



## Job Characteristics and Burnout among Intensive Care Nurses

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### Abstract: -

**Background:** Nursing is recognized as a high-stress occupation. It is essential to improve job characteristics to achieve nurses' goals as well as organizational interests to reduce burnout which consider a major problem for nurses. **Aim:** Determine relationships between job characteristics and nurses' burnout in intensive care units, at both selected studied hospitals **Design:** A descriptive comparative co-relational design were used. **Setting:** Medical Specialty Hospital and Gastroenterology Surgery Center which are of centers at Mansoura University Hospitals. **Subjects:** All nurses working at different I.C.U at medical Specialty Hospital (36) and in Gastroenterology Surgery Center (45). **Tools:** Two structured questionnaires were used: Job characteristics Questionnaire and Maslach Burnout Inventory (MBI) **Result:** Total mean score of job characteristics at Gastroenterology Surgery Center was higher than total mean score of Medical Specialty Hospital . Level of burnout were low in all items of burnout at both setting except in relation to emotional exhaustion which was high among nurses at Medical Specialty Hospital. **Conclusion:** There is no significant correlation between job characteristics and level of burnout among studied nurses at Medical Specialty Hospital and Gastroenterology Surgery Center. **Recommendation:** The current findings suggest that intervention programs should be implemented to prevent or reduce burnout and focus on improving job characteristics among nurses working in different Intensive Care Units.

**Keywords:** *Burnout, Job Characteristics, and Nurses, Intensive Care Units*

## **Introduction**

Healthcare institutions are complex and subject to constant changes due to economic, social, political, and technological factors. These factors force the organization to redesign the roles of the caregivers, especially the role of the nurse (**Baghshykhi, et al, 2020**). These challenging conditions require nurses to constantly adapt to their work environment to provide quality care (**Lu & While, 2019**).

Intensive Care Unit (I.C.U) is a hospital's specialist section that treats critically ill patients and provides comprehensive and continuous care to them. The nature of the work in an intensive care unit imposes tremendous tension and extremely stressful environment for nursing staff. (**Salehi, et al, 2019**). Nurses who work in critical care units are more likely to burnout and out of work because they work in a challenging work environment (**Ahlstedt, et al, 2019**).

According to the job characteristics theory, many job characteristics can influence nurses' motivation, satisfaction, performance, absenteeism, and turnover (**Baghshykhi et al. 2020**). Job characteristics are a set of environmental elements typically regarded as major drivers of nurse job attachment and behavior. They are job-specific factors such as knowledge and skills, mental and physical demands, and working circumstances that might be improved identified, characterized, and assessed as significant causes of nurse health (**Matilu and K'Obonyo, 2018**).

Job characteristic model was developed by **Hackman and Oldham (1980)** that is the most effective models used to explain important work outcomes for nurses. This model includes five core job dimensions that affect nurses' job outcomes and comprising skill variety, task significance, task identity, autonomy, and feedback. Nurses according to this model, experience feasibility if their job includes task variety, task significance and task identity. The degree to which a work needs a variety of distinct activities that make use of different skills and talents was defined as skill variety. Secondly, task identity relates to how much the task

necessitates that the entire process be completed from beginning to end with a visible result. (**Jeske & Lippke, 2022**).

The degree to which a job has a substantial impact on the lives or work of others, both within and outside the immediate organization, is referred to as task significance. Autonomy encompasses responsibility and is defined as the degree to which the job provides nurses with the necessary freedom, independence, and discretion in scheduling work and selecting how to carry it out. Finally, feedback of the job gives nurses direct and obvious information about how well or poorly they are doing. These characteristics likely influence nurses' behaviour and motivation (**Cangialosi, et al., 2021**).

Job characteristics are typically limited in scope within an organization, and they tend to apply to a certain job or group of jobs. Different kinds of supervision, functional autonomy, job variety, and job feedback are all common job characteristics. According to Hackman and Oldham (1980), positive job characteristics allow nurses to feel a positive, and self-generated emotional starting when they perform well. Finally, job characteristics model was created to provide a theoretical explanation of how job features affect nurses' outcomes. It has been used to explain job satisfaction, job involvement, organizational commitment, absenteeism, and burnout among nurses. (**Griffin et al, 2012**).

