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A study to assess the sleep habits and the sleep problems among labour workers in urban areas of Silvassa, Dadra Nagar Haveli, with a view to develop and provide an informational booklet on sleep hygiene

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Abstract

Sleep is one of the basic human need of life. Almost 40-50% of adults reports difficulty in sleep. The need of complete sleep cycle are not being met fully. According to National Sleep Foundation's 7 to 9 hours of sleep has been recommended. "Sleep hygiene" is used to as a measures to maintain a regular sleep-and-wake schedule. The aim of the study was to assess the sleep habits and to assess the sleep problems among labour workers. After the assessment the informational booklet of sleep hygiene will be provided. Non-experimental descriptive research design was used. A study was conducted in urban area of Silvassa, Dadra Nagar Haveli, with the sample size of 200 were selected by using a non-probability convenient sampling technique. The analysis revealed significant association with gender, health condition, regular medication with selected baseline data with the levels of sleep habits and sleep problems at 0.05 level of significance. The findings of sleep habit has shown that the 59.5% of them had fair sleep habits, 39% had good sleep habits and 1.5% of them had poor sleep habits. The findings of sleep problems has shown that 53% had average sleep problems, 46.5% had mild sleep problems and 1.5% had excessive sleep problems. The result highlighted the levels of sleep habits and the levels of sleep problems which has been affected among labour workers. An informational booklet has been provided to get better knowledge related to the good sleep hygiene measures.

Keywords: Sleep habits, sleep problems, sleep hygiene

Introduction

Today, people are highly ignoring the symptoms related to of sleep problem and sleep deprivation. Almost 40-50% of adults report difficulty in sleep. There are factors like: age, gender, lifestyle, environment, daily activity and also the physical, physiological and psychosocial characteristics. Daytime sleepiness in adults has increase chances for experiencing distress, obesity, more likely to get coronary heart disease, diabetes, stroke, high blood pressure. Sleep is part of sleep-wake cycle.

Sleep has been considerable benefiting. Good sleep help to feel better and helps brains to find solutions to everyday problems, it help in develop of problem solving skills, good sleep indicates good health. Poor sleep patterns are strongly linked with a sleeping disorder. Sleeping pattern less than 6-7 hours per night has increased risk rate in making weak immune system, develop difficulty in thinking ability, increases chance of weight gain there is also risk for development of certain cancer, diabetes and accidents.

The term "sleep hygiene" is used as a measure to maintaining a regular sleep-and-wake schedule. Some experts also recommend sleep retraining: staying awake longer in order to ensure sleep is more restful. Obtaining healthy sleep is important for both physical and mental health, improving productivity and overall quality of life.

Objectives of the study

1. To assess the sleeping habits among labour workers
2. To assess the sleeping problems among labour workers
3. To identify the relationship between baselines data of labour workers with sleep habits.
4. To identify the relationship between baselines data of labour workers with sleep problems.

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5. To identify the correlation between the levels of sleep habits with levels of sleep problems.
6. To prepare an informational booklet on sleep hygiene.

Methodology

Research approach: Quantitative (descriptive study) research approach.

Research design: Descriptive research design

Research settings: Labour workers in urban areas of Dadra Nagar Haveli, Silvassa.

Population: In the present study includes labourer workers in urban areas in Dadra and Nagar Haveli.

Sample & Sample size: The study include 200 samples who are working has a labourer workers in urban areas at, Dadra and Nagar Haveli.

Sampling Techniques: Samples was obtained through non-probability convenient sampling technique.

Sampling Criteria: The study included subject who are Male or female within age of 20 to 59 years who are able to communicate in Hindi or English. It excluded subject who are mentally ill and Workers who are doing night duty.

Ethical Considerations: Ethical clearance was obtained from the institutional ethical committee of Shri Vinoba Bhave Civil Hospital, Silvassa and informed consent was obtained from study participants.

Description of the tool

Section I: Baseline Data.

Section II: Scale to Measure sleep Habits.

Section III: Scale to Measure Sleep Problems.

