

## Relationship between Job Satisfaction and Mental Health Moderating role of Insomnia among Health Care Professionals

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### Abstract

A total of 200 healthcare professionals were randomly selected from public and private hospitals, with ages ranging from 25 to 60 years. The sample was evenly divided by gender, with 100 male participants and 100 female participants. Purposive and convenience sampling were used to select participants who met the inclusion for this research. Data were collected using a detailed demographic sheet, the Athens Insomnia Scale, the General Job Satisfaction Scale, and the Mental Health Inventory (MHI-38) questionnaire. All participants were informed about the research, and their consent was obtained before they participated. They were informed about the research, and their consent was obtained before the participated. They were informed that their information would be kept confidential. The findings of this research show that there is no significant positive correlation between job satisfaction, insomnia, and mental health. However, the moderation between insomnia and job satisfaction shows a positive association, and the moderation between insomnia and mental health also shows a positive relationship. This means that if insomnia increases, job satisfaction will decrease, and job satisfaction will increase.

### Introduction

The most common kind of sleep problem across all age groups is insomnia, which has links to socio-demographic, environmental, and lifestyle factors. The purpose of this study is to estimate the prevalence of insomnia, examine its causes in relation to the psychological health of healthcare professionals, and assess how it affects job satisfaction. Healthcare personnel will be forced to make hard decisions and work under severe pressure as a result of the covid-19 epidemic, which is likely to place them in a predicament that has never been seen before. Health professionals' mental health is directly impacted by this kind of circumstance. Recent research of nurses and doctors treating COVID-19 patients discovered a significant frequency of stress, anxiety, and PTSD, with women and nurses experiencing higher levels of anxiety than men. This can be explained by the extended work hours and closer patient contact that nurses have, which can easily cause exhaustion and tension.

A comparable sample was used in another study, which discovered that the social support received by doctors had a negative impact on anxiety and stress and a significant positive impact on the quantity and quality of their sleep. The mental health of healthcare professionals who come into touch with infected patients has to be periodically assessed and tracked, particularly in respect to depression, anxiety, and suicidal thoughts. Determining professionals who have had previous exposure to psychosocial risk factors is also crucial. Somatic symptoms such fatigue, rumination, worry, irritability, insomnia, poor focus, and sadness. Internal processes like personality, temperament, and other characteristics can have an impact on a person's psychological well-being (Malasch & Leiter, 1997; Okyay, 2009).

Work and social issues are a result of insomnia. Reduced productivity, an increase in work-related accidents, absenteeism, use of medical services, and interpersonal issues are some effects of insomnia. Age, sex, socioeconomic status, health status, quality of life, environmental factors, shift work, and psychological stress are all risk factors for insomnia that epidemiologic studies have looked into. The two most significant risk variables for employment are likely shift work and occupational stress (Nakata et al.,

2004).

A new virus that is poorly understood and for which there are no defined clinical standards or treatments may make many physicians uncomfortable doing clinical interventions on patients. 6. Self-inoculation as well as worries about potentially infecting their loved ones, acquaintances, or coworkers 9,10. Their patterns may change, they may become more reclusive, and their social support system may become smaller as a result. Someone may be pleased with one or more aspects of their employment, but they may also be unhappy with other aspects of that job. For instance, a healthcare professional may be content with their title but dissatisfied with their pay (Jathanna, Melisha, Mary, Latha, 2011).

Job satisfaction has a unique influence on health services, according to Nadinloyi, Sadeghi, and Hajloo's study from 2013. As a result, severe behavioral and health effects are experienced by all healthcare workers. After accomplishing their jobs, healthcare workers report feeling happy and helpful, which contributes to their job satisfaction. It not only makes them feel more confident and gives their tasks more focus, but it also enhances their connections with their coworkers and lessens mental tension (Quyen, Lan, Minh, 2020). A healthcare worker is a person who works with the sick and injured, either directly as a doctor or nurse, or indirectly as an aid, an assistant, a lab technician, or even a person who handles medical waste. There are roughly 59 million healthcare professionals in the world. The World Health Organization (WHO) designated the years 2006 to 2015 as the Decade of Human Resources for Health in recognition of the crucial role that healthcare professionals play as the most important resource for health. The definition of insomnia is the inability to initiate or maintain sleep, which causes daytime tiredness (Roth, 2007). This definition of well-being includes the perception that life goes on in addition to the absence of mental illness. Success at the professional, personal, and interpersonal levels is correlated with well-being; those who have high levels of well-being demonstrate more workplace productivity, more effective learning, improved creativity, more pragmatic behavior, and positive interpersonal interactions. Furthermore, longitudinal data imply that childhood happiness predicts future adult happiness (Faragher et al., 2005).

#### **Objectives:**

The objectives of the present study are as follow:

To investigate the relationship between job satisfaction, insomnia, and mental health among health care professionals at district Umerkot, Sindh.

- To investigate the impact of job satisfaction on mental health in Health care professionals.
- To investigate the impact of mental health on insomnia in health care professionals.
- To find out the moderating role of insomnia between Job satisfaction and mental health among health care professionals.
- To study the role of demographic variables on insomnia, Job satisfaction, and mental health among health care professional

## Literature Review

This particular chapter of the study will explain the extensive literature relevant to the topic under discussion. At the same time, this chapter aims to cover the literature related to the specific research variables of the study. In addition, the hypothesis will be developed in the shadow of the relevant literature on the research variables. Subsequently, the research gap will be mentioned. The World Health Organization (WHO) defines mental health as "a condition of well-being in which a person is aware of his or her own abilities, can cope with everyday pressures, can work successfully and fruitfully, and can contribute to his or her community" (1). This definition raises several concerns and could result in misunderstandings when it identifies positive feelings and positive functioning as key determinants of mental health, despite the fact that it represents a significant advancement in moving away from the concept of mental health as the absence of mental illness (Strawberry, 2020). A person's mental health is a private thing. It encompasses the live human body, or more accurately, the condition of each person's mind. It is improper to refer to a "sick civilization" or a "sick community" because while the social environment or culture may be conducive to disease or health, the quality generated is specific to each individual. Differentiating between traits and actions is appropriate when discussing a person's mental health. Positive emotions and positive functioning, two essential components of the WHO definition, are included in the terminology used in various articles on mental health (Strawberry, 2020).

Three aspects of mental health are listed by Keyes: emotional well-being, psychological well-being, and social well-being. Happiness, interest in life, and satisfaction are examples of emotional well-being. Psychological well-being is defined as liking most of one's personality, being adept at handling everyday obligations, having positive relationships with others, and being satisfied with one's own life. Positive functioning is referred to as social well-being, which includes having something to offer society (social contribution), feeling a part of a community (social integration), thinking that society is improving for everyone (social actualization), and feeling that society's functioning gives them purpose (social coherence) (Strawberry, 2020). Problems with waking up or having trouble sleeping or staying asleep cause brief or minor sleep dissatisfaction. But chronic insomnia is frequently accompanied by severe distress, diminished daily functioning, or both. An insomnia disorder diagnosis is justified in these circumstances. Chronic insomnia is linked to a decline in perceived health and quality of life, an increase in work-related accidents and absenteeism, and even fatal accidents (Morin et al., 2011).

The conventional understanding of insomnia is that it is a disorder of nocturnal and daytime over arousal, which is both a result and a cause of insomnia and manifests both cognitively and emotionally as well as physically. Excessive concern, rushing thoughts, and selective attention to enticing stimuli are common symptoms of sleeplessness. One factor that frequently has an impact on society is insomnia. We frequently fail to diagnose insomnia and manage it, which has a huge negative impact on how well we can function in society. Depression and other mental problems are among the conditions that insomnia is considered to be a disease that might lead to. Although it is rather prevalent, there are few studies and descriptions of it in general literature (Morin et al., 2011).

It was crucial to develop a method that could quickly determine the severity of insomnia in various populations. Such a tool is the Insomnia Severity Index Scale (ISI) (Morin et al., 2011). The most prevalent sleep issue is insomnia, which affects between 9 and 12 percent of the population (Ford & Kamerow, 1989). As a result, during the past few decades, attention has grown on the potential health effects of insomnia. Risk factors are generally defined as elements that contribute to an increase in illness incidence (Kelsey, Whittemore, Evans, & Thompson, 1996). Obesity is one of the risk factors for hypertension. Insomnia may act as a stressor, triggering the emergence of another, predisposed illness (eg, depression, substance abuse).