Burnout is a psychological syndrome caused by occupational stress that involves feelings of emotional weariness, depersonalization, a sense of low personal accomplishment, and low self-efficacy. Emotional tiredness, depersonalization and cynicism, and diminishing personal accomplishment are three dimensions of burnout. Emotional exhaustion is characterised by a sense of being emotionally and physically exhausted, as well as a lack of personal vitality. Depersonalization refers to a cynical and detached attitude toward the nurse's tasks and activities. Low personal accomplishment refers to the nurses' tendency to negatively evaluate their own achievements at work. In recent years, nurses who are seen a high-risk population that is particularly

vulnerable to suffering from burnout, have faced extraordinary obstacles within the current volatile healthcare system due to issues such as limited health resources, staff shortages, overworked, and burnout. Furthermore, strained nurse-patient interactions, frequent nurse-patient confrontations, and workplace violence all contribute to widespread depressive symptoms and occupational stress in nurses, resulting in burnout (**Li Zhou et al, 2022**).

Burnout has been identified as a serious issue around the world. It's a major side effect of working in high-stress environments for a long time. The hallmark components of burnout are energy depletion (exhaustion), increased mental distance from nurse's job (cynicism) and decreased professionalism. Burnout in nurses can result in decreased productivity and increased absenteeism. (**Hu a, et al., 2015**).

Nurses suffer from burnout, which has detrimental consequences. At the nurses' level, burnout was found to be strongly linked to psychological stress, anxiety, depression and low self-esteem. It has a negative influence on physical health and is positively linked to morbidity and physical disorders, cardiovascular disease, and some psychosomatic symptoms like poor appetite, headaches, and chest pains. It also has negative consequences at the organizational level, such as decreased job performance, satisfaction, productivity, organizational commitment, and innovation. It's clear that burnout has been shown to have a negative influence on both organizational efficiency and nursing well-being. (**Duan-Porter et al., 2018**).

In addition to this, Job burnout is a state of physical and mental tiredness that nurses experience as a result of their work. It is characterized by emotional exhaustion, depersonalization, and a diminished sense of personal achievement. Depression, unresponsiveness, resistance to life and work, and reduced motivation for work and family life are all clinical indications of job burnout. Job burnout is a phenomenon caused by long-term stress at work that has a negative impact on nurses' health

and can lower their quality of life (**Casida et al., 2018**).

Job burnout refers to severe and persistent nervousness of nurses at work, the inability to accomplish desired work results, and the dislike of work as a result of apathy and indifference. The syndrome of emotional exhaustion, depersonalization, and decreased personal achievement that can arise among nurses who undertake 'people work' could be of some one, or a combination of negative prolonged work stress outcomes (**Merecz and Andysz, 2014**). So, staff who provide long-term inpatient care as in the gastroenterological hospital are exposed to a large number of circumstances that can due to the development of burnout syndrome (**Rouxel, et al, (2016)**).

Many factors influence the occurrence of job burnout, and numerous research have shown the link between the work environment and job burnout. Personal factors, including gender, age, length of service, and education, in addition to environmental factors are the focus of current job burnout research and the impact of personal factors on job burnout varies between professions. (**Mccormack et al., 2018 and Yi, et al, 2021**).

Nurses working in intensive care units undergo greater stress compared to the nurses in other units. The basic proposition of this study is that I.C.U nurses work motivation and involvement arise from the characteristics of their jobs. Therefore, nurses are more likely to feel free to make decisions, freedom, and responsibility, that they are doing something important, that their work is appreciated, and that they have control over the tasks process if motivating job characteristics can be achieved, which reduces the negative effects of burnout. (**Bogaert et al, 2014**).

