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The Relationship between Burnout, Sleep Quality and Job Performance among Staff Nurses at El-Sinbellawin General Hospital

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1.ABSTRACT

Background: Burnout and sleep quality can impact the job performance of nurses in terms of effectiveness, productivity, task execution speed and supervision. **Aim:** to investigate the relationship between burnout, sleep quality and job performance among staff nurses at El-Sinbellawin General Hospital. **Methods:** A descriptive correlational design was used with a sample of (76) staff nurses at EL-Sinbellawin General Hospitals. Tools of data collection were Burnout Self-Test, Sleep Quality Scale and Observation Checklist of Nurses Performance **Results:** More than half of the studied staff nurses had a highest level of burnout and lowest level of sleep quality. Two third of studied staff nurses had poor performance. **Conclusion:** There was statistically significant positive correlation between total sleep quality and burnout; there was statistically significant negative correlation between burnout and nurses performance. While, the level of burnout was high. Finally lowest level of sleep quality and job performance was poor. **Recommendations:** Consistent physical activity to staff nurses also lengthens the time you spend in the deep, restorative stages of sleep and improves the symptoms of sleep apnea and poor sleep quality. Furthermore, the performance of staff nurses are regularly evaluated, with positive performance being rewarded and criticism being given and Offering organized training programs to help staff nurses manage burnout and develop coping mechanisms.

Keywords*: Burnout, Job performance, Staff nurses***,** *Sleep quality*

2.Introduction:

Nurse managers promote the physical and mental health of staff nurses, enhance job performance for staff nurses who are showing symptoms of burnout, and increase the standard for clinical care **(Lu et al., 2017).** Insufficient sleep by the nurse will surely result in symptoms. **(Pınar et al., 2015**). Burnout is a serious issue in today's workplace, and it more patient-related mistakes. Performance on the job may be impacted by the physical and mental exhaustion brought on by poor sleep quality brought on by nurses' pessimism, fatigue, and discontent. **(Lu,Dresden, Mark &Salzman, 2017; Rudman &Gustavsson,2012).** Additionally, staff nurse turnover, health risks, excessive workloads, social support, resource access, and emotional demands can also have an impact. The precision of nursing and patient safety are both significantly impacted by the nurses' health **(Aronsson et al., 2017).**

Burnout is illness of the workplace. Constant work demands lead to the development of burnout syndrome, which has an adverse effect on both the staff nurses impacted and the environment in which they work (**Iserson, 2018**). Since nursing needs close contact with patient, nurses are more likely than other occupations to develop physical and mental problems as well as burnout has increased in frequency over the past ten years. It can have an impact on the environment when the physical environment, equipment, human resources, and inputs are inadequate **(De la Fuente et al., 2015).**

Staff nurses who have burnout may have a rise in blood pressure and heart rate, which could lead to a heart attack or other heart problems. Healthcare professionals have an issue with it. Additionally, it could be a sign of underlying psychological issues like pessimism and anxiousness. **(Iserson, 2018).** Burnout and poor sleep quality can frequently emerge from the consequences of personal life worries on the workplace, especially among staff nurses because they are typically more involved in hospitals. **(Abiodun, Osibanjo, Adeniji ,&Lyere-Okojie,2014).** Burnout brought on by insufficient sleep impairs focus, which raises the risk of workplace medical mistakes and patient harm **(Surani, Hesselbacher, Guntupalli,Surani& Subramanian, 2015).**

Sleep, which is a dynamic and controlled blend of behavioral and physiological states, is when many processes crucial to wellbeing and health take place. Healthy sleep is characterized by promoting high sleep quality, getting adequate amounts of sleep at the right times, and avoiding any sleep interruptions. **(Paruthi et al., 2016).** Sleep is essential for maintaining bio-psycho-social-cultural functioning in humans and is directly related to wellbeing and quality of life. In addition to decreasing cognitive performance and resulting in increased exhaustion, drowsiness, and concern, sleep disruptions are frequently linked to cardiovascular, metabolic, mental, and hormonal illnesses. These circumstances may hinder professional performance, which raises the risk of accidents. **(Garbarino,Lanteri, Durando, Magnavita, &Sannita, 2016).**

The disorder of the typical 24-hour sleep-wake cycle that results from shift work or other factors, such as travel, the environment, or different pathological states, is known as dyssomnia and is correlated with poor sleep quality. Waking up feeling alert and fit is definite as the sleep quality (**Karatay et al., 2016).** A person's satisfaction with their sleep experience, which includes aspects of sleep maintenance, sleep initiation, sleep quantity, and waking up rested, is defined as having good sleep quality. The efficiency with which staff nurse performs their job duties in relation to providing direct patient care is referred to as job performance. When staff nurses carry out their responsibilities poorly, patients complain more frequently and there are more tardiness's and delays.

