Sleep Disturbance and Depression: Effects on Psychological Wellbeing

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The current study was aimed to find relationship between sleep disturbance and depression and its effect on psychological well-being among hostel living students. The sample of the study was 400 (200 male and 200 female) hostel living students from University of Gujrat. To measure sleep disturbance, depression and psychological well-being three standardized scales Pre Sleep Arousal Scale (Shahzadi and Ijaz, 2014), Beck Depression Inventory (Beck, 1996) and Ryff Psychological Well-being Scale (Ryff, 1989) were used respectively. Correlation analysis was carried out and results indicated significant positive correlation between sleep disturbance and depression ($p < .05$). Results also indicated a significant negative relationship between depression and psychological well-being ($p < .05$). Results of the study are also discussed to explain the findings with reference to Pakistani culture and previous empirical evidence.

Key Words: Sleep disturbance, depression, psychological well-being.

Sleep is an altered state of consciousness in which brain gives up its some functioning for some time and the individual went into a state where sensitivity to environment decreases. An individual who is feeling the state of sleep wants a relaxed and peaceful place to fulfill his/her need of sleep. Mostly people spend third of their lives in this state (Gray, 2003).

According to George and Julie (2012) sleep complaints or problems can be a cause of one's disturbed sleep. Sleep disturbance comprises the incapability in went to sleep, the incapability in going back to sleep and recurrent awakening during the sleep. According to DSM-V (2013) people experiencing sleep disturbances has many observable symptoms like, difficulty initiating sleep at bed time, frequent awakening throughout night, daytime distress, involuntary day time sleep, decline in motor dexterity, inappropriate behavior, memory deficits, head bobbing, jaw dropping, snoring, disturbance in breathing, heart failure, renal failure, difficulty waking in the morning, feeling panic, crying, fear, anxiety, negative emotions, jumping, flying out of bed, creeping, crawling, itching, and toxin exposure.

Depression is an emotional state followed by severe sadness, feelings of worthlessness and shame, social isolation, disturbance in sleep and appetite, decreased desire for sex, loss of interest in daily life activities. Depressed people are not concerned with maintain their health and care and often complaint about pains with no obvious physical symptoms (Comer, 2000). According to APA (1994) a low sad condition represented by clear cut stages of grief, lack of vigor, low self-esteem blame, or correlated symptoms. It is a down, unhappy state in which life appears shady and its dares irresistible.

According to Lopez, Pedrotti and Snyder (2011) "A state of well-being characterized by self-acceptance, personal growth, purpose in life, environmental mastery and positive emotions". According to Ryff (1989) the concept of psychological well-being is divided into six categories; Self-acceptability, Optimistic relationships with other people, Self-sufficiency, Ecological expertise, meaning in life and Individual development.

The persistence of the current study will be to find the link between sleep disturbance and depression then to explore its effects on psychological wellbeing among hostel students. Sleep disturbance in students can distort their mental health which leads towards depression and can cause worst effects on their psychological wellbeing. This study will help to find the causing factors of sleep disturbance in hostel students and its effects on psychological well-being. This study will also help to find different factors which cause sleep disturbance and lead towards depression. This study will also be helpful for hostel management and university administration in finding what kind of psychological problems students are facing while they are living in hostel and what further initiatives should administration take to resolve these issues. These study will also be as important as for students that they will be able to analyze their selves that in which era of their life they are

facing disturbance which is leading them toward sleep disturbance and depressions which in turn they are having poor psychological wellbeing.

Shahzadi and Ijaz (2014) conducted a research to study sleep problems in university students. Sample size to conduct this study was 600 students consisting of 248 male and 352 female students. To conduct this study Pre Sleep Arousal Scale was used. Factor analysis revealed two factors including somatic arousal and cognitive arousal.

Abdulghani, Alhaqwi, Alsubaie and Haji (2012) conducted a research on hostel living medical students to measure sleep problems. First, second and third year hostel living students were taken as sample and the sample size was 491. ESS was used to measure sleep problems. Results revealed that sleep problems were highest among female hostel living students as compared to male hostel living students. Study also indicated strong relationship between low sleep quality and lower academic performance.

Andreski, Breslau, Roth and Rosenthal (1999) studied sleep instabilities and mental disorders in young adults. To conduct this research sample of 1200 young adults was taken and longitudinal research design was used. Lifetime occurrence of restlessness unaided was 16.6%, of hypersomnia by you, 8.2%, and of wakefulness and more hypersomnia, 8%. The gender-adjusted virtual jeopardy for innovative commencement of major depression through the follow-up old-fashioned in folks with antiquity of restlessness at starting position was 4.0 and in publics with point of departure times gone by of hypersomnia, 2.9.