Positive job characteristics will provide nurses with positive feelings and experiences and these in turn will increase the likelihood that nurses will experience positive work outcomes, such as intrinsic work motivation, job satisfaction, and job involvement. Conversely, negative job

characteristics can cause a person to suffer from the job and ultimately, experience negative work outcomes, such as increased work absenteeism, decreased job performance, and heightened desires to quit. Simply stated, job characteristics are important in shaping work outcomes for nurses. Also, stressors leading to nurse's jobs burnout and can lead to comparable stress reactions with other professions. So, the study aimed to determine relationships between job characteristics and nurses' burnout in intensive care units at different setting.

### Aim of study

The aim of this study is to determine relationships between job characteristics and nurses' burnout in intensive care units, at both selected studied hospitals through:

- 1- Assess job characteristics dimensions as perceived by studied nurses in different I.C.U at both setting?
- 2- Assess level of burnout among studied nurses in different I.C.U at both setting?
- 3- Examine relation between job characteristics dimensions and burnout among studied nurses at both setting?

### Methods:-

**Design:-** Descriptive comparative correlational design were used.

**Setting:** - This study was conducted at I. C.U in two selected setting. The first setting was Specialty Medical Hospital and the second setting was Gastroenterology Surgery Center Which affiliated to Ministry of Higher Education Scientific Research and both setting provide wide spectrum of health service at Delta region. Specialty Medical Hospital included four I.C.U.s (Medical Male & female, Cardiac and Diabetic and Endocrine Care Unit) and that occupied with (194) beds. The Gastroenterology Surgery Center was equipped with the recent international equipment and instruments. It have three intensive care units (Surgical, liver transplantation and intermediate), with bed capacity of 130 beds.

### Sample:

All nurses working in different I.C.U.s at Medical Specialty Hospital (n=36) and Gastroenterology Surgery Center (n=45) who meet the criteria of having at least one year of experience and available at time of data collection to express their opinion about job characteristics and burnout.

### Tools of data collection:-

Two tools were used in data collection namely; Job Characteristics Questionnaire and Maslach Burnout Inventory (MBI).

### Job characteristics Questionnaire:-

This questionnaire consisted of two parts:

**First part:** Included personal characteristics of nurses as; age, educational qualification, hospital, and years of experience.

**Second part:** job characteristics questionnaire was adopted by researcher based on relevant literature review (**Hackman and Oldham, 1980** and **Morris & Venkatesh, 2010**). It comprises five sub-scales, it including 24 statements that used to assess characteristics of job dimensions namely, task variety (4 items), task significance (4 items), task identity (4 items), total autonomy (9 items) which contain 3 subscale; work schedule autonomy (3 items), decision making autonomy (3 items), work method autonomy and feedback (3 items). The responses scored using five-point rating scales ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

### I. Maslach Burnout Inventory (MBI)

It was developed by **Maslach et al, (1996)** and translated into Arabic by (**Ahmed, 2014**) and consists of twenty two items used to measure the frequency of three component of burnout namely emotional exhaustion (9 items) that allow the nurses to express their feeling are exhausted or not, depersonalization (5 items) which describe an unfeeling and impersonal response toward recipients of care and finally personal accomplishment (8 items) which describe feeling of competence and successful achievement in ones, work with people.

The responses scored using 7-point rating scales ranged from zero to 6 responses.

Scoring system of burnout were high more 70 % (93-132) moderate from 50 % to 70 % (66-92) and low burnout less than 50% (22-65).

## Methods

Ethical approval was obtained from the Research Ethical Committee of Faculty of Nursing, Mansoura University. The aim of this study was explained to the administrative staff, the written permission was acquired from the faculty of nursing, Mansoura University to the hospital administrators. An official permission to conduct the study was obtained from the hospital

Job characteristic questionnaire tool translated into Arabic, and tested for its content validity and relevance by a (5) jury and accordingly the necessary modification was done and also Maslach Burnout Inventory Distributed to also to jury for any modification. The reliability for the tools was done using alpha coefficient to measure the internal consistency reliability of job characteristics questionnaire and burnout tools were (0.90, 0.89) respectively.

-A pilot study was carried out on (10) nurses from different I.C.U in both setting to evaluate the clarity and applicability of the tools and necessary modifications were done based on their responses and excluded from the total sample.