Job performance has become a priority in the workplace environment and administrative insolence. Clinical instances, national research, and the financial penalty of bad sleep habits have all been used to demonstrate the impact of sleep quality on job performance. **(Synder, 2003)**.The performance of their human resources affects the quality of standard of care given to patients. In reality, staff nurses make up the largest group of healthcare professionals' human resources when working in a hospital setting as frontline staff nurses. Low human expenses, increased organizational profitability, and patient loyalty are all benefits of good job performance. Because of the limited resources, there is uncertainty over several aspects of the nurse's function. **(Noor &Ong 2016)**.

Nurses must constantly overcome difficulties as a result of cuts that have unintended consequences, such as reducing patient care standards and providing staff nurses with insufficient information about their performance. Because nurses give the highest level of direct patient care compared to other staff nurses in hospital settings, and because their job performance is viewed as a crucial factor in providing high services, studying the nursing profession is imperative. **(Ali &Qun, 2019).**

2.1Significance of Study

Burnout and sleep quality can impact the job performance of nurses in terms of effectiveness, productivity, task execution speed and supervision. Understanding the effect of these factors on nurses' health and performance could help healthcare providers to set strategies that might increase the psychological status and performance of nurses. Thereby, improving the overall health status of nurses which could significantly contribute to keep patients' safe, develop outcomes, and better use of institutional resources. Burnout and sleep quality appear to be related, and seems to have adverse effects on the job performance of nurses **(Giorgi, Mattei, Notarnicola, Petrucci, &Lancia, 2018).** So the study aimed to investigate the relationship between burnout, sleep quality and job performance among staff nurses at El-Sinbellawin General Hospital.

2.2Aim of the study

This study aimed to investigate the relationship between burnout, sleep quality and job performance among staff nurses at El-Sinbellawin General Hospital.

2.3Research questions:

RQ1: What is the level of burnout among staff nurses at El-Sinbellawin General Hospital?

RQ2: What is the characteristic of sleep quality among staff nurses at El-Sinbellawin General Hospital?

RQ3: What is the level of job performance among staff nurses at El-Sinbellawin General Hospital?

RQ4: Is there a relationship between burnout, sleep quality and job performance among staff nurses at El-Sinbellawin General Hospital?

3.Methods

3.1Research design:

Descriptive correlational research design.

3.2Setting:

This study was carried out at EL-Sinbellawin General Hospital which delivers a wide spectrum of health services to many villages affiliated with EL-Sinbellawin General Hospital ,Dakahlia Governate.The study was accompanied at all hospital departments which are (obstetrics,

gynecology, nephrology, urology, pediatric and internal medicine).

3.3Participant:

All staff nurses (n=76) who were available at the time of data collection were included in the study.

3.4Study tools:

Three tools were used to gather the data for this study:

Tool (I): Burnout Self-Test

It involves of two parts:

First part: Personal characteristics such as (age, gender, marital status, years of experience and educational qualification) of staff nurses.

Second part: Burnout Self-Test developed by **Maslash and Leiter (1997)**.It aims to assess the level of burnout. It consists of 15 statements .Response of staff nurses range from (1) not at all to (5) very often.

Scoring system:

*15-18: no sign of burnout
*19-32: little sign of burnout
*33-49: at risk of burnout
*50-59: severe risk of burnout
*60-75: very severe risk of burnout

Tool (II): Sleep Quality Scale (SQS) :

Developed by **Yi, Shin and Shin (2006)**. It goals to assess the characteristic of sleep quality of staff nurses**.** It consisting of (28) items grouped under five domains :daytime symptoms(9), restoration after sleep(6), problems initiating and maintaining sleep(8), difficulty waking(2), and sleep satisfaction(3). Using a four-point, Likert-type scale, respondents indicate how frequently they exhibit certain sleep behaviors from (0 = "few," to "almost always"3).