Table 1: Frequency & Percentage distribution of labour workers to their baseline data, N= 200

Sr. No	Baseline data	F	%
1.	Gender		
	Male	146	73.0
	Female	54	27.0
2.	Age in years		
	20-29	60	30.0
	30-39	67	33.5
	40-49	48	24.0
	50-59	25	12.5
3.	Marital status		
	Married	150	75.0
	Unmarried	50	25.0
	Widow/ widower	0	0
	Separated/divorce	0	0
4.	Education		
	Illiterate	72	36.0
	Primary school	96	48.0
	Secondary education	26	13.0
	Higher secondary	6	3.0
	Above Higher secondary	0	0
5.	Monthly Income		
	5000-10000	78	39.0
	10001-15000	75	37.5
	15001-20000	41	20.5
	20001-25000	6	3.0
	≥ 25001	0	0
6.	Type of Accommodation		
	Staying with tenants	39	19.5
	Nuclear Family	85	42.5
	Joint Family	52	26.0
	Extended Family	24	12.0
7.	Which position do you prefer for your sleep?		
	Prone Position	33	16.5
	Lateral Position	110	55.0
	Supine Position	56	28.0
	Sim's Position	1	0.5
8.	What time would you go to bed?		
	Before 10:00 pm	72	36.0
	10:00 pm to 11:59 pm	98	49.0
	12:00 am to 1:59 am	29	14.5
	After 2:00 am	1	0.5
9.	What time would you wake up?		
	Before 4:00 am	2	1.0
	4:00 am to 5:59 am	57	28.5

	6:00 am to 7:59 am	120	60.0
	After 8:00 am	21	10.5
10.	How many hours sleep do you achieve each night?		
	≤ 4 hours	0	0
	5-6 hours	55	27.5
	7-8 hours	114	57.0
	≥ 9 hours	31	15.5
11.	Do you think whether your sleep pattern is regular?		
	Yes	126	63.0
	No	74	37.0
12.	Do you take a nap / naps during day times?		
	Yes	83	41.5
	No	117	58.5
13.	Do you have any health condition that disturb your sleep?		
	Yes	59	29.5
	No	141	70.5
14.	Are you taking any medication regularly?		
	Yes	57	28.5
	No	143	71.5
15.	Does anyone has any sleep disorder in the family?		
	Yes	10	5.0
	No	190	95.0
16.	Do you share your bed with someone?		
	Yes	123	61.5
	No	77	38.5

The above table indicates that majority of subjects 146 (73%) were male and 54 (27%) were of female. Most of the subjects 67(33.5%) were aged between 30-39 years. The majority of the subjects 150 (75%) were married. Most of the subjects 96 (48%) has received primary education. Maximum subjects 78 (39%) were having monthly income of 5000-10000. Most of the subject 85 (42.5) were staying in nuclear family. Most the subject 110 (55%) use to sleep in lateral position. Majority of subject 98 (49%) goes to bed at the time between 10:01 pm to 11:59 pm. Maximum subject 120 (60%) wake up between 6:00am to 7:59 am. Majority of the subject 114 (57%) does achieve 7-8 hours of sleep. Maximum subject 126 (63%) use to have a normal sleeping pattern. Most of the subject 117 (58.5%) don't take nap/ naps at day times. Majority of subject 141(70.5) doesn't have any health condition that disturbs sleep. Maximum subject 143 (71.5%) doesn't take any medication. Majority of subject 190 (95%) doesn't had any sleep disorder in the family. Maximum subject 123 (61.5%) do share their bed with others

Table 2: Distribution of subjects based on sleep habits, N=200

Sr. No.	Level of sleep habits	(F)	(%)
1.	Good	78	39.0
2.	Fair	119	59.5
3.	Poor Sleep	3	1.5
	Total	200	100

The above table indicates that 59.5% of them had fair sleep habits, 39% had good sleep habits and 1.5% of them had poor sleep habits.

Table 3: Distribution of subjects based on sleep problems, N=200

Sr. No.	level of sleep problems	(F)	%
1.	Mild	93	46.5
2.	Average	104	52.0
3.	Excessive	3	1.5
	Total	200	100

The above table indicates that 53% had average sleep problems, 46.5% had mild sleep problems and 1.5% had excessive sleep problems.