On the other hand, insomnia is a symptom of many disorders (such as depression), and it's equally likely that it's a prodromal symptom that appears before the complete disorder starts. The

various definitions of insomnia present one of the challenges while assessing papers in this field. As specific definitions of insomnia as "present difficulty sleeping three evenings a week" or "complaint of 'poor' sleep throughout life" are possible (Nakata et al., 2004).

Psychological distress is a mediator in the link between psychological well-being and sleeplessness. We anticipate that the experience of a psychological contract breach depletes employees' emotional and physical resources and raises distress in line with the COR theory (Hobfoll, 1989). Inability to cope with frustration can worsen psychological anguish, increase excitement and brooding, and cause insomnia.

Doctors reported more severe symptoms of stress compared to nurses and paramedical personnel, whereas women, frontline healthcare workers, and younger staff reported higher symptoms of anxiety, sadness, and insomnia (Nazish Imran, 2020). Additionally, long-term employees are more satisfied with their jobs (Nadinloyi, Sadeghib, Hajloo, 2012). The frequency of psychosomatic symptoms appears to be a useful sign of health issues, which frequently result from taxing psychosocial processes, such as stress and discontent at work, according to Piko et al. (1997) (Eells et al., 1994; Gonge et al., 2002).

Interpersonal and professional performance are both hampered by poor mental health. As a result, it may have a detrimental impact on service quality and safety in addition to employee satisfaction. An emotional reaction to a work environment is job satisfaction. It can only be implied; it cannot be seen as such. How effectively achievements match or surpass expectations is frequently a determining factor in job satisfaction (Levinson, 1997, Moser, 1997).

Convenience (short commute, access to the right digital tools, and flexible work hours) Regular appreciation by immediate management and the organization as a whole Competitive pay that maintains a good quality of life for employees The promise of career advancement in line with the personal growth goals of employees Motivational factors play an important role in increasing employee job satisfaction.

- Demanding tasks that push workers to new limits
- Level of comfort (short commute, access to the right digital tools and stretchy working hours)
- Ongoing gratitude from upper management and the entire company.
- Competitive pay that preserves the employees' standard of living.
- The assurance of career promotion in line with employees' personal development objectives.
- Motivational factors are crucial for improving job satisfaction among employees.

#### **Hypotheses:**

The Following Hypotheses are drawn from previous literature

1. There will be a positive relationship between job satisfaction and mental health among healthcare professionals at district Umerkot Sindh.
2. There will be a negative correlation between insomnia and mental health among health care professionals.
3. Insomnia negative moderate between job satisfaction and mental health among healthcare professionals.
4. Older age health care professionals have low mental health as compared to younger health care professionals.
5. Older age health care professionals have high insomnia as compared to young age health care professionals.
6. Health care professionals who have night shifts have high insomnia as compared to health care professionals working in the morning shift.

7. Male health care professionals have high job satisfaction as compared to female health care professionals.
8. Female health care professionals have high insomnia as compared to male health care professionals.

## 1. Method

### 2.1 Research design

The present study was carried out using a correlation research design.

### 2.2 Sample/ Participants

This study was conducted among Umerkot Sindh healthcare professionals. The sample was taken at random from public and private hospitals. The sample's age ranged from 25 to 60 years. The sample size was 200 participants (N=200). The sample consisted of male (n=100) and female (n=100).

### 2.3 Inclusion Criteria

- Participants should be educated to easily understand and complete the questionnaire.
- Participants should be limited to 25 to 60 years of age.
- Data will be collected from health care professional of Umerkot Sindh.

### 2.4 Exclusion Criteria

- Those participants who are under the age of 25 are excluded and those who are over the age of 60 will also be excluded.
- A participant who does not belong to Umerkot will also be disqualified.

## 2.5 Operational Definitions

### 2.5.1 *Insomnia*

weariness brought on by difficulties starting or sustaining restorative sleep, whose severity or persistence results in clinically significant difficulty or functioning impairment. Such insomnia may be brought on by a short-term, long-term, or psychological problem. (APA Psychology Dictionary) The Athens Insomnia Scale results will be used in this study to characterize insomnia.

### 2.5.2 *Mental Health*

A mental condition defined by emotional stability, sound behavioural management, a low level of anxiety and other incapacitating symptoms, the capacity to build healthy relationships, and the capacity to manage the demands and stressors of everyday life.

### 2.5.3 *Job Satisfaction*

Hedonistic responses, such as liking or disliking the work itself, the incentives (such as pay, advancement, or recognition), or the environment, are frequent ways for employees to express their attitudes toward their jobs (working conditions, colleagues). (APA Psychology Dictionary) Job satisfaction is defined as "a pleasant or positive emotional state arising from the evaluation of one's job experiences" for the purposes of this study (Locke, 1976, p. 1300).

## 2.6 Instruments

### 2.6.1 Demographic Sheet

The demographic sheet will be used to collect information on demographic status, which includes age, gender, qualifications, sleeping environment, work shift time, etc.

### 2.6.2 Athens Insomnia Scale

The Athens Insomnia Scale was developed by Soldatos, Dikeos & Paparrigopoulos in June 1999 to assess the level of insomnia eight items shorter than the Athens Insomnia Scale, which is a 0-3 Likert scale with 0 being meaninglessly happy and 3 being happier. At a 1-week interval, it was discovered that the test-retest reliability correlation coefficient was around .90.

## 1. Results

Table 1

*Socio-demographic characteristic of the study general population*

Variables	Category	<i>f</i>	%
Gender	Male	100	50.0
	Female	100	50.0
Age	18-40 (Y)	187	93.5
	40-65 (Y)	13	6.5
Marital Status	Single	71	35.5
	Married	112	56.0
	Divorced	17	8.5
Education	FCPS	32	16.0
	MBBS	34	17.0
	BSN	49	24.5
	Nursing diploma	57	28.5
	Others	28	14.0
Occupation	Doctor	59	29.5
	Nurse	97	48.5
	Paramedical Staff	27	13.5
	Physician Assistant	8	4.0
	Others	9	4.5
Working Experience			

	Less than 2 years	18	9.0
	2-5 years	84	42.0
	More than 5 years	98	49.0
Working Shift			
	Morning	73	36.5
	Evening	69	34.5
	Night	46	23.0
	Other	12	6.0
Yearly Income			
	Less than 10 lacs	103	51.5
	10-15 lacs	42	21.0
	More than 15 lacs	55	27.5
Sleep Hours			
	Less than 6 Hours	14	7.0
	6-8 Hours	180	90.0
	More than 8 Hours	6	3.0

Note. FCPS = Fellow of College of Physicians and Surgeons; MBBS = Bachelor of Medicine and Bachelor of Surgery; BSN = Bachelor of Science in Nursing.

Results indicated that both males and females are distributed equally males (50%) and females (50%) and their age ranges are start from 18-40 (93.5%) and from 40-65 (6.5%). Maximum of the participants are married and their percentages are (56.0%). Most of the participants are educated in which 57% participants have done nursing diploma. Further, the findings indicated that in terms of occupation majority of the participants are nurse (48.5%). Furthermore, according to the findings in terms of working experience majority of the participants have more than 5 years of working experience (49.0%). According to the findings in terms of work shift majority of the participants are doing their work in morning shift (36.5%). Moreover, according to the findings in terms of yearly income majority of the participants have less than 10 lacs (51.5%). Further, findings indicate that majority of the participants sleep 6 to 8 hours daily (90.0%).

**Table 2**

*Psychometric Properties of job satisfaction, Insomnia, and Mental Health inventory and its subscales*

Variables	K	$\alpha$	Range		M	SD	Skewness	Kurtosis
			Potential	Actual				
MHI	38	.70	38-228	82-166	125.20	13.06	-.10	.93
Anxiety	09	.52	9-54	18-44	30.68	4.90	-.10	.17
Depression	04	.65	4-24	4-20	14.67	3.39	-.73	-.27
LBEC	09	.28	9-54	19-42	30.17	4.13	-.21	.40
GPA	10	.56	10-60	15-45	30.17	5.41	.09	-.01
ET	02	.58	2-12	2-12	6.29	2.06	.72	.11
LS	01	0	1-6	1-6	2.87	0.97	.65	1.51
JSS	10	.85	10-50	13-46	34.98	5.31	-1.40	3.46
AIS	08	.78	0-24	0-18	8.06	3.74	.40	-.26

Note. MHI = Mental Health Inventory; LBEC = Loss of Behavioural/ Emotional Control; GPA = General Positive Affect; ET = Emotional Control; LS = Life satisfaction; JSS = Job satisfaction scale; AIS = Athens insomnia scale

Table 2 showed the psychometric properties of the study major scales including. Mental Health Inventory; Loss of Behavioural/ Emotional Control; General Positive Affect; Emotional Control; Life satisfaction; Job satisfaction scale; Athens insomnia scale. The results findings indicated that the values of alpha co-efficient ranged from .70 to .78 which shows the scales reliabilities are acceptable. The values of skewness and kurtosis were within range ( $\pm 2$ ) which indicates that the data was normally distribute.