Rarely: none or 1-3 times a month

Sometimes: 1-2 times a week

Often: 3-5 times a week

Almost always: 6-7 times a week **(Howell, 2008).**

Tool (III): Observation Checklist of Nurses performance (OCNP):

Developed by **Ahmed,(2015)**. It was utilized to assess the level of performance of staff nurses. It included (71) items categories under 9 main dimensions which are: leadership (7items), Psychosocial individual (14 items), communication (11 items), general patient care (13 items), vital signs (3 items), medication (7 items), patient status (5 items), planning and evaluation (4 items) and dressing (7items). Observation checklist scored on the basis of (yes, no) and not applicable for each activity. "Yes" scored (one point), "no" scored (zero), and "not applicable" omitted from the calculation.

Scoring system was used (Ayyash&Aljeesh, 2011):

*< 50% poor performance

50%- < 65% moderate *

*65%- < 75% good

*75% -< 85% very good

*85% - 100% excellent performance.

3.5Validity and reliability:

Five nursing faculty experts from Mansoura University examined it for face validity. They improved the tools for clarity, applicability, relevancy, understanding, comprehensiveness, and ease of execution, and changes were made in accordance with their recommendations. Burnout, sleep quality, and job performance reliability tests were conducted using study tools, and Cronbach's Alpha reliability was calculated to be (0.709), (0.796), and (0.670) correspondingly.

3.6Pilot study:

A pilot study was conducted on 10% of: 9 staff nurses who participated in the pilot study were not included in the main study sample in order to test the statement's clarity, viability, and time requirements for answering the questions. According to the pilot study, clarification and rewording are necessary modifications.

3.7Data Collection:

The staff nurse received the questionnaire sheets (I and II). The researcher explained the purpose of the study and how to complete the questionnaire sheets. Staff nurse completed in the tools individually at once and they read the questionnaires and filling it sheet acquired from 10-15 minutes. In order to complete the third tool (the observation checklist), which is used to evaluate the staff nurses performance, the researcher observes each staff nurse on various days throughout the morning and afternoon shifts. From the beginning of August through the end of October 2021, data was gathered.

3.8Ethical Consideration:

Ethical approval was received from the Research Ethical Committee of Faculty of Nursing, Mansoura University. The hospital's responsible administrator granted official permission for the study to be carried out. An oral consent was obtained from staff nurse who accept to participate in the study after providing the explanation of

nature and aim of the study. Every participant was made aware of the study's voluntary nature and their right to discontinue participation at any time. All participants were assured about the confidentiality of the gathered data and the privacy of the study sample was assured at all phases of the study.

3.9Statistical analysis:

Data collected were coded, entered and analyzed using Statistical Package for the Social Sciences (SPSS version 21). Descriptive statistics, such as mean, standard deviation (SD), frequency, and percentage were used. Median, 75th percentiles, minimum, maximum was used to assess total sleep quality scores among the studied nurses. Pearson correlation coefficient was used to test the relationship between burnout, total performance and sleep quality domains.

4.Results:

Table (1): Demographic characteristics of staff nurses. It revealed that 64.5 % of the staff nurses were in age group from 22:<26years old with mean±sd 25.53±2.87, equal precent in gender ,over half of them were married.68.4 % had more than 1:<5 with mean ±sd 4.26±2.90 and all of them had diploma of technical institute of nursing.

Figure (1): Levels of burnout of staff nurses .Shows that 84.2% of the studied sample were at risk for burnout and 15.8% of were was at severe risk for burnout.

Figure (2): Levels of sleep quality of the studied staff nurses. Shows that 90.8 of studied sample had low sleep quality, while 9.2% had high sleep quality.

Figure (3): Boxplot sleep quality**.** Shows that total sleep quality scores among the studied nurses were categorized as ;1st quartile (25)th was 38, 50th (median) was 42, 3rd (75)th was 44 , minimum score was 26, maximum score was 54 and outlier values were (22,23) **.**

Figure (4): Levels of staff nurses performance **.**Shows that 73.7% of the study sample had poor performance, and 26.3% had moderate performance.

