

Effects of 12-hour Shift Duration to Operations Employees’ Job Performance during the Pandemic

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Abstract:

Debates on the issues on shifting schedules are discussed in different industries due to its benefits and negative effects on the overall safety well-being of the employee. The compressed work weeks that are considered a benefit from a 12-hour shift duration is often popular to employees due to the increased number of days off. However, the concern on the negative effects does not nullify the negative effects on safety and well-being of the employees. Shift management of the shifting schedule shall be considered to counterbalance to provide a solution to this problem. The objective of this study was to assess the effects of 12-hour shift duration to operations employees’ job performance considering the current setup due to the limitations of the COVID-19 pandemic. For this study, the researchers conducted a survey with 48 respondents from the Company Y’s operations department. The descriptive design technique was used and data gathered were analyzed using comparison. Despite the problems that were presented in the related literature in the study, according to the findings of the researchers, the employees seemed to have adapted to the 12-hour shift duration which shows less negative impact to their physical and medical condition, psychological health, quality and duration of sleep, and productivity and quality of work. The findings do not indicate if these factors affect the employees in a long-term set-up. Since the operations employees are the heart of the Supply Chain, Pricing, and Terminal Operations, the management must develop programs to mitigate chronic and acute effects of the 12-hour shift schedule in the overall safety and well being of the employees.

Keywords — Shift duration, Job Performance, Shift Management

I. INTRODUCTION

In response to the demands of a developing community, a 24-hour job duration is now a major feature of working life across a wide range of industries. This round the clock arrangement is to provide continuous services to customers in different fields. Though it has its benefits, this type of job shift duration must be managed accordingly to minimize the impact on the well-being

and performance of the shift workers. It is the organization’s responsibility to apply proper shift management to let its employees work under suitable and sensible time protocols. Twelve-hour system is a popular option of shift management in a 24-hour job duration since it compresses the required working weeks per month and it also offers a greater opportunity for a work-life balance.

However, unfavorable outcomes have also been studied after the introduction of 12-hour shifts. Some of the major arguments regarding this system tend to discuss the concern regarding fatigue management and the negative effect on the alertness and performance thereby reducing the operational safety and efficiency.

This study entitled “Effects of 12-hour Shift Duration to Operations Employees’ Job Performance during the Pandemic” aims to evaluate the possible factors that could affect the Operations Employees’ Job Performance considering a continuous 12-hour shift duration. This study shall be conducted to help the organization in the improvement of the workers’ shift schedule to produce a more efficient workforce despite the challenges of the new normal during the pandemic.

The chosen subject area of the study is the Operations department of Company Y since the organization applies the 12-hour shift schedule with 15 days on duty and 15 days off. Employees’ work efficiency is critical to the organization given that limited manpower is available due to the pandemic. Thus, there is a need to conduct the study in order to describe the factors affecting the employees’ job performance regarding the current shift management to be a basis in formulating actions for the continuous improvement that would greatly benefit not only the employees but the organization as well.

II. JUSTIFICATION OF THE PROPOSED TOPIC

Company Y, the third biggest player as of August 2021 in the downstream oil sector in the Philippines, consists of 650 employees deployed in the nine oil terminals across the country. Among the nine oil terminals of the company, Calaca Terminal with 54 operations employees situated in Calaca, Batangas is considered the largest in terms of manpower, area, and sales volume. In the second quarter of 2021, Calaca Terminal contributed more than 60% of the total sales volume despite the challenges imposed by the pandemic.

In order to meet the growing demands of the customers, Company Y started a revamp and expansion project at Calaca Terminal last 2019 for the tank truck loading area. Last March 2020, when pandemic hit the Philippines, and the organization started realigning its budget priorities resulting in lay off of some of the employees and the suspension of all the ongoing projects nationwide. The revamp and expansion project has affected eight tank truck loading bays with six loading bays still operational.

In order to sustain and achieve better throughput volume while maximizing the available resources, the terminal aims to optimize the efficiency of the remaining tank truck loading bays and performance of the Operations department employees.

This study aims to provide data to the HR department as a basis on how they can better manage the schedule of the manpower to increase the Operations Employees’ Job Performance given the challenges during the pandemic. This study shall focus on the work-related factor which is the employees consecutive 12-hour shift duration for 15 days. The findings of the study shall be the basis of the adjustment and formulation of policies by the HR department for a more suitable work schedule based on the effects of the current arrangement that would lead to a more efficient workforce.