Berhane, Gelaye and others (2012) studied quality of sleep and its association with psychological problems among university students. Sample size of the study was 2551 students. Cross sectional research

design was used. PSQI, PSS and STEPS were used in research to measure desired variables. Sleep problems were highest among females and third year students. There was a significant positive relation among sleep problem and depression.

Kajavinthan (2013) studied depression among hostel living students. Data was collected from both male and female hostel living students and the sample size was 100. Data was collected through BDI and PIS. Results revealed that depression rate was highest among those students who have greater hostel living duration.

Gupta, Iqbal, and Venkatarao (2014) conducted a research on students to measure distress, worry and depression and their relation with demographic characteristics. All the students present at the time of research were taken as sample and all participated in research. A standardized scale DASS consisting of 42 items was used in study. Findings of the study indicated that participants more than half were affected by distress, worry and depression and this problem were highest among students of 5th semester. Females affecting rate was higher than males.

Dhara and Jogsan (2013) studied depression and psychological well-being in people of old age. The total sample of the study was taken 60 consisted of both male and female participants. To measure depression, Beck depression inventory was used. To measure psychological well-being SudhaBhogle's Psychological well-being scale was used. Results of the study revealed significant correlation between depression and psychological well-being and also a significant difference in adults and old persons for depression and psychological well-being.

Kleftaras and Psarra (2012) "studied meaning in life, psychological well-being and depressive symptoms in young adults". The sample size of the study was 401 participants. To conduct the study four questionnaires were used to measure demographic characteristics, meaning in life, psychological well-being and depressive symptoms. The consequences of the scholarship indicated a significant relationship of connotation in lifespan with spiritual comfort and gloomy symptoms.

Buro, Digdon, Howell and Sheptycki (2008) studied associations among mindfulness, well-being and sleep. Fallouts from a trial of 305 apprentices bare constructive connotations between procedures of demonstrative, emotional, and common well-being, mindfulness, snooze worth, and monotony. A route breakdown engendered upkeep for mindfulness as a undeviating conjecturer of well-being and for mindfulness as an subsidiary prognosticator of well-being, intermediated by sleep eminence. Domino effect was reflected in languages of surplus possible interactions stuck between intellectual fitness and sleep, and in positions of ideas for imminent effort.

On the basis of above mentioned literature review there is solid evidence of relationship among sleep disruption, depression and psychological well-being. Readings indicate constructive link concerning sleep disturbance and depression and negative relationship between sleep disturbance, depression and psychological well-being.

Methodology

Population of study was pupils of university living in hostels. The target population was students of university of Gujrat living in hostels. Both male and female students living in hostels were included in population.Sample of the study was selected through convenient random sampling.Sample size of the study

was also taken equal to measure gender differences. Sample of the study was taken about 400 students of university of Gujrat living in hostels. Equal proportion of male and female students was taken as 200 male and 200 females.To conduct this study cross sectional research design was used. To conduct present study informed consent, demographic sheet and three standardized scales and to measure sleep disturbance: Pre Sleep Arousal Scale (PSAS) developed by Ijaz and Shahzadi (2014), to measure depression: Beck Depression Inventory-II (BDI-II) developed by Beck (1996), and to measure psychological well-being Ryff Psychological Well-Being 3-item Measure (RPWBS) developed by Ryff (1989) was used.

Procedure

For the collection of data, formal permission from the concerned authors for used scales was taken. The researcher personally contacts the authors of scales in order to get the permission for the test administration. As data was collected from girls and boys hostels so before data collection former permission was taken from wardens of both hostels. For data collection one demographic sheet and 3 standardized scales were uses each for one variable. Data was conducted from students of university of Gujrat living in hostels. Male and female both students were included in the study and day scholars were excluded from the study. The respondents were identified by the researcher. The data collection was conducted by using convenient random sampling. The inform consent was provided to respondents and scales were distributed to respondents separately. The significance of research and essential facts about research was given to participants. Appropriate directions to fill the scales were delivered too.

Results

After completion of data collection and data entry further different analysis was done on demographic and main variables.

Table 1

Percentage and Frequencies of Demographic Variables of Gender, Age, Semester and hostel duration of Participants (N=400)

Variables	*f*	%
Gender		
Male	200	50
Female	200	50
Age		
17-19	61	15.2
20-22	274	68.5
23-25	62	15.5
26-28	3	0.7
Semester		
1-2	92	23
3-4	114	28.5
5-6	105	26.2
7-8	89	0.2

Hostel Duration		
2-11	94	23.5
1-2	123	30.8
3-4	171	42.8
5-6	12	3

Table 1 shows the percentage demographic variables including gender, age, semester, and hostel duration. There was equal proportion of male and female students in sample. Mean age range of most hostel living students was between 20 to 22 years. Table also indicated that the mostly students hostel living duration was 3-4 years.