**Table 3**

*Inter correlation between job satisfaction, Insomnia, and Mental Health.*

Variable	1	2	3	4	5	6	7	8
JSS	--							
AIS	-.00	--						
Anxiety	-.06	-.15*	--					
Depression	-.07	-.23**	.55**	--				
LBEC	-.03	-.23**	.39**	.38**	--			
GPA	-.04	.33**	-.02	-.19	.19**	--		
ET	.08	.30**	-.08	-.03	.07	.46**	--	
LS	-.23**	.00	.15*	.21**	.06	.16*	.08	--

Note. \* $p < .05$ ; \*\* $p < .01$  JSS = Job Satisfaction Scale; AIS = Athens Insomnia Scale; LBEC = Loss of Behavioural / Emotional control; GPA = General Positive Affect; ET = Emotional Ties; LS = life satisfaction

Table 3 shows the statistical association of job satisfaction; insomnia and mental health. The result indicated that there is no significant positive correlation between job satisfaction, insomnia, and mental health.

**Table 4**

*Mean Comparison between male and female in terms of job satisfaction, Insomnia, and Mental Health.*



Variable	Male n = 100		Female n = 100		P	t (398)	Cohen's d
	M	SD	M	SD			
Anxiety	31.20	4.80	30.16	4.97	.49	1.50	0.21
Depression	14.63	3.61	14.71	3.17	.25	-.166	-0.02
LBEC	30.86	3.83	29.48	4.31	.42	2.39	0.33
GPA	30.18	5.66	30.16	5.16	.16	.026	0.003
ET	6.26	2.06	6.32	2.05	.55	-.206	-0.02
LS	2.83	0.97	2.92	.97	.76	-.654	-0.09
AIS	8.40	3.63	7.72	3.82	.38	1.28	0.18
JSS	35.62	4.98	34.34	5.56	.80	1.71	0.24

Note. M = Mean; SD = Standard Deviation; LBEC = Loss of Behavioural/ Emotional Control; GPA = General Positive Affect; ET = Emotional Control; LS = Life satisfaction; AIS = Athens insomnia scale; JSS = Job satisfaction scale

Table 4 shows the mean difference between male and female in terms Mental Health Inventory; Loss of Behavioural/ Emotional Control; General Positive Affect; Emotional Control; Life satisfaction; Job satisfaction scale and Athens insomnia scale. The result indicated that there is no significant mean difference between male and female in term of Mental Health Inventory; Loss of Behavioural/ Emotional Control; General Positive Affect; Emotional Control; Life satisfaction; Job satisfaction scale and Athens insomnia scale.

**Table 5**

*Mean Comparison between 18 to 40 years, and 41 to 65 years on job satisfaction, Insomnia, and Mental Health.*

Variable	18 to 40 years n = 187		41 to 65 years n = 13		P	t (398)	Cohen's d
	M	SD	M	SD			

MHI	125.30	13.14	123.54	12.05	.38	.47	.13
Anxiety	30.65	4.94	31.15	4.41	.75	-.35	-.10
Depression	14.73	3.37	13.85	3.76	.75	.90	.24
LBEC	30.16	4.16	30.31	3.75	.92	-.12	-.03
GPA	30.25	5.46	29.08	4.66	.80	.75	.23
ET	6.31	2.08	6.00	1.58	.14	.52	.16
LS	2.90	0.97	2.46	0.87	.78	1.59	.47
JSS	35.13	5.21	32.85	6.36	.19	1.50	.39
AIS	8.10	3.78	7.54	3.01	.57	.51	.16

Note. MHI = Mental Health Inventory; LBEC = Loss of Behavioural/ Emotional Control; GPA = General Positive Affect; ET = Emotional Control; LS = Life satisfaction; JSS = Job satisfaction scale; AIS = Athens insomnia scale

Table 5 shows the mean difference between 18 to 40 years old and 41 to 65 years old in terms Mental Health Inventory; Loss of Behavioural/ Emotional Control; General Positive Affect; Emotional Control; Life satisfaction; Job satisfaction scale and Athens insomnia scale. The result indicated that there is no significant mean difference between male and female in term of Mental Health Inventory; Loss of Behavioural/ Emotional Control; General Positive Affect; Emotional Control; Life satisfaction; Job satisfaction scale and Athens insomnia scale.

**Table 6**

*Mean Comparison between below and above means on job satisfaction, Insomnia, and Mental Health.*

Variable	Low score of insomnia n = 88		High score of insomnia n = 112		P	t (398)	Cohen's d
	M	SD	M	SD			
MHI	127.16	12.73	123.64	13.15	.36	1.90	.27
JSS	34.82	3.91	35.11	6.20	.00	-.38	-.05
AIS	4.68	1.61	10.71	2.61	.00	-18.95	-2.78

Anxiety	32.13	4.52	29.54	4.91	.13	3.81	.54
Depression	16.05	2.85	13.59	3.40	.00	5.42	.78
LBEC	31.07	4.04	29.46	4.07	.57	2.77	.39
GPA	28.34	5.26	31.61	5.09	.78	-4.43	-.63
ET	5.52	1.31	6.89	2.32	.00	-4.94	-.72
LS	2.97	0.80	2.80	1.08	.00	1.17	.17

Note. MHI = Mental Health Inventory; JSS = Job Satisfaction Scale; AIS = Athens Insomnia Scale; LBEC = Loss of Behavioural/ Emotional Control; GPA = General Positive Affect; ET = Emotional Control; LS = Life satisfaction;

Table 6 shows the mean difference between below mean and above mean in terms Mental Health Inventory; Job Satisfaction Scale; Athens Insomnia Scale; Anxiety; Depression; Loss of Behavioural/ Emotional Control; General Positive Affect; Emotional Control; Life satisfaction The result indicated that there is significant mean difference between below and above mean in terms of JSS; AIS; Depression; ET and LS. The result further indicated that there is no significant mean difference between below and above mea in term of MHI; Anxiety; LBEC and GPA.

**Table 7**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory based on Marital status.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Marital status Group (M, SD)	Marital status Group (M, SD)
MHI	3.93*	.03	Single (128.28, 13.50)	Married* (122.95, 13.08) Divorced (127.06, 7.33) Divorced (127.06, 7.33)

Note. \*\*\*p<.001; MHI = Mental health inventory

Table 7 indicated the mean, standard deviation, F-value and Post-hoc comparison for Mental Health Inventory across Marital status groups. The findings indicated that there is a significant mean difference among marital status groups with F (2, 199) = 3.93, p<.001. Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The marital status group single mean (M = 128.28, SD = 13.50) having significance with marital status group married (M = 122.95, SD =13.08). However, the mean difference was not significant among other types of marital status groups.

**Table 8**

*Means, Standard Deviations, and One-Way Analyses of Variance in Emotional Tie based on Marital status.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Marital Status Group (M, SD)	Marital Status Group (M, SD)
ET	4.56*	.04	Single (6.82, 2.42)	Married* (6.09, 1.85) Divorced (5.41, .87)
			Married (6.09, 1.85)	Divorced (5.41, .87)

Note. \*\*\* $p < .001$ ; SCL- ET = Emotional Ties

Table 8 indicated the mean, standard deviation, F-value and Post-hoc comparison for Emotional tie across Marital status groups. The findings indicated that there is a significant mean difference among marital status groups with  $F(2, 199) = 4.56^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The marital status group single mean ( $M = 6.82$ ,  $SD = 2.42$ ) having significance with marital status group married ( $M = 6.09$ ,  $SD = 1.85$ ). However, the mean difference was not significant among other types of marital status groups.

**Table 9**

*Means, Standard Deviations, and One-Way Analyses of Variance in Athens Insomnia Scale based on Marital status.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Marital Status Group (M, SD)	Marital Status Group (M, SD)
AIS	4.41*	.04	Single (8.34, 4.01)	Married (8.27, 3.53) Divorced* (5.53, 3.04)
			Married (8.27, 3.53)	Divorced (5.53, 3.04)

Note. \*\*\* $p < .001$ ; AIS = Athens Insomnia Scale

Table 9 indicated the mean, standard deviation, F-value and Post-hoc comparison for Athens insomnia across Marital status groups. The findings indicated that there is a significant mean difference among marital status groups with  $F(2, 199) = 4.41^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The marital status group single mean ( $M = 8.34$ ,  $SD = 4.01$ ) having significance with marital status group Divorced ( $M = 5.53$ ,  $SD = 3.04$ ). However, the mean difference was not significant among other types of marital status groups.

