

**Appendix 1. Comparing the frequency of insomnia and sleep disorders based on Pittsburgh sleep quality index among the three pregnancy trimesters**

		<b>1<sup>st</sup> trimester (N=41)</b>	<b>2<sup>nd</sup> trimester (N=135)</b>	<b>3<sup>rd</sup> trimester (N=163)</b>	<b>P-value</b>
<b>Insomnia severity index</b>	<b>Without insomnia</b>	2(10.0%)	11(55.0%)	7(35.0%)	.343*
	<b>With insomnia</b>	38(12.2%)	120(38.6%)	153(49.2%)	
<b>Subjective sleep quality</b>	<b>Without sleep disorder</b>	4(11.8%)	14(41.2%)	16(47.1%)	0.336*
	<b>Moderate sleep disorder</b>	22(11.2%)	87(44.2%)	88(44.7%)	
	<b>Severe sleep disorder</b>	13(16.5%)	23(29.1%)	43(54.4%)	
	<b>Very severe sleep disorder</b>	2(7.7%)	9(34.6%)	15(57.7%)	
<b>Sleep latency</b>	<b>Moderate sleep disorder</b>	16(12.9%)	55(44.4%)	53(42.7%)	0.267*
	<b>Severe sleep disorder</b>	20(16.5%)	46(38.0%)	55(45.5%)	
	<b>Very severe sleep disorder</b>	5(6.9%)	28(38.9%)	39(54.2%)	
<b>Sleep duration</b>	<b>Without sleep disorder</b>	18(11.8%)	68(44.7%)	66(43.4%)	0.212*
	<b>Moderate sleep disorder</b>	8(16.3%)	17(34.7%)	24(49.0%)	
	<b>Severe sleep disorder</b>	15(13.9%)	36(33.3%)	57(52.8%)	
	<b>Very severe sleep disorder</b>	0(0.0%)	13(48.1%)	14(51.9%)	
<b>abitual sleep efficiency</b>	<b>Without sleep disorder</b>	7(10.4%)	28(41.8%)	32(47.8%)	0.646 <sup>†</sup>
	<b>Moderate sleep disorder</b>	0(0.0%)	0(0.0%)	3(100.0%)	
	<b>Severe sleep disorder</b>	0(0.0%)	1(100.0%)	0(0.0%)	
	<b>Very severe sleep disorder</b>	34(12.8%)	106(39.8%)	126(47.4%)	
<b>Sleep disturbances</b>	<b>Moderate sleep disorder</b>	0(0.0%)	1(33.3%)	2(66.7%)	0.290 <sup>†</sup>
	<b>Severe sleep disorder</b>	8(11.4%)	39(55.7%)	23(32.9%)	
	<b>Very severe sleep disorder</b>	15(15.2%)	40(40.4%)	44(44.4%)	
<b>Use of sleeping medications</b>	<b>Without sleep disorder</b>	37(12.2%)	123(40.6%)	143(47.2%)	0.598 <sup>†</sup>
	<b>Moderate sleep disorder</b>	2(13.3%)	4(26.7%)	9(60.0%)	
	<b>Severe sleep disorder</b>	0(0.0%)	0(0.0%)	3(100.0%)	
	<b>Very severe sleep disorder</b>	0(0.0%)	3(60.0%)	2(40.0%)	
<b>Daytime dysfunction</b>	<b>Moderate sleep disorder</b>	16(12.6%)	49(38.6%)	62(48.8%)	0.569*
	<b>Severe sleep disorder</b>	10(9.0%)	49(44.1%)	52(46.8%)	
	<b>Very severe sleep disorder</b>	8(15.1%)	17(32.1%)	28(52.8%)	
<b>Sleep quality</b>	<b>Very good</b>	4(9.8%)	14(10.5%)	16(9.9%)	0.336*

	<b>Rather good</b>	22(53.7%)	87(65.4%)	88(54.3%)	
	<b>Rather poor</b>	13(31.7%)	23(17.3%)	43(26.5%)	
	<b>Poor</b>	2(4.9%)	9(6.8%)	15(9.3%)	

\*The results of chi square test, †The results Fisher's exact test

**appendix 2. Comparing the frequency of insomnia and sleep disorders based on Pittsburgh sleep quality index, categorized between women with and without pregnancy problems**

		<b>Complicated pregnancy (N=103)</b>	<b>Uncomplicated pregnancy (N=237)</b>	<b>P-value</b>
<b>Insomnia severity index</b>	<b>Without insomnia</b>	9(8.8%)	10(4.3%)	.097*
	<b>With insomnia</b>	93(91.2%)	224(95.7%)	
<b>Subjective sleep quality</b>	<b>Without sleep disorder</b>	7(6.8%)	27(11.4%)	.612*
	<b>Moderate sleep disorder</b>	61(59.2%)	137(57.8%)	
	<b>Severe sleep disorder</b>	27(26.2%)	55(23.2%)	
	<b>Very severe sleep disorder</b>	8(7.8%)	18(7.6%)	
<b>Sleep latency</b>	<b>Moderate sleep disorder</b>	33(33.0%)	92(41.6%)	.333*
	<b>Severe sleep disorder</b>	42(42.0%)	79(35.7%)	
	<b>Very severe sleep disorder</b>	25(25.0%)	50(22.6%)	
<b>Sleep duration</b>	<b>Without sleep disorder</b>	43(41.7%)	110(46.2%)	.743*
	<b>Moderate sleep disorder</b>	14(13.6%)	37(15.5%)	
	<b>Severe sleep disorder</b>	37(35.9%)	73(30.7%)	
	<b>Very severe sleep disorder</b>	9(8.7%)	18(7.6%)	
<b>abitual sleep efficiency</b>	<b>Without sleep disorder</b>	21(20.2%)	49(20.6%)	0.384 <sup>†</sup>
	<b>Moderate sleep disorder</b>	2(1.9%)	2(0.8%)	
	<b>Severe sleep disorder</b>	1(1.0%)	0(0.0%)	
	<b>Very severe sleep disorder</b>	80(76.9%)	187(78.6%)	
<b>Sleep disturbances</b>	<b>Moderate sleep disorder</b>	0(0.0%)	3(2.5%)	.647 <sup>†</sup>
	<b>Severe sleep disorder</b>	21(39.6%)	50(41.7%)	
	<b>Very severe sleep disorder</b>	32(60.4%)	67(55.8%)	
<b>Use of sleeping medications</b>	<b>Without sleep disorder</b>	92(92.9%)	213(92.2%)	.939 <sup>†</sup>
	<b>Moderate sleep disorder</b>	5(5.1%)	11(4.8%)	
	<b>Severe sleep disorder</b>	1(1.0%)	2(0.9%)	
	<b>Very severe sleep disorder</b>	1(1.0%)	5(2.2%)	
<b>Daytime dysfunction</b>	<b>Moderate sleep disorder</b>	44(52.4%)	84(39.8%)	.051*
	<b>Severe sleep disorder</b>	31(36.9%)	82(38.9%)	
	<b>Very severe sleep disorder</b>	9(10.7%)	45(21.3%)	

<b>Sleep Quality</b>	<b>Very good</b>	7(6.8%)	27(11.4%)	.612 <sup>†</sup>
	<b>Rather good</b>	61(59.2%)	137(57.8%)	
	<b>Rather poor</b>	27(26.2%)	55(23.2%)	
	<b>Poor</b>	8(7.8%)	18(7.6%)	

\*The results of chi square test, <sup>†</sup>The results Fisher's exact test