Table (2): Correlation between burnout, quality of the sleep and total nurse's performance. Shows that there was statistically significant positive correlation between nurses sleep quality and burnout with r value = .387 and P value = .001*.There was statistically significant negative correlation between nurses performance and burnout with r value =- .048 and P value =.683.

Figure (5): Correlation between burnout and total sleep quality of staff nurses. Shows that there was statistically significant positive correlation between total sleep quality and burnout with r value = .389 and P value .001*.

5.Discussion

The staff nurse's ability to provide high-quality treatment or services may suffer from burnout. Nurses, who institute the most of healthcare professionals, frequently experience burnout and sleep quality while provided that care for patients. It is assumed that staff nurses who find it difficult to juggle work and family responsibilities will experience increased burnout **(Yifan , Ying , Chunhong , et al,2020)**. It is crucial to look at the connection between burnout and sleep issues in staff nurses because it has been shown to have an impact on their sleep quality and be a contributing factor to insomnia. **(Huang ,Wu ,Ho,Wang ,2018)**. Staff nurses in the human services sector, particularly those in the healthcare sector, who have negative views about themselves, life, and job, are gradually coming to understand burnout as a severe issue. **(Coban & Irmis 2016)**. Locally and internationally, nursing job performance has advanced, and long-term goals are garnering attention as a crucial idea that can successfully improve care quality. **(Choi,2020).**

The majority of the staff nurses in the study are at risk of burnout, according to the current study. That's may be because they faced under an unpleasant level of pressure to succeed, they reached less than they should and bureaucracy or organizational politics hinder their ability to perform well. The current study results in the same line supported with **Sowmya & Panchanatham (2012**) presented that staff nurses in healthcare settings are at risk of burnout because they cannot complete many of the tasks necessary for high-quality work because of a lack of time. In accordance with **Maslach and Leiter (2016),** it was discovered that staff nurses in the healthcare sector are at risk for burnout among the general working population. This can result in adverse emotional states like high levels of concern, tension, stress, and finally job burnout. Also, this result agreed with **Gustafsson et al., (2016)** presented that burnout at risk in the hospital because of long work hours and other mediating factors.

Dissimilarity **Mcmillan et al. (2016)** demonstrated that staff nurses' burnout were low when their coworkers valued or understood them. The outcome of the study disagreed with **leiter, (2021)** disagreed that burnout is not an illness in and of itself, but rather has minimal risk impacts on

mental and physical health. Also, **Green et al., (2013)** concluded that burnout is low burnout evidenced by consistent feedback andappreciationofstaffnursesaccomplishments.

The current study presented that the highest percentage of studied staff nurses has low sleep quality. This result may be the result of sleepiness interferes with daily life, difficult to concentrate made lose desire in all things and made easily tired at work. The finding of this study supported with **Zuraikat Faris .etal., (2020)** revealed that low sleep quality have received little attention because poor sleep made staff nurses irritable**.** Furthermore, **Patterson et al., (2020)** showed that low sleep quality resulted feelings of burnout and worry, declined daytime sleepiness. In a group of healthy, uncomplaining staff nurses, a high prevalence of poor sleep quality may be a crucial early indicator of underlying mental or physical health difficulties. Staff nurses' increased daytime sleepiness and poor sleep quality may be produced by the partial sleep deprivation symptoms they exhibit.

Moreover, **Harsh, etal (2005)** showed that a staff nurse with good sleep quality is one who effortlessly transitions from consciousness to sleep in the morning and maintains undisturbed sleep during nocturnal arousals and awakenings. Also,**Fekedulegn et al. (2016)** discovered that staff nurses' poor sleep quality had an impact on their night and evening work schedules. The finding of the study disagreed with **Leary, (2016**) revealed that staff nurses' daily lives were affected by their bad sleep since it was difficult for them to focus at work and made them lose interest in their tasks.