**Table 10**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory subscales based on Marital Status Groups*

Variables	F (2, 199)	P

Anxiety	.804	.32
Depression	1.10	.08
LBEC	2.58	.18
GPA	2.65	.06
LS	1.03	.16
JSS	1.45	.81

Note. LBEC = Loss of Behavioural / Emotional Control: General Positive Affect; LS = Life Satisfaction: JSS = Job Satisfaction Scale

Table 10 shows that there is no significant mean difference among groups based on Martial status in terms of Anxiety; Depression; LBEC; GPA; LS; and JSS. ( $p > .05$ ).

**Table II**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory based on Education Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Education Group (M, SD)	Education Group (M, SD)
MHI	6.53***	.11	FCPS (126.94, 7.77)	MBBS (128.68, 12.19)
				BSN (127.47, 12.39)
				Nursing Diploma** (118.19, 14.37)
				Other (129.21, 12.45)
				MBBS (128.68, 12.19)
				BSN (127.47, 12.39)
			BSN (127.47, 12.39)	Nursing Diploma** (118.19, 14.37)
				Other (129.21, 12.45)
				Nursing Diploma** (118.19, 14.37)
				Other (129.21, 12.45)
				Nursing Diploma (118.19, 14.37)
				Other (129.21, 12.45)

Note. \*\*\* $p < .001$ ; MHI = Mental Health Inventory

Table II indicated the mean, standard deviation, F-value and Post-hoc comparison for Mental Health Inventory across education groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 6.53$ ,  $p < .001$ . Further, the

Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The education group FCPS ( $M = 126.94, SD = 7.77$ ) having significance with education group nursing diploma ( $M = 118.19, SD = 14.37$ ). Furthermore, the finding indicated that education group MBBS ( $M = 128.68, SD = 12.19$ ) having significance with education group nursing diploma ( $M = 118.19, SD = 14.37$ ). Moreover, the result shows that education group BSN ( $M = 127.47, SD = 12.39$ ) having significance with education group nursing diploma ( $M = 118.19, SD = 14.37$ ). However, the mean difference was not significant among other types of education groups.

**Table 12**

*Means, Standard Deviations, and One-Way Analyses of Variance in Anxiety based on Education Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Education Group (M, SD)	Education Group (M, SD)
Anxiety	7.91***	.13	FCPS (31.47, 3.87)	MBBS (32.35, 4.43)
				BSN (31.04, 5.20)
				Nursing Diploma** (27.93, 4.78)
				Other (32.71, 3.98)
			MBBS (32.35, 4.43)	BSN (31.04, 5.20)
				Nursing Diploma*** (27.93, 4.78)
				Other (32.71, 3.98)
				Nursing Diploma** (27.93, 4.78)
			BSN (31.04, 5.20)	Other (32.71, 3.98)
				Nursing Diploma*** (27.93, 4.78)
				Other (32.71, 3.98)
				Other (32.71, 3.98)

Note. \*\*\* $p < .001$

Table 12 indicated the mean, standard deviation, F-value and Post-hoc comparison for Anxiety across education groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 7.91***, p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The education group FCPS ( $M = 31.47, SD = 3.87$ ) having significance with education group nursing diploma ( $M = 27.93, SD = 4.78$ ). Furthermore, the finding indicated that education group MBBS ( $M = 32.35, SD = 4.43$ ) having significance with education group nursing diploma ( $M = 27.93, SD = 4.78$ ). Moreover, the result shows that education group BSN ( $M = 31.04, SD = 5.20$ ) having significance with education group nursing diploma ( $M = 27.93, SD = 4.78$ ). However, the mean difference was not significant among other types of education groups.

**Table 13**

*Means, Standard Deviations, and One-Way Analyses of Variance in Depression based on Education Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Education Group (M, SD)	Education Group (M, SD)
Depression	9.40***	.16	FCPS (15.97, 2.36)	MBBS (15.35, 3.27)
				BSN (14.71, 3.35)
				Nursing Diploma*** (12.68, 3.18)
				Other (16.32, 3.27)
				MBBS (15.35, 3.27)
				BSN (14.71, 3.35)
			MBBS (15.35, 3.27)	Nursing Diploma** (12.68, 3.18)
				Other (16.32, 3.27)
				BSN (14.71, 3.35)
				Nursing Diploma** (12.68, 3.18)
				Other*** (16.32, 3.27)
				Other (16.32, 3.27)

Note. \*\*\*p<.001

Table 13 indicated the mean, standard deviation, F-value and Post-hoc comparison for Depression across education groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 9.40^{***}$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The education group FCPS ( $M = 15.97$ ,  $SD = 2.36$ ) having significance with education group nursing diploma ( $M = 12.68$ ,  $SD = 3.18$ ). Furthermore, the finding indicated that education group MBBS ( $M = 15.35$ ,  $SD = 3.27$ ) having significance with education group nursing diploma ( $M = 12.68$ ,  $SD = 3.18$ ). Moreover, the result shows that education group BSN ( $M = 14.71$ ,  $SD = 3.35$ ) having significance with education group nursing diploma ( $M = 12.68$ ,  $SD = 3.18$ ) and with education group other ( $M = 16.32$ ,  $SD = 3.18$ ). However, the mean difference was not significant among other types of education groups.

**Table 14**

*Means, Standard Deviations, and One-Way Analyses of Variance in Loss of Behavioural / Emotional Control based on Education Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Education Group (M, SD)	Education Group (M, SD)
LBEC	5.28***	.09	FCPS (31.25, 3.15)	MBBS (30.18, 4.85)

	BSN** (31.35, 3.47)
	Nursing Diploma** (28.23, 4.07)
	Other (30.82, 4.16 )
MBBS (30.18, 4.85)	BSN** (31.35, 3.47)
	Nursing Diploma (28.23, 4.07)
	Other (30.82, 4.16 )
BSN (31.35, 3.47)	Nursing Diploma** (28.23, 4.07)
	Other (30.82, 4.16 )
Nursing Diploma (28.23, 4.07)	Other (30.82, 4.16 )

Note. \*\*\* $p < .001$ ; LEBC = Loss of Behavioural / Emotional Control

Table 14 indicated the mean, standard deviation, F-value and Post-hoc comparison for loss of behavioural / emotional control across education groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 5.28^{***}$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The education group FCPS ( $M = 31.25$ ,  $SD = 3.15$ ) having significance with education group BSN ( $M = 31.35$ ,  $SD = 3.47$ ) and with education group nursing diploma ( $M = 28.23$ ,  $SD = 4.07$ ). Furthermore, the finding indicated that education group MBBS ( $M = 30.18$ ,  $SD = 4.85$ ) having significance with education group BSN ( $M = 31.35$ ,  $SD = 3.47$ ). Moreover, the result shows that education group BSN ( $M = 31.35$ ,  $SD = 3.47$ ) having significance with education group nursing diploma ( $M = 28.23$ ,  $SD = 4.07$ ). However, the mean difference was not significant among other types of education groups.

**Table 15**

*Means, Standard Deviations, and One-Way Analyses of Variance in Athens Insomnia Scale based on Education Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Education Group (M, SD)	Education Group (M, SD)
AIS	2.92*	.09	FCPS (8.34, 3.92)	MBBS (8.68, 4.14)
				BSN (6.80, 3.53)
				Nursing Diploma (8.98, 3.09)
				Other



	(7.32, 4.04 )
MBBS	BSN
(8.68, 4.14)	(6.80, 3.53)
	Nursing Diploma
	(8.98, 3.09)
	Other
	(7.32, 4.04 )
BSN	Nursing Diploma*
(6.80, 3.53)	(8.98, 3.09)
	Other
	(7.32, 4.04 )
Nursing Diploma	Other
(8.98, 3.09)	(7.32, 4.04 )

Note. \*\*\* $p < .001$ ; Athens Insomnia Scale

Table 15 indicated the mean, standard deviation, F-value and Post-hoc comparison for Athens Insomnia across education groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 2.92^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The education group BSN ( $M = 6.80$ ,  $SD = 3.53$ ) having significance with education group nursing group ( $M = 8.98$ ,  $SD = 3.09$ ). However, the mean difference was not significant among other types of education groups.

