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ANALYSIS OF COGNITIVE IMPAIRMENT WITH SLEEPING DIFFICULTIES AND DEPRESSION AMONG PAKISTANI POPULATION

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Abstract:
Introduction: Depression is a mental health disorder wherein low mood and low energy can affect a person's thoughts, feelings, behaviour and sense of well-being. It is characterized by disturbed sleeping pattern, change in appetite, fatigue, irritability, reduced ability to concentrate, difficulty in decision making and even suicidal thoughts.
Aims and objectives: The basic aim of the study is to analyze the cognitive impairment with sleeping difficulties and depression among Pakistani population.
Material and methods: This cross-sectional study was conducted at Aziz Bhatti Shaheed Teaching hospital Gujrat from October 2017 till May 2018. The data was collected from patients with psychiatric disorders, any type of cognitive impairment such as dementia and mental retardation, patients on anti-depressants, females in post-partum period and patients who had undergone any traumatic event within the last six months.
Results: Anxiety scores were strongly associated with depression scores (r=0.65, P <0.001). Hierarchical regression analysis was conducted to analyze significant predictors of cognitive difficulties and controlling effects of anxiety in their relationship. The first model, explained 14.1% variation in scores on CDS scale. According to it, high CDS scores were associated with female gender and PSQI scores.
Conclusion: It is concluded that high prevalence of anxiety, depression and sleeping difficulties among the Pakistani people. These psychopathologies were further associated with cognitive deficits that affect their daily routine.

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INTRODUCTION:

Depression is a mental health disorder wherein low mood and low energy can affect a person's thoughts, feelings, behaviour and sense of well-being. It is characterized by disturbed sleeping pattern, change in appetite, fatigue, irritability, reduced ability to concentrate, difficulty in decision making and even suicidal thoughts. Depression is a common psychological state affecting over 350 million people from all age groups [1]. Unipolar depressive disorder is expected to be the most significant cause of disease burden by the year 2030 [2]. Marked as one of the most common unidentified mental health problems in Pakistan, masked by long-term illnesses and psychological disturbances, depression plays a key role in worsening the prognosis of chronic diseases. The risk of developing depression in the general population is 10%-25% in females and 5%-12% in males; whereas, in patients with chronic conditions the risk increases up to 25%-33% [3]. Chronic conditions such as diabetes mellitus, asthma, hypertension and anaemia are the most common comorbidities in a hospital setting.

Sleep medicine is an important medical discipline [4] which has gained a considerable attention nowadays. Poor sleep quality is considered one of the most striking public health problems. The rates of poor sleep quality is increasing in both developing and modern societies [3,4]. It was estimated that the prevalence of sleep disorders among the general population ranged from 22%-65% [5,6].

Sleep deprivation may have grave health consequences; resulting in increasing disease morbidity and mortality. It was postulated that sleep deprivation may be associated with defect in the immune function, and may be implicated in the pathogenesis of psychological problems and metabolic problems (diabetes mellitus, metabolic syndrome and obesity). Attention and concentration difficulties were linked to poor sleep quality among students [7] as good sleep is essential for the best of neuro-cognitive functions, psychomotor performance, physical and mental health.

AIMS AND OBJECTIVES:

The basic aim of the study is to analyze the cognitive impairment with sleeping difficulties and depression among Pakistani population.

MATERIAL AND METHODS:

This cross sectional study was conducted at Aziz Bhatti Shaheed Teaching hospital Gujrat from October 2017 till May 2018. The data was collected from patients with psychiatric disorders, any type of cognitive impairment such as dementia and mental retardation, patients on anti-depressants, females in post-partum period and patients who had undergone any traumatic event within the last six months. Patients above 18 years of age; confirmed diagnosis of at least any one of the following chronic illnesses: diabetes, asthma, hypertension and anaemia; and patients who could speak and understand Urdu (the questionnaire was translated into Urdu for easier and unambiguous communication with the local population) were included in the study. The final questionnaire was divided into three sections 'medical history and demographic details', 'laboratory values' and 'Beck Depression Inventory (BDI) scale'. The data was entered manually into the SPSS Statistics, version 17.0 (IBM SPSS Inc., Chicago, IL). No imputation method was used to replace missing values and only completely filled questionnaires were included in the study.

RESULTS:

Anxiety scores were strongly associated with depression scores (r=0.65, P <0.001). Hierarchical regression analysis was conducted to analyze significant predictors of cognitive difficulties and controlling effects of anxiety in their relationship. The first model, explained 14.1% variation in scores on CDS scale. According to it, high CDS scores were associated with female gender and PSQI scores. In second model, depression was entered along with the previously entered predictors. It also yielded a significant association with cognitive difficulties. However, when anxiety scores yielded strong controlling effects on depression scores and rendered it insignificant. Anxiety itself remained as a significant predictor of cognitive difficulties. The third model could explain 18.1% variation in scores of CDS scale.

Table 01: Regression analysis of cognitive difficulties

Model	Predictors	B	Std. Error	Beta	t-statistic	P-value
1	(Constant)	16.541	4.645		3.561	<0.001
	Gender	4.755	1.787	0.160	2.661	0.008
	Age	−4.009	2.774	−0.084	−1.445	0.150
	PSQI scores	1.571	0.324	0.286	4.842	<0.001
2	(Constant)	14.187	4.633		3.062	0.002
	Gender	5.036	1.761	0.169	2.860	0.005
	Age	−4.825	2.742	−0.101	−1.759	0.080
	PSQI scores	1.257	0.335	0.229	3.755	<0.001
	Depression	0.752	0.242	0.183	3.110	0.002
3	(Constant)	14.977	4.610		3.249	0.001
	Gender	4.006	1.806	0.135	2.219	0.027
	Age	−5.780	2.754	−0.121	−2.099	0.037
	PSQI scores	1.111	0.338	0.202	3.281	0.001
	Depression	0.317	0.307	0.077	1.032	0.303
	Anxiety	0.677	0.299	0.177	2.264	0.024

PSQI: Pittsburgh Sleep Quality Index.

DISCUSSION:

Our results revealed presence of high prevalence of poor sleep quality (70.4%) among Pakistani population. This may be attributed to numerous activities and stresses facing Pakistani population, which may necessitate excessive study during night. This rate coincides with other two recent studies from Pakistan and Spain [8]. Such high rates of poor sleep among Pakistani population from different countries requires great concerns for dealing with stresses facing Pakistani population. This can be improved through counseling and regular education to improve behavior and lifestyle. On the other hand, lower rates of poor sleep were reported from older studies from the USA and Lithuania [9]. This discrepancy may be attributed to the differences in sample sizes, race, target population, or the time of conduction of the studies. In addition, nowadays there is a marked increase in the night use of social media, which may increase the percentages of poor sleepers [10].

CONCLUSION:

It is concluded that high prevalence of anxiety, depression and sleeping difficulties among the Pakistani people. These psychopathologies were further associated with cognitive deficits that affect their daily routine.

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