According to the existing study, the majority of studied staff nurses had poor job performance that was related to not supporting them by providing them with positive feedback, a lot of fatigue, stress, and effort that also required plans to overcome stresses and required the ability to cope effectively, which increased patient fear and anxiety. The present study approved with **Armstrong et al, (2012)** indicated that poor job performance plays the role proximal trigger. The findings indicated that job performance interacts with future work. This result agreed with **Vagas (2005)** showed that staff nurses, who are stressed, fatigued, unable to concentrate, or incapable of controlling their work will make errors and lead to poor job performance. In the same line supported with **Schultz (2006**) presented that there is poor job performance that happens when staff nurses is exposed difficult tasks. This result disagreed with **Yurchisin &Park (2010)** found that good job performance among the staff nurses reported feeling content in their positions.

The current study's findings revealed a statistically significant unfavourable association between burnout and nurse performance. This relationship may be due to burnout's effects on work performance and hospital outcomes. According to the current study, which was supported by **Kim et al. (2019)** Burnout and job performance were significantly correlated among nurses working in normal wards but not statistically connected among nurses working in total nursing care service wards.This result approved with **Uchmanowicz , Manulik , Lomper , et al (2020)** discovered that sufficient working hours, tools, efficient materials and infrastructure, as well as an increase in staff, would improve professional performance and reduce risk factors like burnout syndrome. The study's conclusion According to **Shaharruddin (2021)**, there is a link between burnout and poor job performance, with a high burnout level potentially making job performance poorer.

The current study found a statistically significant positive relationship between burnout and sleep quality, suggesting that burnout may cause poor sleep quality and low career satisfaction. The current study agreed with **Söderström et al (2012)** found that burnout may be somewhat related to poor sleep quality. Regarding fatigue and sleep, this is in agreement. The present study disagreed with **Alimoğlu & Dönmez,(2005)** found that a higher burnout level in nurses with sleep quality. Nurses who had trouble sleeping often experienced sleep disturbances or higher degrees of burnout. Instead of the participant's work schedule, the participant's natural morning-to-evening sleep pattern was the best predictor of sleep quality.

The current study's findings revealed a statistically significant inverse relationship between nurses' performance and their ability to sleep, which shows that staff nurses may need to address the causes of their bad sleep in order to perform their duties more effectively. The present study disagreed with **Gamaldo et al., (2019**) discovered that memory complaints and decreased performance in sustained attention were significantly correlated with poorer sleep quality, especially fragmented or disturbed sleep. In the same line disagreed with **Kline,(2014)** found that poor sleep quality is related to poor job performance. In the same line disagreed with **Khajeh Hosseini et al,(2019)** revealed a strong correlation between the nurses' sleep quality and their job performance, and it was found that nurses

with greater sleep quality performed better on the job performance.

6.Conclusion

According to the study's findings, there was statistically significant positive correlation between total sleep quality and burnout; there was statistically significant negative correlation between nurse's performance and burnout. While, the level of burnout was high, the level of sleep quality and job performance was low.

7.Recommendations: -

Based on the results of this study, it is recommended that:

* Preserving a healthy work environment for the nurses to reduce burnout and to confirm safety and high-quality patient care.
* Planning for work redesign initiatives, early assessment, and intervention are all beneficial in reducing staff nurses' burnout.
* Consistent physical activity also lengthens the time you spend in the deep, restorative stages of sleep and improves the symptoms of sleep apnea and poor sleep quality
* Avoiding large meals before bed in order to improve the sleep quality, try moving dinner time earlier in the evening.
* Maintaining a tight relationship with the staff nurses, treating them with respect, and giving them the assistance and guidance they need to perform better.
* The performance of staff nurses are regularly evaluated, with positive performance being rewarded and criticism being given.

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Table (1): Demographic characteristics of staff nurses (n=76)

Variable	No.	%
Age		
22:<26	49	64.5
26:<30	17	22.4
≥30	10	13.2
Mean ±Sd.	25.53±2.87	
Gender		
Male	38	50.0
Female	38	50.0
Marital status		
Single	37	48.7
Married	39	51.3
Experience		
1:<5	52	68.4
5:<9	18	23.7
≥9	6	7.9
Mean ±Sd.	4.26±2.90	
Education		
Diploma of technical institute of nursing	76	100