III. STATEMENT OF THE PROBLEM

This study aims to describe the effects of the 12-hour shift duration to the employee’s job performance. Specifically, this study seeks answer to the following questions:

1. What is the profile of the respondents in terms of:
 - a. age?
 - b. sex?
 - c. civil status?
 - d. lifestyle?
 - e. nature of work?
2. Upon experiencing the 12-hour shift duration for 15 days straight, what is the assessment of the employees in terms of:
 - a. Physical health and medical condition?
 - b. Psychological health?
 - c. Quality and duration of sleep?
 - d. Productivity and quality of work?
3. How may the responses be compared when respondents are grouped according to profile?
4. Based on the findings, what plan of action may be proposed to enhance the job performance of the operations employees?

IV. RESEARCH LITERATURE

The review of related literature is an early step in conducting the research. It avoids the duplication of the research work and broadens the understanding of the research problem. There are various research studies that have been conducted in the Philippines and other countries which are relatively connected with the research project. In this chapter, a review of the selective and useful studies related to the effects of 12-hour shift duration to employees’ job performance has been conducted. Managers, shift workers, union representatives, federal regulators, corporate policy-makers, and academic experts have been simultaneously debating how 12-hour shifts affect the overall performance of employees compared to those working

on 8-hour shifts. Twelve-hour shifts are still one of the most frequently debated topics in shift work management.

Based on study done by Haddadi (2013) so far, it can be concluded that the study of the effective factors on the nurses' job performance and even other critical jobs is very necessary especially in those whose job performance, how to interact with the job, people involved, organizations and the community is very important. Chronic fatigue syndrome has a considerable impact on job performance, to the extent that many studies have discerned that the loss rate in performance for affected people is 50 % compared to healthy people. This can be due to the factor which is the main reason for this disorder - chronic fatigue - that can affect the performance indicators from various aspects. For example, the intensity of the fatigue can affect their accuracy or ability to acquire new skills and train existing skills.

Williamson et al investigated the effects of 12 hour shifts on the work quality and productivity of computer operators. They found that a change from eight hour to 12 hour shifts was accompanied by improved wellbeing, especially psychological health and reduced tiredness throughout the work period. There were no apparent costs in terms of job satisfaction or productivity as a result of the 12 hour rota. Even under conditions of high physical workload, mining shift workers have been reported to show no differences in levels of fatigue between eight hour and 12 hour shifts.

On the other hand, Rupprecht (2019) presented several factors concerning the advantages and disadvantages of 12-hour duration shifts on the operations employees. These are some of the major advantages of 12-hour shifts from the management perspective, as experienced by Human Resource Managers, Shift Supervisors, Department Superintendents and Plant Managers are the following: 1) increased productivity and reduced errors; 2) increased continuity and accountability; 3) reduced adaptation time; 4) higher project completion rates; 5) reduced absenteeism; 6) lower attrition and turnover; 7) improved morale; 8) more dedicated employees. Contrarily, some disadvantages caused by 12-hour shifts are the following: 1) greater challenge to sustain vigilance; 2) extended exposure to work-related stress; 3) unequal distribution of work hours; 4) potential compromise in alertness and performance; 5) increased ergonomic risk; 6) difficulties of change; 7) sleep schedule inflexibility. Based on the study, the factors under advantages and disadvantages clearly demonstrate that 12-hour shifts are not for everybody and are not for every situation. It may be harder for some people, especially those who work on jobs that require heavy physical labor as they may face severe fatigue and ergonomic injuries in the workplace. strategies[3].

V. THEORETICAL FRAMEWORK

The focus of this study was to describe the factors affecting the employees' job performance in accordance with the 12-hour shift practice. Several factors can be considered but the study will only be limited to the work-related ones such as physical health and medical condition, psychological health, quality and duration of sleep, and productivity and quality of work.

