality of sleep.

Table 22: Cross-tabulation between depression and quality of sleep.

		Depression		
		Normal	Moderate	Total
Quality of Sleep	Sleep well	71	32	103
	Insomnia	47	92	140
	Total	118	124	243

Table 23: Association between depression and quality of sleep.

	Value	df	p-value
Pearson Chi-Square	22.406[a]	4	0.014*
N	243		

a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is 1.64.

Pearson Chi Square confirmed a significant association between depression and quality of sleep (insomnia) P=0.014*

Triangulation with Pearson product moment correlations

Table 24: Pearson's Correlations

	Depression	Quality of sleep
Pearson Correlation	1	+0.536*
P-value		.024*
N		243

*. Correlation is significant at the 0.05 level (2-tailed).

Conclusions

Conclusions: Quality of sleep and depress of lecturers, students and employees in Burpha University were not significantly different. However, Quality of sleep of men was better than women and women were more depress than man. Depress significantly positively correlated with insomnia. The more depress they were, the lower quality of sleep they had.

References

1. James BO, Omoaregba JO, Igberase OO. **Prevalence and correlates of poor sleep quality among medical students at a Nigerian university**. Annals of Nigerian Medicine. 2011 Jan 1;5(1):1.
2. Sitasuwan T, Bussaratid S, Ruttanaumpawan P, Chotinaiwattarakul W. **Reliability and validity of the Thai version of the Pittsburgh Sleep Quality Index**. J Med Assoc Thai. 2014 Mar 1;97(Suppl 3):S57-67.
3. Cates ME, Clark A, Woolley TW, Saunders A. **Sleep quality among pharmacy students**. American journal of pharmaceutical education. 2015 Feb 17;79(1):09…..still more to come.