**Table 16**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory subscales based on Education Groups*

Variables	F (4, 199)	P
GPA	2.20	.07
ET	1.40	.23
LS	1.34	.25
JSS	1.45	.21

Note. GPA = General Positive Affect; ET = Emotional Ties; LS = Life Satisfaction; JSS = Job Satisfaction Scale

The results indicated that there is no significant mean difference among groups based on education in terms of GPA; ET; LS; and JSS. ( $p > .05$ ).

**Table 17**

*Means, Standard Deviations, and One-Way Analyses of Variance in Anxiety based on Occupation Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Occupation Group (M, SD)	Occupation Group (M, SD)

Anxiety	3.29 *	.06	Doctor (32.25, 4.24)	Nurse* (30.02, 4.68) Paramedical staff (30.11, 5.65) Physician assistant (27.38, 4.77) Other (32.11, 6.54 )
			Nurse (30.02, 4.68)	Paramedical staff (30.11, 5.65) Physician assistant (27.38, 4.77) Other (32.11, 6.54 )
			Paramedical staff (30.11, 5.65)	Physician assistant (27.38, 4.77) Other (32.11, 6.54 )
			Physician assistant (27.38, 4.77)	Other (32.11, 6.54 )

Note. \*\*\*p<.001

Table 17 indicated the mean, standard deviation, F-value and Post-hoc comparison for Anxiety across occupation groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 3.29^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The occupation group doctor ( $M = 32.25$ ,  $SD = 4.24$ ) having significance with occupation group nurse ( $M = 30.02$ ,  $SD = 4.68$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 18**

*Means, Standard Deviations, and One-Way Analyses of Variance in Depression based on Occupation Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Occupation Group (M, SD)	Occupation Group (M, SD)
Depression	4.07**	.07	Doctor (15.73, 3.00)	Nurse* (14.10, 3.27) Paramedical staff (14.48, 3,.45) Physician assistant* (12.25, 3.73) Other (16.56, 4.39 )
			Nurse (14.10, 3.27)	Paramedical staff (14.48, 3,.45)

	Physician assistant (12.25, 3.73)
	Other (16.56, 4.39 )
Paramedical staff (14.48, 3,.45)	Physician assistant (12.25, 3.73)
	Other (16.56, 4.39 )
Physician assistant (12.25, 3.73)	Other (16.56, 4.39 )

Note. \*\*\*p<.001.

Table 18 indicated the mean, standard deviation, F-value and Post-hoc comparison for Depression across occupation groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 4.07^{***}$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The occupation group doctor ( $M = 15.73$ ,  $SD = 3.00$ ) having significance with occupation group nurse ( $M = 14.10$ ,  $SD = 3.27$ ) and with occupation group physician assistant ( $M = 12.25$ ,  $SD = 3.73$ ). However, the mean difference was not significant among other types of occupation groups.

Table 19

Means, Standard Deviations, and One-Way Analyses of Variance in General positive effect based on Occupation Group.

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Occupation Group (M, SD)	Occupation Group (M, SD)
GPA	2.91*	.05	Doctor (28.98, 5.11)	Nurse (30.10, 5.64) Paramedical staff (29.30, 4,.04) Physician assistant* (35.00, 4.40) Other (31.67, 6.69 )
			Nurse (30.10, 5.64)	Paramedical staff (29.30, 4,.04) Physician assistant (35.00, 4.40) Other (31.67, 6.69 )
			Paramedical staff (29.30, 4,.04)	Physician assistant (35.00, 4.40) Other (31.67, 6.69 )
			Physician assistant	Other

(35.00, 4.40)

(31.67, 6.69)

Note. \*\*\*p<.001; GPA = General Positive Affect

Table 19 indicated the mean, standard deviation, F-value and Post-hoc comparison for general positive affect across occupation groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 2.91^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The occupation group doctor ( $M = 28.98$ ,  $SD = 5.11$ ) having significance with occupation group Physician assistant ( $M = 35.00$ ,  $SD = 4.40$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 20**

*Means, Standard Deviations, and One-Way Analyses of Variance in Life satisfaction based on Occupation Group.*

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Occupation Group (M, SD)	Occupation Group (M, SD)
LS	2.57*	.05	Doctor (2.78, 0.87)	Nurse (2.90, 0.81)
				Paramedical staff (2.93, 0.95)
				Physician assistant (2.25, 1.75)
				Other (3.67, 1.80)
			Nurse (2.90, 0.81)	Paramedical staff (2.93, 0.95)
				Physician assistant (2.25, 1.75)
				Other (3.67, 1.80)
				Physician assistant (2.25, 1.75)
			Paramedical staff (2.93, 0.95)	Other (3.67, 1.80)
				Physician assistant (2.25, 1.75)
				Other (3.67, 1.80)
				Other* (3.67, 1.80)
Physician assistant (2.25, 1.75)	Other* (3.67, 1.80)			

Note. \*\*\*p<.001; LS = Life Satisfaction

Table 20 indicated the mean, standard deviation, F-value and Post-hoc comparison for life satisfaction across occupation groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 2.57^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The occupation group physician assistant ( $M = 2.25$ ,  $SD = 1.75$ ) having significance with occupation group other ( $M = 3.67$ ,  $SD = 1.80$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 21**

Means, Standard Deviations, and One-Way Analyses of Variance in Job satisfaction scale based on Occupation Group.

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Occupation Group (M, SD)	Occupation Group (M, SD)
JSS	4.58**	.08	Doctor (34.17, 6.57)	Nurse (34.37, 4.46) Paramedical staff (36.07, 4.53) Physician assistant** (40.75, 2.05) Other (38.44, 4.12)
			Nurse (34.37, 4.46)	Paramedical staff (36.07, 4.53) Physician assistant** (40.75, 2.05) Other (38.44, 4.12)
			Paramedical staff (36.07, 4.53)	Physician assistant (40.75, 2.05) Other (38.44, 4.12)
			Physician assistant (40.75, 2.05)	Other (38.44, 4.12)

Note. \*\*\* $p < .001$ ; JSS = Job Satisfaction Scale

Table 21 indicated the mean, standard deviation, F-value and Post-hoc comparison for job satisfaction across occupation groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 4.58^{**}$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The occupation group Doctor ( $M = 34.17$ ,  $SD = 6.57$ ) having significance with occupation group Physician assistant ( $M = 40.75$ ,  $SD = 2.05$ ). Furthermore, the finding indicated that occupation group nurse ( $M = 34.37$ ,  $SD = 4.46$ ) having significance with occupation group physician assistant ( $M = 40.75$ ,  $SD = 2.05$ ). However, the mean difference was not significant among other types of occupation groups.

Table 22

Means, Standard Deviations, and One-Way Analyses of Variance in Athens insomnia scale based on Occupation Group.

Variables	F (4, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Occupation Group (M, SD)	Occupation Group (M, SD)
AIS	2.50*	.04	Doctor (8.25, 4.00)	Nurse (7.59, 3.54)

	Paramedical staff (8.04, 3.58)
	Physician assistant (11.75, 2.25)
	Other (8.67, 4.15 )
Nurse (7.59, 3.54)	Paramedical staff (8.04, 3.58)
	Physician assistant* (11.75, 2.25)
	Other (8.67, 4.15 )
Paramedical staff (8.04, 3.58)	Physician assistant (40.75, 2.05)
	Other (8.67, 4.15 )
Physician assistant (11.75, 2.25)	Other (8.67, 4.15 )

Note. \*\*\* $p < .001$ ; AIS = Athens Insomnia Scale

Table 22 indicated the mean, standard deviation, F-value and Post-hoc comparison for Athens insomnia scale across occupation groups. The findings indicated that there is a significant mean difference among education groups with  $F(4, 199) = 2.50^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The occupation group Nurse ( $M = 7.59$ ,  $SD = 3.54$ ) having significance with occupation group Physician assistant ( $M = 11.75$ ,  $SD = 2.25$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 23**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory subscales based on Occupation Groups*

Variables	F (4, 199)	P
MHI	2.34	.05
LBEC	0.95	.43
ET	1.76	.13

Note. MHI = Mental Health Inventory; LBEC = Loss of Behavioural / Emotional Control; ET = Emotional Ties

The results indicated that there is no significant mean difference among groups based on occupation in terms of MHI; LBEC; and ET. ( $p > .05$ ).