The 12-hour shift duration has several studies that discuss the impact on physical health and medical conditions. As believed by Banakhar (2017), reported that 12-hour duration shifts had a massive impact on the employees' health and wellbeing; including cognitive anxiety, musculo-skeletal disorders, sleep disturbance, and role stress. Moreover, this review concluded that 12-hour duration shifts had resulted in negative health concerns. The findings of the study of Khavaji et.al (2012) collectively indicate that 12-hour shift work is an important variable in influencing the health of petrochemical workers, specifically gastrointestinal, musculoskeletal and cardiovascular symptoms. Khan et al. (2020) said that a 12-hour shift affects the physical medical condition which occurred due to change in body pattern while adjusting in a different environment. Psychological health is one of the most affected according to Khan et al. (2020). Their study states that the psychological stresses are mostly due to deprivation of social activities and remoteness of the workplace and to adjust on-off days. In addition, shift management played a vital role showing that the lack of understanding by organizations affects not only worker's physical situation but their mental health as well. Banakhar (2017) stated that when considering cognitive anxiety and stress which are related to each other, these adverse effects could result from longer daily exposures to the stress of nurse's work characteristics. Moreover, it seems possible that these results are due to their experiences and fatigue as an adverse effect.

Quality and duration of sleep is affected according to Caruso (2013). She states that 12-hour shifts increase the risk for short sleep duration, sleep disturbances, reduced job performance, obesity, injuries, and a wide range of chronic diseases. In her study, statistics between the periods of 1985-1990 and 2004-2007 shows that 32% of healthcare workers have reported that they do not get enough sleep. Khan et al (2020) also states that insomnia greatly affects workers having 12-hour shifts. The middle age group suffered from most of this effect specifically due to change in shifts and adjusting to those shifts while working. In a study conducted by Banakhar (2017), it was found out that nurses working for 12-hour shifts reported significant poor general sleep qualities, and felt more tired after sleep. It could be suggested that higher indices of

chronic fatigue, anxiety, and emotional exhaustion among nurses working for 12-hour shifts are associated with poor general sleep qualities.

It was also discussed that productivity and quality of work is also affected by 12 hour shift duration. Pencavel (2014) stated that long weekly hours and long daily hours do not necessarily yield high output and this implies that employees at work for a long time may experience fatigue or stress that not only reduce his or her productivity but also increases the probability of errors, accidents, and sickness that impose cost on the employer. In the medical field, Stimpfel & Aiken (2013) and Ball et al. (2015), have also found out that nurses who worked on 12-hour shifts or longer were reported to have poor quality of care and poor patient safety compared to those working 8-hour shifts.

VI. CONTRIBUTION OF RESEARCH

The findings of this study shall be a great reference in formulating and re-assessing current HR policies and developing new strategies designed and perfectly suited for the current new normal setup of the Calaca Terminal Operations department which can also be considered to be applied to other oil terminals of the company in the country. This can also be a great platform to the employees to assess the factors related to the 12-hour shift duration that affects their efficiency at work. A more efficient workforce would greatly affect the Calaca Terminal Operations Department of Company Y in terms of a better throughput volume for tank truck loading process which converts to significant increase in the sales volume.

Other industries with the same job shift duration can also use this study as reference in evaluating the design of their shift management. Moreover, this study shall serve as the basis of future researchers in pursuing other related studies.

VII. PROPOSED RESEARCH METHODOLOGY

The main purpose of the study is to describe the factors that affect the operations' employees job performance in the 12-hour shift schedule setup. The researchers shall use a descriptive design method to help them gather reliable information for the formulation of a precise conclusion useful in completing the study. With respect to the variables considered in this study, the descriptive method of research is the most applicable type of research in acquiring information concerning the current study.

VIII. RESULT AND DISCUSSION

A. Profile of the Respondents

TABLE I
 DISTRIBUTION OF THE RESPONDENTS IN TERMS OF AGE

| Age Groupings | Frequency | Percent |
|---------------|-----------|--------------|
| 15-25 | 11 | 22.92 |
| 26-35 | 22 | 45.83 |
| 36-45 | 7 | 14.58 |
| 46-55 | 8 | 16.67 |
| 56-65 | 0 | 0 |
| Total | 48 | 100.0 |

The table shows the distribution of the respondents in terms of age. The data illustrates that the organization has the highest population in the age bracket of 26-35 with the frequency of 22 respondents and percentage of 45.83 percent. This is followed by the age ranging from 15-25 or 22.92 percent of the respondents. Next was the age range by 46-55 which has the frequency of 8 with the percentage of 16.67 percent. It was followed by the age range 36-45 which comprised 7 respondents with the percentage of 14.58 percent. The age ranges from 56-65 have no frequency at all.