An informed consent for participation in the study was secured from the entire study sample. Participation in the research is voluntary. Each participant may decide to stop completing the study and withdraw at any time without consequence.

## Statistical Analysis of Data:

Data were extracted from the interview questionnaire and computerized in Microsoft Excel 2010. Analysis was undertaken using IBM SPSS (statistical package for social science) version 22.0. Qualitative data were described using number and percent.

Quantitative data were described mean, median and standard deviation. Independent t-test was used to compare between two variables among different two groups. Qualitative variables were compared using chi square test ( $\chi^2$ ) as the test of significance and the p-value is the degree of significant and using the Spearman correlation test and correlation test (r). A significant level value was considered when p-value  $\leq 0.05$  and a highly significant level value was considered when p-value  $\leq 0.01$ , while p-value  $> 0.05$  indicates non-significant results.

## Results:

**Table (1):** Showed the personal characteristics of studied nurses at both selected hospitals. Regarding to age most of nurses were aged from twenty to thirty years in Medical Specialty Hospital, and about half of nurses were the same age group in Gastroenterology Surgery Center. According to educational level, half of nurses in both center were B.Sc. in nursing. Regarding to experiences year, majority of nurses have experience about 5 year in Medical Specialty Hospital, while the most of nurses have experience from 11 to 15 years in Gastroenterology Surgery Center. Finally according to marital status, about two third (63.9%) of nurses were married in Medical Specialty Hospital, while the majority (80%) of nurses were married in Gastroenterology Surgery Center.

**Table (2):** Illustrated the total mean, standard deviations and t-value differences of nurses' job characteristics at both studied hospitals. It was observed that mean was higher ( $3.41 \pm 0.45$ ) than total mean score of Medical Specialty Hospital ( $3.34 \pm 0.85$ ). Regarding dimension of job characteristics, task variety mean score was higher at Gastroenterology Surgery Center ( $4.06 \pm 0.84$ ) than at Medical Specialty Hospital ( $3.74 \pm 1.0$ ). While task Significance mean score was higher at Medical Specialty Hospital ( $4.10 \pm 1.0$ ) than Gastroenterology Surgery Center. Finally there is no significant differences between mean scores work characteristics dimensions in Medical Specialty Hospital and Gastroenterology Surgery Center.

**Table(3):** Illustrated that there is a highly significant association between total mean score burnout of nurses and mean score of subscales in both setting except in relation to personal accomplishment. Total mean score of burnout at Medical Specialty Hospital was higher ( $3.69 \pm 1.4$ ) than at Gastroenterology Surgery Center was ( $2.69 \pm$

.86). Also this table illustrated that the highest subscale mean score at Medical Specialty Hospital ( $4.18 \pm 2.1$ ) in relation to emotional exhaustion and the lowest was regarding to personal accomplishment. While the highest subscale mean score a Gastroenterology Surgery Center was ( $3.57 \pm 1.8$ ) regarding personal accomplishment while the lowest mean score ( $0.65 \pm 0.89$ ) regarding Depersonalization.

**Table (4):** Showed that there is a significant association between burnout items level and total burnout level of nurses in Medical Specialty Hospital and Gastroenterology Surgery Centers. Level of burnout were low in all items of burnout at both setting except in relation to emotional exhaustion was high among nurses at Medical Specialty Hospital (85.3%). Also this table showed that there is a significant association between burnout items level and total burnout level of nurses in Medical Specialty Hospital and Gastroenterology Surgery Center.

**Figure (1):** Indicated to low level of burnout among nurses at Medical Specialty Hospital and Gastroenterology Surgery Centers with per cent (66.7%) and (100%).respectively.

**Table (5):** Illustrated relationship between job characteristics dimensions, and Nurses burnout subscale among the studied nurses. There was no significance relationship between total job characteristics and total burnout among studied nurses. Also there is no significance relationship between dimensions of job characteristics and total burnout among studied nurses except task variety and task significance there were significance correlation and total burnout as showed above table.

**Figure (2):** Showed there is no significant correlation between job characteristics and level of burnout among Studied Nurses in Medical Specialty Hospital  $P > 0.05$ .