**Table 24**

*Means, Standard Deviations, and One-Way Analyses of Variance in Emotional Ties based on Working Experience Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Working Experience Group (M, SD)	Working Experience Group (M, SD)
ET	2.19***	.07	Less than 2 years (8.00, 2.70)	2 to 5 years** (6.32, 2.01)
				5 to 10 years*** (5.95, 1.81)
			2 to 5 years (6.32, 2.01)	5 to 10 years (5.95, 1.81)

Note. \*\*\* $p < .001$ ; ET = Emotion Ties

Table 24 indicated the mean, standard deviation, F-value and Post-hoc comparison for Emotional ties across working experience groups. The findings indicated that there is a significant mean difference among working experience groups with  $F(2, 199) = 2.19^{***}$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The working experience group Less than 2 years ( $M = 8.00$ ,  $SD = 2.70$ ) having significance with working experience group 2 to 5 years ( $M = 6.32$ ,  $SD = 2.01$ ). and with working experience group 5 to 10 years ( $M = 5.95$ ,  $SD = 1.81$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 25**

*Means, Standard Deviations, and One-Way Analyses of Variance in Life satisfaction based on Working Experience Group-*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Working Experience Group (M, SD)	Working Experience Group (M, SD)
LS	1.57**	.05	Less than 2 years (2.61, 0.85)	2 to 5 years (3.14, 1.14)
				5 to 10 years (2.69, 0.76)
			2 to 5 years (3.14, 1.14)	5 to 10 years** (2.69, 0.76)

Note. \*\*\* $p < .001$ ; LS = Life Satisfaction

Table 25 indicated the mean, standard deviation, F-value and Post-hoc comparison for life satisfaction across working experience groups. The findings indicated that there is a significant mean difference among working experience groups with  $F(2, 199) = 1.57^{**}$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The working experience group 2 to 5 years ( $M = 3.14, SD = 1.14$ ) having significance with working experience group 5 to 10 years ( $M = 2.69, SD = 0.76$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 26**

*Means, Standard Deviations, and One-Way Analyses of Variance in Athens Insomnia scale based on Working Experience Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Working Experience Group (M, SD)	Working Experience Group (M, SD)
AIS	4.79**	.04	Less than 2 years (9.94, 3.67)	2 to 5 years (8.49, 4.34)
			2 to 5 years (8.49, 4.34)	5 to 10 years* (7.35, 2.97)

Note. \*\*\* $p < .001$ ; AIS = Athens Insomnia Scale

Table 26 indicated the mean, standard deviation, F-value and Post-hoc comparison for Athens Insomnia scale across working experience groups. The findings indicated that there is a significant mean difference among working experience groups with  $F(2, 199) = 0.04$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The working experience group Less than 2 years ( $M = 9.94, SD = 3.67$ ) having significance with working experience group 5 to 10 years ( $M = 7.35, SD = 2.97$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 27**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory subscales and Job satisfaction scale based on Working Experience Groups*

Variables	F (2, 199)	P
MHI	2.19	.11
Anxiety	0.81	.44



Depression	0.97	.37
LBEC	0.23	.79
GPA	2.72	.06
JSS	1.57	.21

Note. MHI = Mental Health Inventory; LBEC = Loss of Behavioural / Emotional Control; GPA = General Positive Affect; JSS = Job Satisfaction Scale.

The results indicated that there is no significant mean difference among groups based on working experience in terms of MHI; Anxiety; Depression; LBEC; GPA and JSS. ( $p > .05$ ).

**Table 28**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory based on Working Shift Group.*

Variables	F (3, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Working Shift Group (M, SD)	Working Shift Group (M, SD)
MHI	3.61*	.05	Morning (125.05, 13.62)	Evening (126.67, 12.43)
				Night (121.02, 12.05)
				Other (133.50, 12.48)
			Evening (126.67, 12.43)	Night (121.02, 12.05)
			Other (133.50, 12.48)	
			Night (121.02, 12.05)	Other* (133.50, 12.48)

Note. \*\*\* $p < .001$ ; MHI= Mental Health Inventory

Table 28 indicated the mean, standard deviation, F-value and Post-hoc comparison for Mental Health Inventory across working shift groups. The findings indicated that there is a significant mean difference among working shift groups with  $F(3, 199) = 0.05$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The working shift group night ( $M = 121.02$ ,  $SD = 12.05$ ) having significance with working shift group other ( $M = 133.50$ ,  $SD = 12.48$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 29**

*Means, Standard Deviations, and One-Way Analyses of Variance in Anxiety based on Working Shift Group.*

Variables	F (3, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Working Shift Group (M, SD)	Working Shift Group (M, SD)
Anxiety	4.86**	.06	Morning	Evening

	(31.38, 4.97)	(30.48, 5.00)
		Night*
		(28.93, 4.47)
		Other
		(34.25, 2.41)
Evening	(30.48, 5.00)	Night
		(28.93, 4.47)
		Other
		(34.25, 2.41)
Night	(28.93, 4.47)	Other**
		(34.25, 2.41)

Note. \*\*\*p<.001;

Table 29 indicated the mean, standard deviation, F-value and Post-hoc comparison for Anxiety across working shift groups. The findings indicated that there is a significant mean difference among working shift groups with  $F(3, 199) = 4.86^{***}$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The working shift group morning ( $M = 31.38, SD = 4.97$ ) having significance with working shift group night ( $M = 28.93, SD = 4.47$ ). Furthermore, the finding indicated that working shift group night ( $M = 28.93, SD = 4.47$ ) having significance with working shift group other ( $M = 34.25, SD = 2.41$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 30**

*Means, Standard Deviations, and One-Way Analyses of Variance in Depression based on Working Shift Group.*

Variables	F (3, 199)	$\eta^2$	Post-hoc (Tukey) Comparison			
			Working Shift Group (M, SD)	Working Shift Group (M, SD)		
Depression	3.73*	.05	Morning (15.22, 3.41)	Evening		
				(14.74, 3.28)		
				Night*		
						(13.35, 3.47)
					Other	(16.00, 2.21)
			Evening	(14.74, 3.28)	Night	(13.35, 3.47)
					Other	(16.00, 2.21)
			Night	(13.35, 3.47)	Other	(16.00, 2.21)
						(16.00, 2.21)

Note. \*\*\*p<.001;

Table 30 indicated the mean, standard deviation, F-value and Post-hoc comparison for Depression across working shift groups. The findings indicated that there is a significant mean

difference among working shift groups with  $F(3, 199) = 3.73^* p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The working shift group morning ( $M = 15.22, SD = 3.41$ ) having significance with working shift group night ( $M = 13.35, SD = 3.47$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 31**

*Means, Standard Deviations, and One-Way Analyses of Variance in AIS based on Working Shift Group.*

Variables	F (3, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Working Shift Group (M, SD)	Working Shift Group (M, SD)
AIS	3.35*	.04	Morning (7.15, 3.10)	Evening (8.07, 4.36)
				Night* (9.11, 2.83)
				Other (9.50, 5.17)
			Evening (8.07, 4.36)	Night (9.11, 2.83)
				Other (9.50, 5.17)
				Other (9.50, 5.17)
			Night (9.11, 2.83)	Other (9.50, 5.17)

Note. \*\*\* $p < .001$ ; AIS = Athens Insomnia Scale

Table 31 indicated the mean, standard deviation, F-value and Post-hoc comparison for Athens Insomnia Scale across working shift groups. The findings indicated that there is a significant mean difference among working shift groups with  $F(3, 199) = 3.35^* p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The working shift group morning ( $M = 7.15, SD = 3.10$ ) having significance with working shift group night ( $M = 9.11, SD = 2.83$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 32**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory subscales and Job satisfaction scale based on Working Shift Groups.*

Variables	F (3, 199)	P
LBEC	2.41	.06
GPA	2.00	.11
ET	2.33	.07
LS	1.19	.12
JSS	0.53	.65

*Note.* LBEC = Loss of Behavioural / Emotional Control; GPA = General Positive Affect; ET= Emotional Ties; LS = Life Satisfaction; JSS = Job Satisfaction Scale

The results indicated that there is no significant mean difference among groups based on working shift in terms of LBEC; GPA; ET; LS; and JSS. ( $p > .05$ ).