TABLE II
 DISTRIBUTION OF THE RESPONDENTS IN TERMS OF SEX

| Sex | Frequency | Percent |
|--------------|-----------|--------------|
| Male | 44 | 91.67 |
| Female | 4 | 8.33 |
| Total | 48 | 100.0 |

This table represents that the majority was composed of a male respondent with a percentage of 91.67 percent and the female respondents with a percentage of 8.33 percent.

TABLE III
 DISTRIBUTION OF THE RESPONDENTS IN TERMS OF CIVIL STATUS

| Civil Status | Frequency | Percent |
|--------------|-----------|--------------|
| Single | 19 | 38.58 |
| Married | 26 | 54.17 |
| Separated | 1 | 2.08 |
| Widowed | 2 | 4.17 |
| Total | 48 | 100.0 |

As seen in the table, the majority of the respondents in this study are married which is 54.17 percent of the respondents. This is followed by the single group which is composed of 38.58 percent. Next to these are the respondents

who are widowed which have 4.17 percent of the respondents. Lastly the ‘separated’ group which is composed of 2.08 percent of the respondents has a frequency of 2.

TABLE IV
 DISTRIBUTION OF THE RESPONDENTS IN TERMS OF LIFESTYLE

| Lifestyle | Frequency | Percent |
|--------------|-----------|--------------|
| Active | 8 | 16.67 |
| Healthy | 20 | 41.67 |
| Solo | 4 | 8.33 |
| Rural | 5 | 10.42 |
| Hedonistic | 11 | 22.92 |
| Total | 48 | 100.0 |

In this study the lifestyle of the respondents is also identified as seen in this table. The data shows that the highest frequency is the healthy lifestyle which consists of 20 respondents and a percentage of 41.67. This is followed by hedonistic lifestyle with 11 respondents and a percentage of 22.92. The third one was active lifestyle composed of 8 respondents or 16.67 percent. It is followed by rural lifestyle with 5 respondents and a percentage of 10.42. The lowest frequency is the solo lifestyle with 4 respondents and 8.33 percent.

TABLE V
 DISTRIBUTION OF THE RESPONDENTS IN TERMS OF NATURE OF WORK

| Nature of Work | Frequency | Percent |
|----------------|-----------|--------------|
| Field | 23 | 47.90 |
| Office | 11 | 22.92 |
| Combination | 14 | 29.18 |
| Total | 48 | 100.0 |

As seen from the table, the frequency of 23 with a percentage of 47.9 percent of the respondents, the nature of work is in the field. This is followed by the combination group with 29.18 percent. The next is the nature of work in the office with a frequency of 11 and a percentage of 22.92 percent.

B. Experiences during the 12-hour Shift Duration

TABLE VI
 EXPERIENCES DURING THE 12-HOUR SHIFT DURATION IN TERMS OF PHYSICAL HEALTH AND MEDICAL CONDITION

| Statement | Mean | Verbal Interpretation |
|-------------------------------------------------------------------------------------------|------|-----------------------|
| 1. I am physically fit to work even under the 12-hour shift schedule for 15 days straight | 3.23 | Often |
| 2. I am feeling perfectly well and in good health | 3.27 | Often |

| | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------|
| 3. I have developed disease/s during the 12-hour shift schedule duration | 2.04 | Seldom |
| 4. I have been experiencing back pain before, during or after my shift | 2.38 | Seldom |
| 5. I have been experiencing abnormal blood pressure (low blood or high blood) during the shift schedule | 2.17 | Seldom |
| 6. I have been experiencing migraines | 2.13 | Seldom |
| 7. I can have my meals on time | 2.71 | Often |
| 8. I feel the need to consult the company nurse/doctor or family physician for health assessment after being under the 12-hour shift schedule for months | 2.02 | Seldom |
| 9. Despite the 12-hour shift schedule, I find time to exercise to stay fit | 2.15 | Seldom |
| 10. It is harder to lose weight and stay fit on the 12-hour shift schedule | 2.58 | Often |
| Composite Mean | 2.47 | Seldom |

Data reveals that the respondents experience the 12-hour shift duration in terms of physical and medical health with a composite mean of 2.47 and a verbal interpretation of “seldom”. The statement with the most elevated mean was the feeling of perfectly well and in good health with a weighted mean of 3.27 and a verbal interpretation of often. On the other hand the lowest frequency was the feeling of needing to consult the company doctor or family physician for health assessment after being under the 12-hour shift schedule for a month with a weighted mean of 2.02 and a verbal interpretation of seldom.