**Figure (3):** Showed there is no significant correlation between job characteristics and level of burnout among Studied Nurses in Gastroenterology Surgery Center  $P > 0.05$ .

**Table (1): Personnel Characteristics of Studied Nurses at Both Selected Hospitals (n= 81)**

Personal Characteristics	Medical Specialty Hospital (n=36)		Gastro-enterology Surgery Center (n= 45)	
	No	%	No	%
<b>Age</b>				
<20	2	5.6	6	13.3
20 - 30	33	91.1	11	44.4
30 - 40	1	2.8	10	20.0
>40	0	0.0	9	20.0
<b>Educational Level</b>				
Technical Institutes of Health	11	30.6	7	15.6
Secondary School of Nursing	9	25.0	9	20.0
Diploma in Nursing	1	2.8	9	20.0
Bachelor in Nursing	15	41.7	19	42.2
Master in Nursing	0	0.0	1	2.2
<b>Experience (Year)</b>				
<5	27	75.0	6	13.3
6-10	8	22.2	8	17.8
11-15	1	2.8	16	35.6
>20	0	0.0	15	33.3
<b>Marital Status</b>				
Single	13	36.1	6	13.3
Married	23	63.9	36	80.0
Divorced	0	0	2	4.4
Widow	0	0	1	2.2

**Table (2): Total Mean Score of Nurses Job Characteristics at both Studied Hospitals (n= 81).**

Job Characteristics Dimensions	Medical Specialty Hospital (n=36)	Gastroenterology Surgery Center (n= 45)	t-test	P-value
	Mean ±SD	Mean± SD		
<b>Task Variety</b>	3.74± 1.0	4.06 ±0.84	- 1.546	0.13
<b>Task Significance</b>	4.10± 1.0	3.97±0.78	0.623	0.54
<b>Task Identity</b>	3.56 ± 1.0	3.69 ±0.67	- 0.703	0.48
<b>Total Autonomy</b>	3.34 ±0.85	3.41± 0.45	- 0.440	0.66
<b>Feedback From Job</b>	3.07±0.96	3.34± 1.0	- 1.192	0.24
<b>Total</b>	3.34±0.85	3.41 ±0.45	- 0.440	0.66

P value significance at < 0.05 (\*) or 0.01 (\*\*)

**Table (3): Total Mean Score of Nurses Burnout at both Studied Hospitals (n= 81).**

Burnout Subscale	Medical Specialty Hospital (n=36)	Gastro- enter ology Surgery Center (n= 45)	t-test	P-value
	Mean± SD	Mean± SD		
Emotional exhaustion	4.18 ± 2.1	3.02± 1.0	3.194	0.002**
Depersonalization	3.38± 2.4	0.65± 0.89	7.058	0.000**
Personal Accomplishment	3.34± 2.4	3.57± 1.8	-0.505	0.62
<b>Total</b>	<b>3.69± 1.4</b>	<b>2.69± 0.86</b>	<b>4.008</b>	<b>0.000**</b>

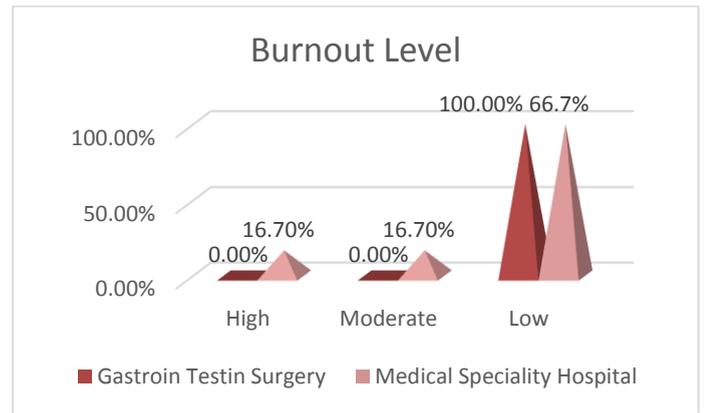
P significance at < 0.05 (\*) or 0.01 (\*\*)