Table 4: Association between the levels of sleep habits with selected baseline data n=200

Sr. No	Baseline Data	Good Sleep Habits		Fair Sleep Habits		Poor Sleep Habits		χ ² (DF)	P-Value
		F	%	F	%	F	%		
1.	Gender								
	Male	49	24.5	94	47	3	1.5	7.378	0.025*
	Female	29	14.5	25	12.5	0	0	(2)	S
2.	Age in years								
	20-29	26	13	34	1.7	0	0	4.923 (6)	0.554 NS
	30-39	27	13.5	39	19.5	1	0.5		
	40-49	15	7.5	31	15.5	2	1		
	50-59	10	5	15	7.5	0	0		
3.	Marital status								
	Married	57	28.5	90	45	3	1.5	1.179 (2)	0.555 NS
	Unmarried	21	10.5	29	14.5	0	0		
	Widow/ widower	0	0	0	0	0	0		
	Separated/divorce	0	0	0	0	0	0		
4.	Education								

	Illiterate	35	17.5	36	18	1	0.5	5.630 (6)	0.466 NS	
	Primary school	33	16.5	62	31	1	0.5			
	Secondary education	8	4	17	8.5	1	0.5			
	Higher secondary	2	1	4	2	0	0			
	Above Higher secondary	0	0	0	0	0	0			
5.	Monthly Income									
	5000-10000	37	18.5	39	19.5	2	1	7.359 (6)	0.289 NS	
	10001-15000	28	14	47	23.5	0	0			
	15001-20000	11	5.5	29	14.5	1	0.5			
	20001-25000	2	1	4	2	0	0			
	>25001	0	0	0	0	0	0			
6.	Type of Accommodation									
	Staying with tenants	14	7	25	12.5	0	0	5.235 (6)	0.514 NS	
	Nuclear Family	33	16.5	49	24.5	3	1.5			
	Joint Family	23	11.5	29	14.5	0	0			
	Extended Family	8	4	16	14.58	0	0			
8.	Which position do you prefer for your sleep?									
	Prone Position	13	6.5	19	9.5	1	0.5	3.577 (6)	0.734 NS	
	Lateral Position	40	20	68	34	2	1			
	Supine Position	24	12	32	16	0	0			
	Sim's Position	1	0.5	0	0	0	0			
9.	What time would you go to bed?									
	Before 10:00 pm	30	15	40	20	2	1	3.546 (6)	0.738 NS	
	10:00 pm - 11:59pm	36	18	61	30.5	1	0.5			
	12:00 am to 1:59 am	11	5.5	18	9	0	0			
	After 2:00 am	1	0.5	0	0	0	0			
10.	What time would you wake up?									
	Before 4:00 am	0	0	2	1	0	0	5.760 (6)	0.451 NS	
	4:00 am to 5:59 am	20	10	35	17.5	2	1			
	6:00 am to 7:59 am	52	26	67	33.5	1	0.5			
	After 8:00 am	6	3	15	7.5	0	0			
11.	How many hours sleep do you achieve each night?									
	≤4 hours	0	0	0	0	0	0	4.857 (4)	0.302 NS	
	5-6 hours	23	11.5	30	15	2	1			
	7-8 hours	45	22.5	69	34.5	0	0			
	≥9 hours	10	5	20	10	1	0.5			
12.	Do you think whether your sleep pattern is regular?									
	Yes	51	25.5	73	36.5	2	1	0.347 (2)	0.841 NS	
	No	27	13.5	46	23	1	0.5			
13.	Do you take a nap / naps during day times?									
	Yes	31	15.5	50	25	2	1	0.895 (2)	0.639 NS	
	No	47	23.5	69	34.5	1	0.5			
14.	Do you have any health condition that disturb your sleep?									
	Yes	25	12.5	31	15.5	3	1.5	8.094 (2)	0.017** S	
	No	53	26.5	88	44	0	0			
15.	Are you taking any medication regularly?									
	Yes	23	11.5	31	15.5	3	1.5	7.914 (2)	0.019** S	
	No	55	27.5	88	44	0	0			
16.	Does anyone has any sleep disorder in the family?									
	Yes	2	1	8	4	0	0	1.876 (2)	0.391 NS	
	No	76	38	111	55.5	3	1.5			
	Do you share your bed with someone?									
	Yes	51	25.5	69	34.5	3	1.5	2.997 (2)	0.223 NS	
	No	27	13.5	50	25	0	0			

The above table indicates there is association between the levels of sleep habits with gender, health condition that disturb sleep and regularly medication at $p > 0.05$. Hence

research hypothesis is accepted at 0.05 levels of significance.