It is revealed that some of the respondents are having such difficulties in the 12-hour duration shift in terms of physical and medical health. Among these statements, many affirms that they are well and in good health. Moreover, the respondents do not feel that they need a health consultation after being under the 12-hour shift. Although in a study conducted by Banakhar (2017), overtime and extended work shifts have an adverse effect on health, this study shows that the 12-hours shift is not considered a factor that triggers the physical and medical health of the employees at Company Y.

TABLE VII
 EXPERIENCES DURING THE 12-HOUR SHIFT DURATION IN TERMS OF
 PSYCHOLOGICAL HEALTH

| Statement | Mean | Verbal Interpretation |
|-----------------------------------------------------------------------------------------------------|-------------|-----------------------|
| 1. I feel optimistic after the 12-hour shift even with the pandemic | 2.94 | Often |
| 2. I keep my mental health checked | 3.02 | Often |
| 3. I feel a high level of stress due to workload and responsibilities on the 12-hour shift schedule | 2.65 | Often |
| 4. I can still do my hobbies that help me relax | 2.54 | Often |
| 5. I find more time to bond with my family | 2.40 | Seldom |
| 6. I get easily irritated | 2.50 | Often |
| 7. I feel pressured | 2.56 | Often |
| 8. I feel like I'm mentally burning out even before my shift ends | 2.48 | Seldom |
| 9. I am more reliant on smoking to help me relax | 1.75 | Seldom |
| 10. I feel more at peace with the current setup | 2.52 | Often |
| Composite Mean | 2.54 | Often |

As seen from the table, the respondents often experience during the 12-hour shift duration in terms of psychological health with a composite mean of 2.54 and a verbal interpretation of “often”. The statement with the highest weighted mean was keeping the mental health checked with a 3.02 and a verbal interpretation of “often”. Meanwhile, the statement with the lowest weighted mean was being more reliant on smoking to help them relax with a weighted mean of 1.75 and a verbal interpretation as “seldom”.

In the study conducted by Khan (2020) he mentioned that unpredictability and length of work patterns brings unwanted steam and stress. However, in the results presented in this study, the experiences of employees under the 12-hour shift does not depict negative effects on their psychological health. Given that individuals have their own distinctions, their opinions and coping mechanisms also vary. This table clearly demonstrates how individuals respond and cope with the challenges caused by long hours of work.

TABLE VIII
 EXPERIENCES DURING THE 12-HOUR SHIFT DURATION IN TERMS OF QUALITY
 AND DURATION OF SLEEP

| Statement | Mean | Verbal Interpretation |
|--------------------------------------------------------------------------------|-------------|-----------------------|
| 1. I have difficulty falling asleep | 2.67 | Often |
| 2. I get sufficient deep sleep during my 15 days of duty | 2.46 | Seldom |
| 3. I find it hard to go back to sleep once I wake up in the middle of my sleep | 2.75 | Often |
| 4. I can easily fall asleep whenever I want to | 2.27 | Seldom |
| 5. I find it hard to adjust to the day shift and night shift | 2.46 | Seldom |
| 6. I feel the need to take a nap during my shift | 2.48 | Seldom |
| 7. I feel refreshed after sleep | 2.69 | Often |
| 8. My fatigue is relieved after sleep | 2.85 | Often |
| 9. I am satisfied with my sleep | 2.60 | Often |
| 10. I feel sleepy throughout the day | 2.29 | Seldom |
| Composite Mean | 2.55 | Often |

This table shows that the composite mean of experiences during the 12-hour shift duration in terms of quality and duration of sleep is 2.55 and verbally interpreted as “often”. The statement with the highest weighted mean was the fatigue is relieved after sleep with a composite mean of 2.85 and a verbal interpretation as “often”. On the other hand the lowest weighted mean was the feeling sleepy throughout the day with a weighted mean of 2.29 and a verbal interpretation of “seldom”.

The data shows how 12-hour shift duration affects the quality and duration of sleep of employees. Most of the respondents affirm that they are having trouble falling asleep due to long hours of work. As stated in the theoretical framework, 12-hour shifts increase the risk for short sleep duration, sleep disturbances, and reduced job performance.

In his study, Banakhar (2017) mentioned that fatigue has been found to increase over the length of the duration of shifts among his respondents. Therefore, 12-hour shifts are associated with poor quality of sleep.