**Table (4): Level of Burnout Subscale among Studied Nurses at Both Studied Hospitals (n= 81).**

Burnout Subscale	Medical Specialty Hospital (n=36)		Gastro- Gastro enter ology Surgery (n= 45)		X <sup>2</sup>	P- value	
	No	%	No	%			
Emotional Exhaustion					29.054	0.000**	
	High	21	85.3	2			4.4
	Moderate	1	2.8	1			2.2
Depersonalization					23.445	0.000**	
	High	16	44.4	1			2.2
	Moderate	1	2.8	0			0.0
Personal Accomplishment					7.275	0.03*	
	High	17	47.2	11			24.4
	Moderate	1	2.8	8			17.8
Total Burnout Level					17.609	0.000**	
	High	6	16.7	0			0.0
	Moderate	6	16.7	0			0.0
Low	24	66.7	45	100			

P significance at < 0.05 (\*) Or 0.01 (\*\*)

**Figure 1: Levels of Total Burnout among Studied Nurses at Both Studied Hospitals (n=81).**



**Table (5): Relationship between job characteristics**

Job characteristics Dimensions	Burnout Subscale			Total Burnout
	Emotional Exhaustion	Depersonalization	Personal Accomplishment	
	r	r	r	r
	p	p	p	p
Task Variety	-0.314 0.004**	-0.277 0.01*	0.078 0.488	-0.243 0.03*
Task Significance	-0.320 0.004**	0.260 0.02*	-0.005 0.968	-0.291 0.008**
Task Identity	-0.413 0.000**	-0.389 0.000**	0.307 0.005*	-0.204 0.067
Autonomy	.092 .414	.080 .480	.038 .737	-0.10 0.3476
Feedback From Job	-0.109 0.335	-0.192 0.085	0.226* 0.04*	-0.001 0.994
Total Job Characteristics	-0.209 0.009	-0.159 0.010	0.147 0.150	-0.106 0.347

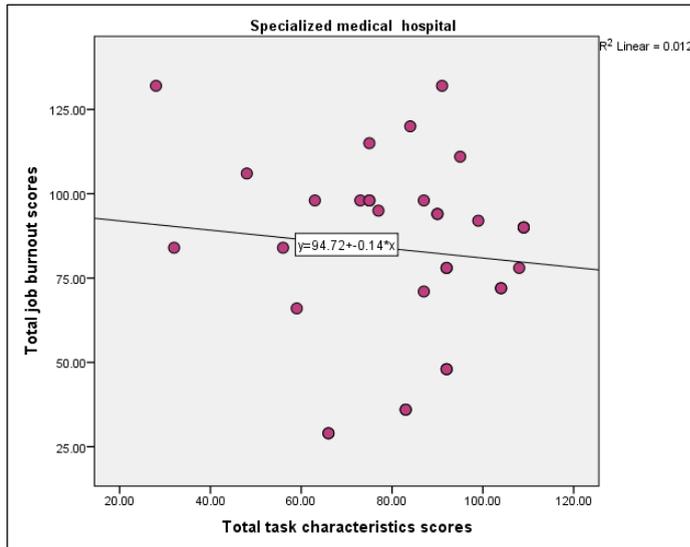
dimensions, and Nurses burnout subscale among the studied nurses at Both Studied Hospitals (n= 81).

\* Correlation is significant at the 0.05 level.

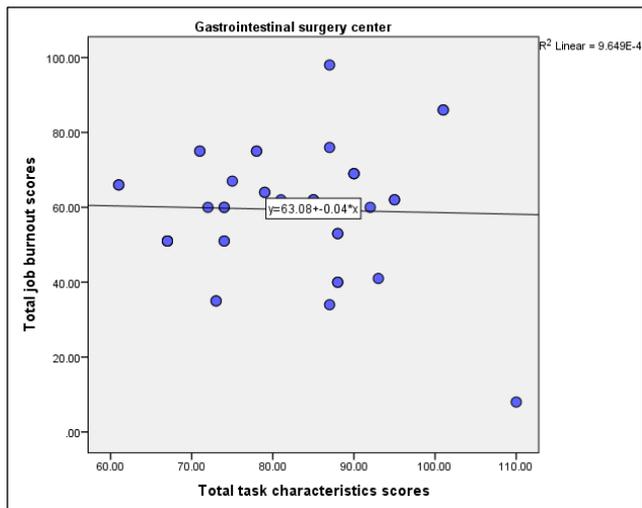
\*\* Correlation is significant at 0.001 level.