Table 5: Association between the level of sleep problems and selected baseline data n=200

Sr. No	Baseline Data	Mild Sleep Problems		Average Sleep Problems		Excessive Sleep Problems		χ^2 (DF)	P-Value
		F	%	F	%	F	%		
1.	Gender								
	Male	60	30	83	41.5	3	1.5	6.95	0.031*
	Female	33	16.5	21	10.5	0	0	(2)	S
2.	Age in years								
	20-29	24	12	36	18	0	0	7.35 (6)	0.290 NS
	30-39	31	10.5	35	17.5	1	0.5		
	40-49	27	13.5	19	9.5	2	1		
	50-59	11	10.5	14	7	0	0		
3.	Marital status								
	Married	73	36.5	74	37	3	1.5	2.42 (2)	0.297 NS
	Unmarried	20	10	30	15	0	0		
	Widow/ widower	0	0	0	0	0	0		
	Separated/divorce	0	0	0	0	0	0		
4.	Education								
	Illiterate	31	15.5	40	20	1	0.5	2.45 (6)	0.873 NS
	Primary school	48	24	47	23.5	1	0.5		
	Secondary education	12	6	13	6.5	1	0.5		
	Higher secondary	2	1	4	2	0	0		
	Above Higher secondary	0	0	0	0	0	0		
5.	Monthly Income								
	5000-10000	36	18	40	20	2	1	3.82 (6)	0.700 NS
	10001-15000	33	16.5	42	21	0	0		
	15001-20000	22	11	18	9	1	0.5		
	20001-25000	2	1	4	2	0	0		
	≥25001	0	0	0	0	0	0		
6.	Type of Accommodation								
	Staying with tenants	15	7.5	24	12	0	0	6.37 (6)	0.383 NS
	Nuclear Family	38	19	44	22	3	1.5		
	Joint Family	28	14	24	12	0	0		
	Extended Family	12	6	12	6	0	0		
7.	Which position do you prefer for your sleep?								
	Prone Position	16	8	16	8	1	0.5	2.79 (6)	0.834 NS
	Lateral Position	49	24.5	59	29.5	2	1		
	Supine Position	28	14	28	14	0	0		
	Sim's Position	0	0	1	0.5	0	0		
8.	What time would you go to bed?								
	Before 10:00 pm	31	15.5	39	19.5	2	1	7.80 (6)	0.253 NS
	10:00 pm to 11:59 pm	53	26.5	44	22	1	0.5		
	12:00 am to 1:59 am	9	4.5	20	10	0	0		
	After 2:00 am	0	0	1	0.5	0	0		
9.	What time would you wake up?								
	Before 4:00 am	0	0	2	1	0	0	5.01 (6)	0.542 NS
	4:00 am to 5:59 am	24	12	31	15.5	2	1		
	6:00 am to 7:59 am	60	30	59	29.5	1	0.5		
	After 8:00 am	9	4.5	12	6	0	0		
10.	How many hours sleep do you achieve each night?								
	<4 hours	0	0	0	0	0	0	5.53 (4)	0.236 NS
	5-6 hours	22	11	31	15.5	2	1		
	7-8 hours	58	29	56	28	0	0		
	≥9 hours	13	6.5	17	8.5	1	0.5		
11.	Do you think whether your sleep pattern is regular?								
	Yes	61	30.5	63	31.5	2	1	0.54 (2)	0.761 NS
	No	32	16	41	20.5	1	0.5		
12.	Do you take a nap / naps during day times?								
	Yes	39	19.5	42	21	2	1	0.84 (2)	0.656 NS
	No	54	27	62	31	1	0.5		
13.	Do you have any health condition that disturb your sleep?								
	Yes	32	15.5	24	12	3	1.5	10.3 (2)	0.006*** S
	No	61	30.5	80	40	0	0		
14.	Are you taking any medication regularly?								
	Yes	32	15.5	24	12	3	1.5	8.26 (2)	0.016** S
	No	61	30.5	80	40	0	0		
15.	Does anyone has any sleep disorder in the family?								

	Yes	4	2	6	3	0	0	0.38	0.826
	No	89	44.5	98	49	3	1.5	(2)	NS
16.	Do you share your bed with someone?								
	Yes	60	15	60	15	3	1.5	2.87	0.238
	No	33	16.5	44	22	0	0	(2)	NS

The above table indicates significant association between the levels of sleep problems with gender, health condition that disturb sleep and regularly medication at $p > 0.05$. Hence research hypothesis is accepted at 0.05 levels of significance.

Interpretation and Conclusion

The overall finding of the study showed that sleep habits and sleep problems is been affected among the labour workers which was evidenced by mean value. This study was selected because the sleep hygiene measures can provide a good quality of sleep. Hence the effective use of sleep hygiene measures will reduce the sleep problems and will help in improving the sleep habits.

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