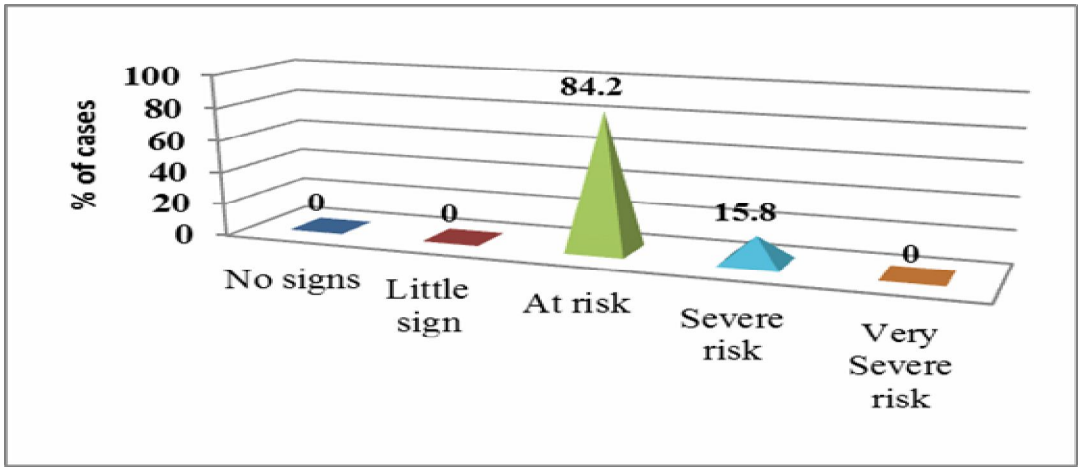


Figure (1): Levels of burnout of staff nurses (n=76)