r= Correlation coefficient

**Figure (2) Correlation between Job Characteristics Model and Level of Burnout among Studied Nurses at Medical Specialty Hospital (n=36).**



**Figure (3) Correlation between Job Characteristics Model and Level of Burnout among Studied Nurses in Gastroenterology Surgery Center (n= 45).**



## Discussion

Job characteristics is considered among the most powerful contextual factors influencing nurses' well-being, it has become a central topic in work leading to various outcomes as burnout. Nurses appear to be particularly vulnerable to burnout because they frequently work in stressful and exhausting conditions such as intensive care units. The relationship between job characteristics and burnout among nurses in different ICUs was investigated in

this study. The findings of this study showed that there is no significant correlation between job characteristics and burnout among studied nurses at Medical Specialty Hospital and Gastroenterology Surgery Center. This might be explained that the circumstances in two hospitals as financial incentives and rewards motivate nurses and compensating them for hard working.

These results are in the same line with earlier research of (Santos et al (2020) that has shown that there is no substantial relationship between job characteristics and burnout dimension among Portuguese hospital registered nurses. Moreover, (Pisanti et al, 2016) conducted a study on nurses and reported that no reversed effects of burnout on work characteristics have been found. Also, the study done by Roy et al , (2017) indicated that there was no significant differences between the responses on job characteristics and burnout status among doctors from Bangladesh's district health system's public primary, secondary, and private facilities.

On the other hand, this findings of the study results are disagree with the study done by Jin et al, (2018) who mentioned that Job characteristics had a substantial effect on correctional worker burnout, and job characteristics were significantly associated with greater levels of correctional burnout in China, Moreover (Griffin et al , (2012) reported that both job autonomy and job variety as two dimensions of job characteristics had a significant negative effect on emotional exhaustion, indicating that employees with low levels of autonomy and variety on the job reported higher levels of emotional exhaustion, and job characteristics associated with higher levels of burnout among those working in a difficult and

dangerous profession. **Lachowska & Minda (2020)** also mentioned that the occupational burnout was statistically significantly related to many of the investigated work characteristics among psychiatric nurses.

According to job characteristics dimensions, task significance has a high mean score in MSH because nurses in this hospital provide critical care for patients which this care is significant and affect the life of patients. The study findings are disagree with the study done by (**Hernaus & Vokic (2014)**) who reported that for all three generations of respondents employees from large-sized Croatian firms, task significance was one of the job qualities with the lowest mean value, and the only job feature evaluated was an average of less than (3.50).

At Gastroenterology Surgery Center (GSC), task variety dimension was high mean score because the nurses use a different skills, knowledge and performing a wide variety of tasks. This finding is in line with the study of **Hernaus & Vokic (2014)** who mentioned that the task variety was the one job characteristic highly present. The results of this study are similar to the findings of **Cangialosi, et al, (2021)** who reported decreased levels of all the other characteristics, with skill variety among employees of an Italian manufacturing firm. This finding also supported by **Agarwal & Gupta (2018)** who reported that the presence of significance and a variety of meaningful tasks can enhance the level of intrinsic motivation of nurses by increasing their feeling of accomplishment and reduce burnout level. While, **Cangialosi, et al, (2021)** reported that the employees at an Italian manufacturing company had low levels of task significance. Moreover, identity of the task dimension has a same mean in two setting

because the nurses done a job from start to finish with a visible results and nurses with professional identity develop favourable feelings about their job, gain more pride and efficacy in their work, experience a greater sense of accomplishment and happiness, and enable others to devote themselves to their work with greater enthusiasm.