**Table 33**  
*Means, Standard Deviations, and One-Way Analyses of Variance in General Positive Affect based on yearly income Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Yearly Income Group (M, SD)	Yearly Income Group (M, SD)
GPA	3.31*	.03	Less than 10 Lac (31.00, 5.18)	10 to 15 Lac*
				(28.52, 5.86)
			10 to 15 Lac (28.52, 5.86)	Above 15 Lac (29.87, 5.22)
				Above 15 Lac (29.87, 5.22)

Note. \*\*\* $p < .001$ ; GPA = General Positive Affect

Table 33 indicated the mean, standard deviation, F-value and Post-hoc comparison for General Positive Affect across yearly income groups. The findings indicated that there is a significant mean difference among yearly income groups with  $F(2, 199) = 3.31^*$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The yearly income group less than 10 lacs ( $M = 31.00$ ,  $SD = 5.18$ ) having significance with yearly income group 10 to 15 lac ( $M = 28.52$ ,  $SD = 5.86$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 34**  
*Means, Standard Deviations, and One-Way Analyses of Variance in Emotional Ties based on yearly income Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Income Group (Year) (M, SD)	Income Group (year) (M, SD)
ET	7.66**	.07	Less than 10 Lac (6.75, 2.33)	10 to 15 Lac***
				(5.33, 1.35)
			10 to 15 Lac (5.33, 1.35)	Above 15 Lac (6.16, 1.66)
				Above 15 Lac (6.16, 1.66)

Note. \*\*\* $p < .001$ ; ET = Emotional Ties

Table 34 indicated the mean, standard deviation, F-value and Post-hoc comparison for Emotional Ties across yearly income groups. The findings indicated that there is a significant mean difference among yearly income groups with  $F(2, 199) = 7.66^{**}$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The yearly income group less than 10 lacs ( $M = 6.75$ ,  $SD = 2.33$ ) having significance with yearly income group 10 to 15 lac ( $M = 5.33$ ,  $SD = 1.35$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 35**

*Means, Standard Deviations, and One-Way Analyses of Variance in Job satisfaction scale based on yearly income Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Income Group (Year) (M, SD)	Income Group (year) (M, SD)
JSS	3.07*	.03	Less than 10 Lac (35.72, 5.41)	10 to 15 Lac (35.05, 5.07) Above 15 Lac* (33.55, 5.07)
			10 to 15 Lac (35.05, 5.07)	Above 15 Lac (33.55, 5.07)

Note. \*\*\* $p < .001$ ; JSS = Job Satisfaction Scale

Table 35 indicated the mean, standard deviation, F-value and Post-hoc comparison for Job Satisfaction Scale across yearly income groups. The findings indicated that there is a significant mean difference among yearly income groups with  $F(2, 199) = 3.07^*$   $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The yearly income group less than 10 lacs ( $M = 35.72$ ,  $SD = 5.41$ ) having significance with yearly income group Above 15 lacs ( $M = 33.55$ ,  $SD = 5.07$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 36**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory subscales and Athens Insomnia Scale based on Yearly Income Groups*

Variables	F (2, 199)	P
MHI	1.01	.36
Anxiety	2.89	.05
Depression	1.98	.14
LBEC	0.01	.99
LS	2.15	.11
AIS	1.96	.14

Note. MHI = Mental Health Inventory; LBEC = Loss of Behavioural / Emotional Control; LS = Life Satisfaction; AIS = Athens Insomnia Scale.

The results indicated that there is no significant mean difference among groups based on yearly income in terms of MHI; Anxiety; Depression; LBEC; LS: and AIS. ( $p > .05$ ).

**Table 37**

*Means, Standard Deviations, and One-Way Analyses of Variance in Emotional Ties based on Sleeping Hours Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Sleeping hour (M, SD)	Sleeping hour (M, SD)
ET	4.29*	.04	Less than 6 hours (7.92, 3.20)	6 to 8 hours* (6.17, 1.89) More than 8 hours (6.67, 2.94)
			6 to 8 hours (6.17, 1.89)	More than 8 hours (6.67, 2.94)

Note. \*\*\* $p < .001$ ; ET = Emotional Ties.

Table 37 indicated the mean, standard deviation, F-value and Post-hoc comparison for Emotional Ties across Sleeping hour groups. The findings indicated that there is a significant mean difference among sleeping hour groups with  $F(2, 199) = 4.29^*$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The sleeping hour group less than 6 hours ( $M = 7.92$ ,  $SD = 3.20$ ) having significance with sleeping hour group 6 to 8 hours ( $M = 6.17$ ,  $SD = 1.89$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 38**

*Means, Standard Deviations, and One-Way Analyses of Variance in Life satisfaction based on Sleeping Hours Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Sleeping hour (M, SD)	Sleeping hours (M, SD)
LS	7.97***	.07	Less than 6 hours	6 to 8 hours***

	(3.92, 1.37)	(2.80, 2.87)
		More than 8 hours
		(3.00, 1.67)
6 to 8 hours		More than 8 hours
(2.80, 2.87)		(3.00, 1.67)

Note. \*\*\* $p < .001$ ; LS = Life Satisfaction

Table 38 indicated the mean, standard deviation, F-value and Post-hoc comparison for Life Satisfaction across Sleeping hour groups. The findings indicated that there is a significant mean difference among sleeping hour groups with  $F(2, 199) = 7.97^{***}$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The sleeping hour group less than 6 hours ( $M = 3.92$ ,  $SD = 1.37$ ) having significance with sleeping hour group 6 to 8 hours ( $M = 2.80$ ,  $SD = 2.87$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 39**

*Means, Standard Deviations, and One-Way Analyses of Variance in Job satisfaction scale based on Sleeping Hours Group.*

Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Sleeping hour (M, SD)	Sleeping hours (M, SD)
JSS	11.28***	.10	Less than 6 hours (28.58, 10.97)	6 to 8 hours*** (35.29, 4.28) More than 8 hours*** (38.33, 8.82)
			6 to 8 hours (35.29, 4.28)	More than 8 hours*** (38.33, 8.82)

Note. \*\*\* $p < .001$ ; JSS = Job Satisfaction Scale

Table 39 indicated the mean, standard deviation, F-value and Post-hoc comparison for Job Satisfaction Scale across Sleeping hour groups. The findings indicated that there is a significant mean difference among sleeping hour groups with  $F(2, 199) = 11.28^{***}$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The sleeping hour group less than 6 hours ( $M = 28.58$ ,  $SD = 10.97$ ) having significance with sleeping hour group 6 to 8 hours ( $M = 35.29$ ,  $SD = 4.28$ ) and with sleeping hour group more than 8 hours ( $M = 38.33$ ,  $SD = 8.82$ ). Moreover, the finding shows that the sleeping hour group 6 to 8 hours ( $M = 35.29$ ,  $SD = 4.28$ ) having significance with sleeping hour group more than 8 hours ( $M = 38.33$ ,  $SD = 8.82$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 40**

*Means, Standard Deviations, and One-Way Analyses of Variance in Athens Insomnia scale based on Sleeping Hours Group.*



Variables	F (2, 199)	$\eta^2$	Post-hoc (Tukey) Comparison	
			Sleeping hour (M, SD)	Sleeping hours (M, SD)
AIS	4.87**	.04	Less than 6 hours (11.17, 3.38)	6 to 8 hours** (7.82, 3.71)
			6 to 8 hours (7.82, 3.71)	More than 8 hours (9.00, 2.44)

Note. \*\*\* $p < .001$ ; AIS = Athens Insomnia Scale

Table 40 indicated the mean, standard deviation, F-value and Post-hoc comparison for Athens Insomnia Scale across Sleeping hour groups. The findings indicated that there is a significant mean difference among sleeping hour groups with  $F(2, 199) = 4.87^{**}$ ,  $p < .001$ . Further, the Post-hoc Comparisons indicated a significant between group mean differences of each group with other groups. The sleeping hour group less than 6 hours ( $M = 11.17$ ,  $SD = 3.38$ ) having significance with sleeping hour group 6 to 8 hours ( $M = 7.82$ ,  $SD = 3.71$ ). However, the mean difference was not significant among other types of occupation groups.

**Table 41**

*Means, Standard Deviations, and One-Way Analyses of Variance in Mental Health Inventory subscales based on Sleeping Hours Groups*

Variables	F (2, 199)	P
MHI	1.90	.15
Anxiety	0.75	.47
Depression	1.66	.19
LBEC	0.64	.52
GPA	2.32	.10

Note. MHI = Mental Health Inventory; LBEC = Loss of Behavioural / Emotional Control; GPA = General Positive Affect.

The results indicated that there is no significant mean difference among groups based on Sleeping hours in terms of MHI; Anxiety; Depression; LBEC; and GPA. ( $p > .05$ ).