TABLE IX
 EXPERIENCES DURING THE 12-HOUR SHIFT DURATION IN TERMS OF
 PRODUCTIVITY AND QUALITY OF WORK

| Statement | Mean | Verbal Interpretation |
|----------------------------------------------------------------------------------------------------|-------------|-----------------------|
| 1. I contribute new ideas to work more efficiently | 2.96 | Often |
| 2. I can perform my job best on the 12hour schedule | 2.94 | Often |
| 3. I find myself not working at times when I'm supposedly working | 2.17 | Seldom |
| 4. I cannot concentrate enough on my work during the 12-hour shift schedule | 2.04 | Seldom |
| 5. I get compliments from my supervisor for a job well done | 2.75 | Often |
| 6. I actively participate in training to keep my knowledge up to date | 3.02 | Often |
| 7. I am not involved in any product quality related incident | 2.60 | Often |
| 8. I need to take frequent breaks during the 12-hour shift schedule | 2.58 | Often |
| 9. I ensure to double check all the documents, the dye, and the product before releasing the lorry | 3.38 | Often |
| 10. My work has become more efficient due to the 12-hours shift schedule | 2.83 | Often |
| Composite Mean | 2.93 | Often |

This data shows the experiences during the 12-hour shift duration in terms of psychological health showing the composite mean of 2.93 and verbally interpreted as “often”. The statement with the highest mean is the ensuring to double check all the documents, the dye and the product before releasing the lorry with a weighted mean of 3.38 and the verbal interpretation is “often”. Meanwhile the statement with the lowest frequency is they cannot concentrate enough on their work during the 12-hour shift schedule with a weighted mean of 2.04 and verbally interpreted as “seldom”.

Pencavel (2014) suggested a reason for optimizing employer to care about the length of working hours: employees at work for a long time may experience fatigue or stress that not only reduces his or her productivity but also increases the probability of errors, accidents, and sickness that

costs on the employer. In this study, the result represents the experiences of employees under the 12-hour shift duration and its effects on their productivity and quality of work. Given this data, it is not evident that long hours of work contribute to poorer quality of work and productivity, including errors, accidents and sickness associated with fatigue and stress.

TABLE X
 FACTORS AFFECTING THE EMPLOYEE’S JOB PERFORMANCE ON A 12-HOUR
 SHIFT BE COMPARED WHEN RESPONDENTS ARE GROUPED ACCORDING TO AGE

| Age | I1 | VI | I2 | VI |
|-------|------|--------|------|--------|
| 15-25 | 2.68 | Often | 2.63 | Often |
| 26-35 | 2.43 | Seldom | 2.45 | Seldom |
| 36-45 | 2.33 | Seldom | 2.46 | Seldom |
| 46-55 | 2.41 | Seldom | 2.7 | Often |
| 56-65 | 0 | NA | 0 | NA |
| CM | 2.47 | Seldom | 2.54 | Often |

| Age | I3 | VI | I4 | VI |
|-------|------|--------|------|-------|
| 15-25 | 2.65 | Often | 2.8 | Often |
| 26-35 | 2.56 | Often | 2.71 | Often |
| 36-45 | 2.32 | Seldom | 2.69 | Often |
| 46-55 | 2.51 | Often | 2.7 | Often |
| 56-65 | 0 | NA | 0 | NA |
| CM | 2.55 | Often | 2.93 | Often |

This table demonstrates that when the respondents are grouped according to age, the productivity and quality of work obtained the highest with the composite mean of 2.93 and verbally interpreted as often. This means that the employees increase productivity and reduce errors due to longer shifts. Next was the quality and duration of sleep with a composite mean of 2.55 which was similarly interpreted as often. Additionally, the physical health and medical condition falls under the last position with the composite mean of 2.47 and verbally interpreted as seldom.

This demonstrates that employees with a 12-hour shift duration despite the significance of long working hours can have a variety of physical and medical health syndromes.

TABLE XI
 FACTORS AFFECTING THE EMPLOYEE’S JOB PERFORMANCE ON A 12-HOUR
 SHIFT BE COMPARED WHEN RESPONDENTS ARE GROUPED ACCORDING TO SEX

| Sex | I1 | VI | I2 | VI |
|--------|------|--------|------|--------|
| Male | 2.46 | Seldom | 2.56 | Often |
| Female | 2.58 | Often | 2.3 | Seldom |
| CM | 2.52 | Often | 2.43 | Seldom |

| Sex | I3 | VI | I4 | VI |
|--------|------|-------|------|-------|
| Male | 2.53 | Often | 2.72 | Often |
| Female | 2.80 | Often | 2.78 | Often |
| CM | 2.67 | Often | 2.75 | Often |

Presented in Table 11 are the factors affecting the employee’s job performance when grouped according to sex. The data presents that the productivity and quality of work has the highest composite mean with the value of 2.75 and verbal

interpretation of Often. The data also present that the quality and duration of sleep has the lowest composite mean of 2.43 with a verbal interpretation of seldom.