In relation to emotional exhaustion and depersonalization the study findings showed a statistically significant differences between the Medical Specialty Hospital and Gastroenterology Surgery Centre on the burnout variables for emotional exhaustion and depersonalization which were greater in Medical Specialty Hospital than in Gastroenterology Surgery Centre. This can be explained by the nurses' more demanding and resource less work environment, the existence of a daily routine, the long working hours in intensive care units, high rate of patients, potentially reduces job interest and may significantly increase emotional exhaustion so, they feel that they are emotionally overextended and exhausted at work.

This outcome is consistent with the findings of the study of **Nie et al, (2015)** who found that 65% of registered hospital nurses suffered from moderate to severe depersonalization. Also, **Pradas-Hernández et al. (2018)** reported that emergency nurses have shown higher levels of emotional exhaustion. While, **Quattrin et al, (2006)** reported low level of emotional exhaustion among Oncology nurses in an Italian Region and this finding explained by the large percentage of nurses who chose to work in oncology to obtain better personal achievement and by the various courses organized by regional hospitals on

the relationship between healthcare staff and cancer patients.

The finding of the present study also indicated that the personal accomplishment scale has the lowest mean score. This result is consistent with **Lahana. et al., (2017)** who indicated that more job experience can lead to emotional tiredness, which can lead to depersonalization and a drop in personal achievement.

The study results also, showed that the level of burnout was low among studied nurses at both setting but it high among nurses at Medical Specialty Hospital than nurses working in Gastroenterology Center. This could be due to an excessive workload, and poor working relationships between team members and supervisors, such as between nurses, head nurses, and managers, can contribute to burnout. And also, patient' status differentiates, in Gastroenterology Center, as: the majority of the patients who enter the hospital for surgery have stable condition whereas in MSH patients need complete critical care. These findings are consistent with those of **Kumar et al., (2021)** who conducted a study among nursing personnel in intensive care units in a tertiary care center and discovered that seventy-eight participants (62.4%) reported low or no burnout.

These findings are also supported by the study done by **(Russell et al., (2020)** who mentioned that employees with job that have high levels of skill variation, task identity, task relevance, and feedback are more likely to report better work results and have lower levels of burnout.

On the contrary, these findings are disagree with the study done by **Zhou et al., (2022)** who found that 68 (6.0%) of Chinese female nurses had severe burnout. Also, **Khan, Bruyneel, & Smith (2022)** indicated that 70% of nurses was at high risk of burnout. Also, the findings of the this study are disagree with the study done by **Wan et al., (2022)** who indicated that the burnout level of nurses worked in Wuhan tertiary hospitals tended to be mild to moderate. Furthermore, the results of the present study are not in line with the study done by **Bogaert et al., (2014)** who reported that higher degree of burnout were linked to unfavourable job performance, patient and family complaints, among nurses in the Dutch speaking part of whom high levels of burnout were identified in Belgium.

### Conclusion

On the basis of the overall, the current findings revealed that there was no significant association between nurses' job characteristic and burnout at the Medical Specialty Hospital and Gastroenterology Surgery Center. Total mean score of job characteristics at Gastroenterology Surgery Center was higher than total mean score of Medical Specialty Hospital. Level of burnout were low in all items of burnout at both setting except in relation to emotional exhaustion was high among nurses at Medical Specialty Hospital.

### Recommendation

- It is necessary to improve communication and teamwork.
- Facilitating workshops that promote the sharing of feelings, the normalizing of experience, the strengthening of collaboration, conflict resolution

management, and positive reappraisal can help to establish a healthy work environment.

- Improving supervision for effective nurse support is another key measure for preventing burnout in the workplace.
- Providing incentives for participation and autonomy, as well as longer breaks for nurses, will help to break up the daily routine.
- Providing comprehensive information about the hospital's structure, mission, and procedures.
- Reducing the workload of support staff (e.g. job redesign, flexible work schedules, and goal setting).
- Improving working conditions and creating positive work environments reduces burnout.
- Improving nurse job satisfaction by improving the organizational support system, which would lead to a reduction in burnout.
- Increasing nurses' overall well-being in relation to their jobs is critical to improving their performance and ensuring the best possible outcome for the hospital health system.

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