Table 2

Percentage and Frequencies of Demographic Variables of Socioeconomic Status, Family System and Area of Participants (N=400)

Variables	*f*	%
Socioeconomic Status		
Low	16	4.0
Middle	350	87.5
High	34	8.5
Family System		

Nuclear	236	59.0
Joint	164	41.0
Area		
Urban	203	50.8
Rural	197	49.2

Table 2 shows the demographic variables including socioeconomic status, family system and area of participants. Results indicated that large number of hostel living students belonged to middle socioeconomic status as compare to high and low socioeconomic status. Table also highlights that those students who belonged to nuclear family system were more than the students' lives in rural areas.

Table 3

Inter-Correlations for Scores on the Gender, Age, Family System, Area, PSAS Total, Somatic Total, Cognitive Total, BDI Total and RPWBS Total

Variable	G	A	FS	AR	PSAS	ST	CT	BDI	RPWBS
G	-	-.306”	-.274”	-.025	-.155”	-.225”	-.033	-.165”	.222”
A		-	.082	-.073	-.010	.056	-.073	-.0.96	-.067
FS			-	.165”	.132”	.135”	.084	.091	-.026
AR				-	-.069	-.014	-.100’	.002	-.095
PSAS					-	.831”	.831”	.342”	.036
ST						-	.381”	.332”	-.019
CT							-		

.236” .079

BDI

- -.234”

RPWBS

-

** p< 0.01; * p < 0.05 G= Gender, A=Area, FS= Family System, AR= Area, PSAS= Pre sleep arousal scale total, ST=somatic Total, CT= Cognitive Total, BDI= beck Depression Inventory, RPWBS= Ryff Psychological Wellbeing Scale Total.

Table 3 shows the correlation between demographic including gender, age, family system, living area, and the scales total of pre sleep arousal scale its two factors, total of depression, and total of psychological well-being. Results indicated that there was a significant positive correlation between gender, age, and family system (p< 0.05). Table also highlight the positive significant correlation between PSAS, Somatic arousal, BDI and RPWBS. There was also a significant correlation between family system, area, total PSAS and somatic arousal. Table also indicated that area of student’s belongings had significant correlation with cognitive arousal (p< 0.05) as compare to total of PSAS and somatic arousal. Results indicated that there is no significant relationship between age and any other variable. Somatic arousal had also a significant positive correlation with total BDI and cognitive arousal but no significant relationship was

found (p< 0.05) with RPWBS. Cognitive arousal had also a significant positive relationship with BDI (p< 0.05). Results also showed highly significant negative correlation between total BDI and total RPWBS.

Table 4

Mean, Standard Deviation, t and p value of Male (n=200) and female (n=200) hostel living students on two factors and total of PSAS

		Gender		
Factors				*t*
		Male		
		Female		
PSAS Total				
	M	41.55	38.55	
				3.133
	S.D	9.59	9.56	
Somatic Total				
	M	18.68	16.06	
				4.598
	S.D	5.86	5.50	
Cognitive Total				
	M	22.87		

	22.49	0.661
S.D		
	5.50 6.12	

p< .05, df= 398

Table 4 shows the t-test result which reveals significance difference among the mean scores of male and female hostel living students experiencing sleep problems. Results are significant (p< 0.05) for total PSAS and somatic arousal as compare to for cognitive arousal.

Table 5

Mean, Standard Deviation, t and p value for nuclear and joint family system of hostel living students on two factors and total of PSAS

Family System

Factors		Nuclear	Joint	*t*
PSAS Total				
	M	38.99		
		41.58		-2.655
	S.D			
Somatic Total		9.82		
	M	9.28		
				-2.723
	S.D	16.71	18.31	
Cognitive Total				
	M	5.68		
		5.92		-1.681
	S.D			
		22.27		
		23.26		
		6.08		
		5.38		

p< .05, df= 398

Table 5 shows the t-test results which reveal significant difference among mean scores for nuclear and joint family system of hostel living students in experiencing sleep problems. Results are significant for ($p < .05$) for PSAS Total and Somatic arousal as compared to for cognitive arousal.

Table 6

Mean, Standard Deviation, t and p value for urban and rural background of hostel living students on two factors and total of PSAS

	Area	
Factors		*t*
	Urban	

		Rural	
PSAS Total			
	M	40.70	
		39.38	1.374
	S.D		
Somatic Total		9.81	
	M	9.51	
			0.281
	S.D	17.45	
Cognitive Total		17.28	
	M		
		5.99	2.008
	S.D	5.66	
		23.25	
		22.09	
		5.89	
		5.69	

p< 0.05, df= 398

Table 6 shows the t-test result which shows the significant difference among mean scores for urban and rural background of hostel living students in experiencing sleep problems. Results are significant (p < .05) for cognitive arousal as compare to somatic arousal and total of PSAS.