TABLE XII
 FACTORS AFFECTING THE EMPLOYEE'S JOB PERFORMANCE ON A 12-HOUR SHIFT BE COMPARED WHEN RESPONDENTS ARE GROUPED ACCORDING TO CIVIL STATUS

| Status | I1 | VI | I2 | VI |
|-----------|------|--------|------|--------|
| Single | 2.65 | Often | 2.45 | Seldom |
| Married | 2.0 | Seldom | 2.6 | Often |
| Separated | 2.55 | Often | 2.45 | Seldom |
| Widowed | 2.46 | Seldom | 2.60 | Often |
| CM | 2.42 | Seldom | 2.53 | Often |

| Status | I3 | VI | I4 | VI |
|-----------|------|--------|------|--------|
| Single | 2.15 | Seldom | 1.85 | Seldom |
| Married | 2.4 | Seldom | 2.6 | Often |
| Separated | 2.63 | Often | 2.81 | Often |
| Widowed | 2.53 | Often | 2.74 | Often |
| CM | 2.43 | Often | 2.50 | Often |

Table 12 illustrates that when the respondents are grouped according to civil status the highest mean was the psychological health with a composite mean of 2.53 and a verbal interpretation as often. It is followed by the productivity and quality of work with a mean of 2.50 and verbally interpreted as often. The lowest composite mean based on this data was the experiences in physical and medical health with a composite mean of 2.42 and a verbal interpretation as seldom.

Based on this, it shows that single employees seldom experience some factors that affect their performance due to long hours of work.

TABLE XIII
 FACTORS AFFECTING THE EMPLOYEE'S JOB PERFORMANCE ON A 12-HOUR SHIFT BE COMPARED WHEN RESPONDENTS ARE GROUPED ACCORDING TO LIFESTYLE

| Life Style | I1 | VI | I2 | VI |
|------------|------|--------|------|--------|
| Active | 2.56 | Often | 2.66 | Often |
| Healthy | 2.47 | Seldom | 2.46 | Seldom |
| Solo | 2.15 | Seldom | 2.18 | Seldom |
| Rural | 2.32 | Seldom | 2.5 | Often |
| Hedonistic | 2.58 | Often | 2.72 | Often |
| CM | 2.42 | Seldom | 2.50 | Often |

| Life Style | I3 | VI | I4 | VI |
|------------|------|--------|------|--------|
| Active | 2.54 | Often | 2.65 | Often |
| Healthy | 2.56 | Often | 2.82 | Often |
| Solo | 2.6 | Often | 2.80 | Often |
| Rural | 2.44 | Seldom | 2.48 | Seldom |
| Hedonistic | 2.58 | Often | 2.71 | Often |
| CM | 2.54 | Often | 2.69 | Often |

The table demonstrates that when responses are grouped according to lifestyle, the productivity and quality of

work has the highest mean of 2.69 with verbal interpretation as often while the physical health and medical condition ranked the lowest with 2.38 as the mean and verbal interpretation of seldom.

Based on the given data, it can be inferred that employees who seek enjoyment and pleasure as they follow the hedonistic lifestyle are the most productive and produce quality work among others.

TABLE XIV
 FACTORS AFFECTING THE EMPLOYEE'S JOB PERFORMANCE ON A 12-HOUR SHIFT BE COMPARED WHEN RESPONDENTS ARE GROUPED ACCORDING TO NATURE OF WORK

| Nature of Work | I1 | VI | I2 | VI |
|----------------|------|--------|------|--------|
| Field | 2.65 | Often | 2.45 | Seldom |
| Office | 2.0 | Seldom | 2.6 | Often |
| Combination | 2.55 | Often | 2.45 | Seldom |
| CM | 2.40 | Seldom | 2.50 | Often |

| Nature of Work | I1 | VI | I2 | VI |
|----------------|------|--------|------|--------|
| Field | 2.15 | Seldom | 1.85 | Seldom |
| Office | 2.4 | Seldom | 2.6 | Often |
| Combination | 2.63 | Often | 2.81 | Often |
| CM | 2.39 | Often | 2.42 | Often |

Table 14 illustrates that when the respondents are grouped according to the nature of work, the highest mean was the psychological health with a composite mean of 2.50 and a verbal interpretation as often. It is followed by the productivity and quality of work with a mean of 2.42 and verbally interpreted as often. The lowest composite mean based on this data was the experiences in quality and duration of sleep with a composite mean of 2.39 and a verbal interpretation as seldom.