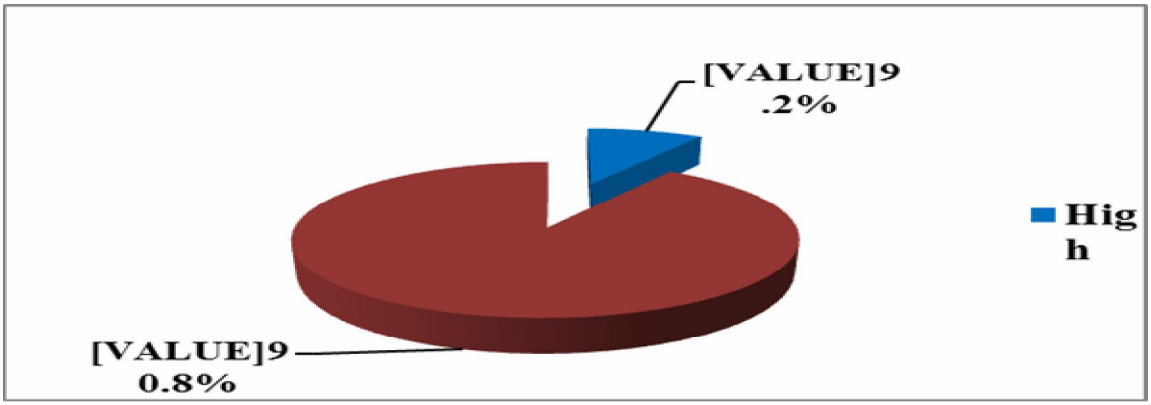


Figure (2): Levels of sleep quality of the studied staff nurses

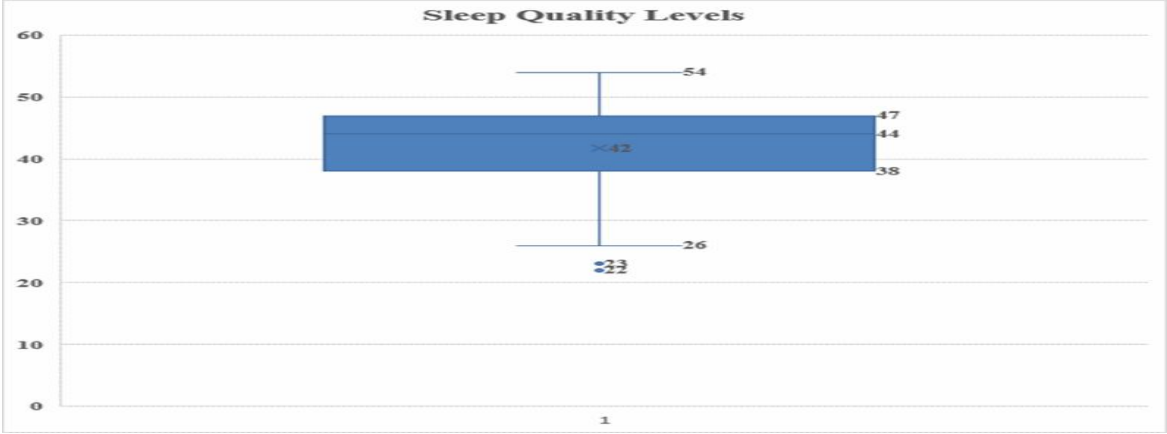


Figure (3): Boxplot sleep quality

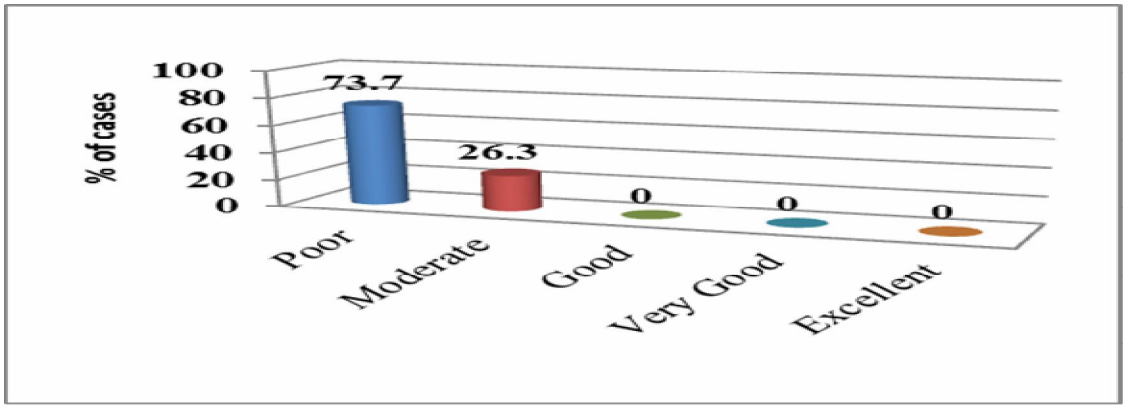
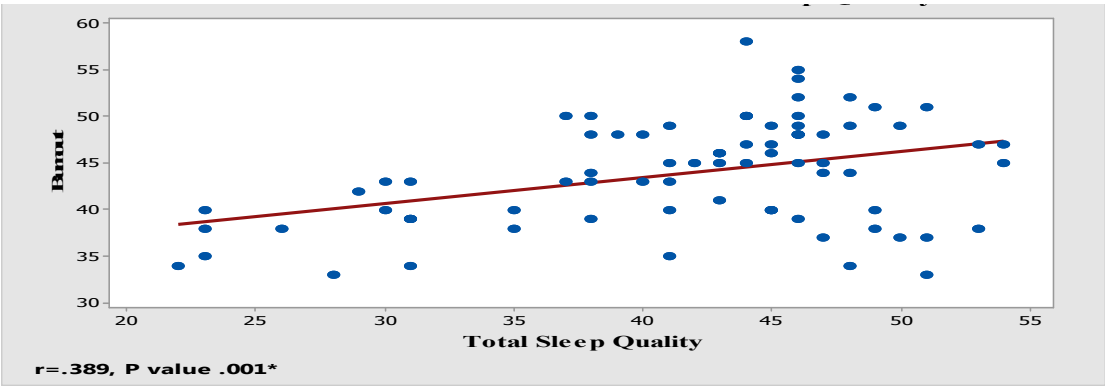


Figure (4): Levels of staff nurses performance (n=76)

Table (2): Correlation between burnout, quality of the sleep and total nurse's performance.

Items	Burn out	
	R	P value
Total sleep quality	.387	**.001***
Total nurses' performance	-.048	.683

r is Pearson correlation test; * Significant at p < 0.05



Correlation between Burnout and Total Sleep Quality

r is Pearson correlation test; * Significant at p < 0.05

Figure (5): Correlation between burnout and total sleep quality of staff nurses (n=76)