Table *7*

One Way Analysis of Variance for Socioeconomic Status on Two Factors and Total of Pre Sleep Arousal Scale for Students

	SocioeconomicStatus			
Factors				*f*
	Low	Middle	High	

PSAS Total					
	M	41.81	39.94		
		40.38			0.306
	S.D				
Somatic Total		11.50	9.71		
	M	8.50			
					1.263
	S.D	19.18	17.20		
Cognitive Total		18.20			
	M				
		7.60	5.77		0.142
	S.D	5.38			
		22.62	22.73		
		22.17			
		6.00	5.86		
		5.42			

p< 0.01, p < 0.05, df= 399

Table 7 shows the results for ANOVA which shows the significant difference among mean scores for hostel living students who belong to low, middle and high socioeconomic status in experiencing sleep problems. Results are not significant for ($p < .05$) PSAS total, cognitive arousal and somatic arousal.

Discussion

Sleep is an altered state of consciousness in which brain gives up its some functioning for some time and the individual went into a state where sensitivity to environment decreases (Grey, 2003). Distressed sleep comprises helplessness in went to sleep, the incapability to go back to sleep, and recurrent awakening while sleeping. Sleep disturbance lead toward physical and psychological distress. It is identified by various researches that sleep problems causes many of psychological disorders, depression is one of the leading problem. Sleep disturbance and depression are highly linked with each other both have vice versa relationship, which means presence on one causes the other. Blizard, Livingston and Mann (1993) studied sleep disturbance predicting depression. Results revealed a significant positive relationship between sleep disturbance and depression.

Psychological well-being is a condition of mental health in which individual comprises a number of capabilities like self-knowing, self-sufficiency, ecological expertise, relationships with others, meaning in life. Mental health is linked with sleep disturbance and depression. Studies indicated that poor psychological well-being is a result of sleep disturbance and depression. Dhara and Jogsan (2013) studied depression and psychological well-being. Results of the study indicated significant relationship between depression and psychological well-being.Byrne, Honig and Smaldone (2007) conducted a research to study inadequate

sleep and psychological wellbeing in students. Results showed significant associations between two variables. Students having sleep disturbances and depression reported their low level of psychological well-being since they were having sleep problems and depression.

Present study was designed to explore the relationship between sleep disturbance and depression plus its effect on psychological well-being among students. The present study focused exploring sleep problem and depression among hostel living students. Both male and female students of equal proportion were included in sample. Other demographic characteristics of students included age, semester, department, hostel living duration, socioeconomic status, family system and area were also taken.

Current study indicated that sleep problems and depression is very significantly effecting students' performance and psychological wellbeing. Results of the study indicated that male students had to face more sleep problems as compare to female, as male students had different schedules in hostel living, their company also matters and most of all extra usage of internet, sports TV. There was no effect of age in causing sleep problems and depression among hostel living students because there is no specific age range to have sleep problems and depression and it can occur at any age. Results indicated the significant positive correlation of family system and area with sleep disturbance because the living conditions and family background play a vital role in developing sleep problems.

Outcomes of the present study also supported the main assumption of the study and indicated a strong correlation between sleep disturbance and depression. Poor sleep leads toward depressive symptoms as individual is unable to perform daily routine tasks and having a number cognitive and somatic dis-functioning. Results did not show a significant relationship between sleep problems and psychological

well-being but a significant relationship between depression and psychological well-being was found. Depressive symptoms lead toward lower level of psychological well-being as depression deceases an individual's strengths.

The findings of the current study also suggested gender differences in experiencing sleep problems in hostel living students. Brown, Buboltz and Soper (2010) studied sleep behaviors and patterns of college students. Findings of the study revealed certain gender differences in experiencing sleep problems. Family system differences were present in experiencing somatic arousal and area differences were obvious in experiencing cognitive arousal. Students who live in joint family system experiences more sleep problems as compared to those who live in nuclear family system because living conditions specially peace and affiliation is greater among nuclear family system which create a condition for having good sleep. Students who belong to urban area experience more sleep problems as compared to those who belongs to rural area because rural areas are more peaceful and living conditions are more healthy and supportive rather than cities. Results revealed no significant differences for socioeconomic status in experiencing sleep problems. As sample of the study lives in hostel so there is no significant impact of socioeconomic status on sleep disturbance. Students are affected by the living conditions in hostel not by their socioeconomic status in terms of sleep problems.

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