Based on this, it shows that the employees with a combination of field and office work are focused on their productivity and quality of work.

C. Comparison of the Responses on the Extent of Utilization of the Factors affecting Employee's Job Performance on a 12-hour shift schedule

TABLE XV
 COMPARISON OF THE RESPONSES ON THE EXTENT OF UTILIZATION OF THE FACTORS AFFECTING EMPLOYEE'S JOB PERFORMANCE ON A 12-HOUR SHIFT SCHEDULE

| Factors Affecting Employees' Job Performance | | |
|----------------------------------------------|----------------|-----------------------|
| Indicator | Composite Mean | Verbal Interpretation |
| Physical Health and Medical Condition | 2.41 | Seldom |
| Psychological Health | 2.54 | Often |

| | | |
|----------------------------------|------|-------|
| Quality and duration of sleep | 2.55 | Often |
| Productivity and quality of work | 2.73 | Often |
| Total: | 2.56 | Often |

Table 15 presents the composite mean of all the indicators affecting the employees' job performance on a 12-hour shift schedule with a verbal interpretation of "Often". This indicates that despite the challenges of the 12-hour shift schedule for 15 days straight, the employees found a way to cope with the schedule that had less and manageable negative effects on their physical and medical condition, psychological health, quality and duration of sleep, and productivity and quality of work.

D. Proposed Plan of Action to Enhance the Employees' Job Performance in 12-hour shift schedule

CONCLUSION

Long working hours are recognized to be harmful to one's health. The researchers have concluded that 12-hour duration shifts are most likely to cause constant exposure to stressful situations for long periods, along with generally difficult hours of work and the overall psychological demands of the job, can lead to general stress, fatigue, cognitive anxiety, musculoskeletal disorders, problems sleeping, tiredness, and various health risks. Working long hours can also lead to hypertension, diabetes, metabolic syndrome, and ischemic heart disease, stroke, and an increase in mortality. Employees who worked long hours had negative consequences on their mental health and effects on their physical health. The researchers have observed that the longer the working hours, the greater the amount of stress and the greater the incidence of physical and mental health problems. This study suggests that the main reason for the adverse health effects caused by prolonged working hours is employees' exposure to stressful situations and environments. Though 12-hour duration shifts can benefit both the employee and employer's overall growth and development, a few things should be considered before moving forward to prolonged working hours. After all, nothing is a hundred percent beneficial, especially in terms of shift scheduling. Longer shifts are commonly associated with the greater challenge of sustaining vigilance, extended exposure to work-related stress, diminished communication, personal interaction, unequal distribution of work hours, increased risk of getting out of touch, increased ergonomic risk, increased health risks.

Furthermore, employee performance levels might be reduced as well. Despite the adverse health effects, several people prefer working longer shifts and choose to face the challenges such as being mentally and physically drained. These people should be educated on what they need to equip themselves to survive their shifts — maintaining motivation and general health.

RECOMMENDATIONS

The organization of working time based on 12-hour shifts in studied units led to a massive improvement for day employees, who are typically in favor of working 12-hour shifts. Benefits include greater work-life balance, decreased time strain, and more job satisfaction. These advancements are detrimental to night employees, who are typically unsatisfied and opposed to working 12-hour shifts: they express a degradation in working conditions, increased discontent with handovers, and a deterioration in their work-life balance.

Our findings highlight the importance of a sufficiently coordinated and in-depth preparation before implementing these new organizational schedules to avoid last-minute adjustments and a polemical climate, as was the case in the studied hospital's intensive care units, particularly among night staff. Flexible scheduling should be appropriately handled to avoid several consecutive shifts, lengthy periods of working without rest, and balanced breaks throughout the day. Employees who can adjust their schedules for family or personal requirements are especially crucial for families with children. This will reduce stress, enable flexible work hours throughout the year, and eliminate many work-life issues.

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