Table 42  
*Moderation of Insomnia between Job Satisfaction and Mental Health.*

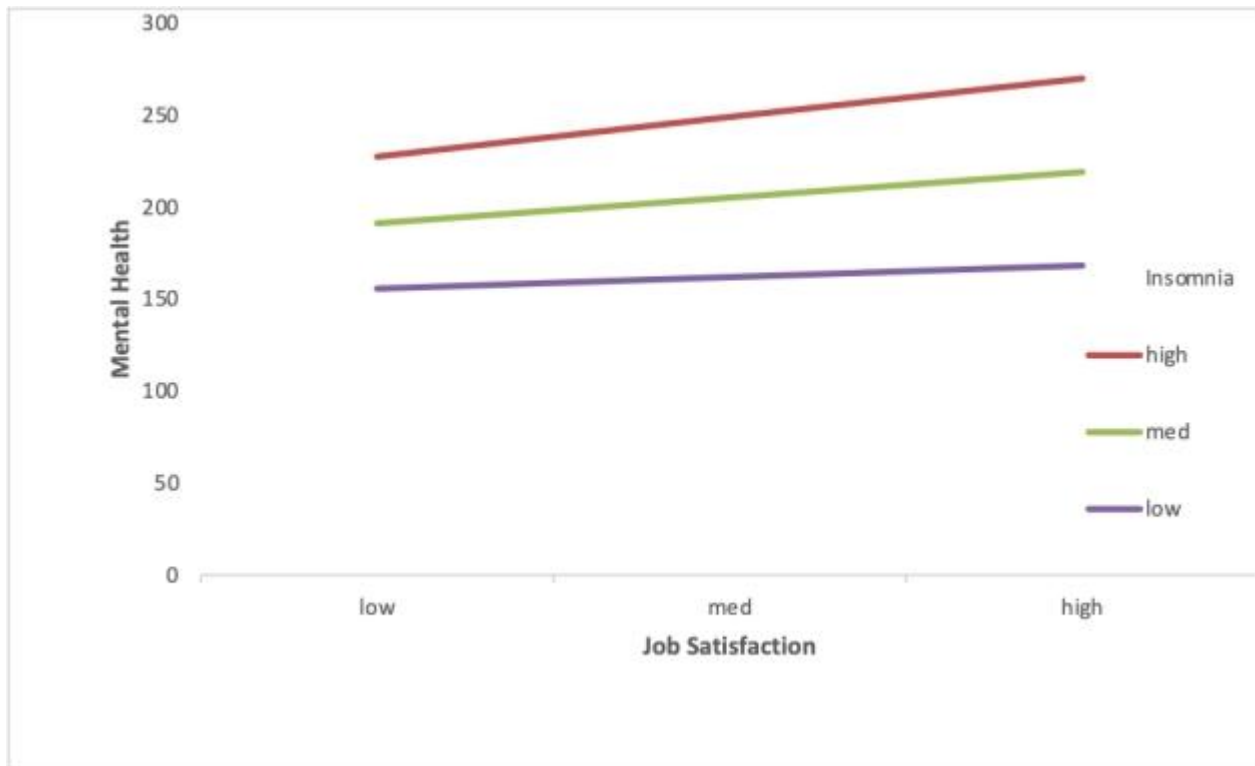
Variables	Model 1			Model 2		
	B	$\beta$	SE	B	B	SE
Constant	125.19***		.92	125.19***		.93
AIS	-.40	-.03	.93	-.39	-.03	.93
JSS	-1.05	-.08	.93	-1.31	-.10	1.10
Mental Health x Insomnia				.37	.04	.88
R <sup>2</sup>		.00			.00	
$\Delta R^2$					.00	

Note. AIS = Athens Insomnia Scale; JSS = Job Satisfaction Scale.

Table 42 shows the moderation of Insomnia between Mental Health and job satisfaction. In Model 1 the R<sup>2</sup> value of .00 revealed that the predictor explained 0% variance in the outcome with F (2, 197) = .75, p .474<sup>b</sup>. The finding revealed that insomnia ( $\beta = -.03$ ) and Job satisfaction were predicated ( $\beta = -.08$ ). In model 2, the R<sup>2</sup> values of .00 revealed that the predictors explained 0% variance in the outcome with F (3,96) = .56, p.64<sup>c</sup>. The findings revealed that insomnia ( $\beta = -.03$ ) and Job satisfaction predicated ( $\beta = -.10$ ) and Mental Health X Insomnia predicated statistic impulse ( $\beta = .04$ ). The  $\Delta R^2$  value of .00 revealed 0 0 percent change in the variance of model 1 and model 2 with  $\Delta F (1, 196) = .178$ .

**Figure 2**

*Mod-Graph with Moderating Effect of Insomnia between Job Satisfaction and Mental Health.*



## Discussion

The present study is conducted to explore the relationship between job satisfaction, insomnia, and mental health among health care professionals at district Umerkot, Sindh, to investigate the impact of job satisfaction in mental health in Healthcare professionals, to examine the impact of mental health on insomnia in health care professionals, to find out the moderating role of insomnia between Job satisfaction and mental health among health care professionals, to study the role of demographic variables on insomnia, Job satisfaction, and mental health among health care professional.

It is hypothesized that there will be a positive relationship between job satisfaction and mental health among healthcare professionals in district Umerkot Sindh. Some of the Previous studies show that in the healthcare industry, multidisciplinary teamwork is crucial and has been shown to improve patient outcomes. Additionally, a supportive team environment and a positive attitude toward teamwork could lessen burnout, boost job satisfaction, and foster a positive work environment. Teamwork among healthcare professionals becomes more crucial during a pandemic to overcome obstacles and manage COVID-19 patients (Htay et al., 2021).

Moreover, research indicated that the job satisfaction of healthcare professionals has been shown to be boosted by a number of factors. The increase in staff satisfaction is a result of several factors, including their pay and salary. There may be some form of compensation in order to increase the productivity and job satisfaction of the medical and nursing staff. Each healthcare employee could therefore be more productive if there is a corresponding incentive that would raise his or her level of job satisfaction. Equally significant is the fact that employees at health organizations report higher job satisfaction and a sense of justice within the organization. Meritocracy, impartial administration, fair distribution of shifts, rational division

of duties and work within the unit, and objective evaluation of promotions and pay increases are all important factors that can affect how satisfied nursing and medical staff are with their jobs (Kitsios & Kamariotou, 2021).

It is hypnotized that Health care professionals who have night shifts have high insomnia as compared to health care professionals working in the morning shift Some of the research has shown that Health care workers are already at an increased risk of sleep issues due to irregular work schedules, exposure to night shifts, and other contextual work factors. Additionally, Health care workers frequently experience burnout due to their demanding jobs, which is linked to the emergence of mental health issues like anxiety and depression, which in turn raises the likelihood of sleep issues. This may make it more difficult to provide high-quality healthcare services and negatively impact patient care (Pappa, Sakkas & Sakka, 2022).

### Conclusion

In Pakistan, the mental health of healthcare professionals is disturbed because of the working shift many employees are facing severe problems related to mental health, especially during the duration of the COVID-19 pandemic. Some of the main mental health problems with healthcare professionals during the COVID-19 pandemic are Insomnia, Anxiety, Depression, Post-Traumatic Stress Disorder, Job Satisfaction, etc.

The present study is conducted to explore the relationship between job satisfaction, insomnia, and mental health among health care professionals at district Umerkot, Sindh, to investigate the impact of job satisfaction in mental health in Healthcare professionals, to examine the impact of mental health on insomnia in health care professionals, to find out the moderating role of insomnia between Job satisfaction and mental health among health care professionals, to study the role of demographic variables on insomnia, Job satisfaction, and mental health among health care professional.

The findings of this research indicate that on the basis of job satisfaction, insomnia and mental health there is no significant positive correlation between job satisfaction, insomnia, and mental health. The moderation of Insomnia between Mental Health and job satisfaction shows. The model 1 revealed that the predictor explained 0% variance in the outcome. The moderation between insomnia and job satisfaction shows positive association and moderation between insomnia and mental health also shows positive relation with each other, which means that if the insomnia increases the job satisfaction will decrease and if the insomnia decrease the job satisfaction will increase.

### Limitations and Recommendations

There are some limitations of this research that the future researchers have to also select qualitative data on such sample so they can explore the participant's issues more conveniently and correctly also on the basis of qualitative data the research work will be more resilient and also help the students in future. Another limitation for future researchers is that the sample will be collected from a probability sampling technique. The recommendations of this study include that the qualitative data was not included and the probability sampling technique is not used in this research.