

## Relationship between Job Crafting and Work Engagement among Staff Nurses

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### Abstract

**Background:** Job crafting is a specific form of proactive work behavior in which employees are actively changing the characteristics of their jobs. **Aim of the study:** The study aimed to assess job crafting and its influence on work engagement among staff nurses. **Subjects and methods:** The study was conducted at Ain Shams University hospital. A Descriptive correlational design was used. It included 186 staff using simple random sampling. Data was collected by using two tools namely, job crafting scale and work engagement scale. **Results:** staff nurses' (45.2%) aged more than 30 years old, (78.5%) female, married (86%), and (46.8%) had 25 years of experience. In total, shows that more than half (53.2%) of the studied staff nurses had a high level of total job crafting. While slightly more than a quarter (25.30%) of them had a moderate level. While one-fifth (22%) of them had a low level. Also, more than half (58.60%) of the studied staff nurses had high levels of total work engagement. While less than one-fifth (21.50%) of them had moderate levels. While only (19.90%) of them had a low level. **Conclusion and Recommendations:** There was a highly significant positive correlation between total staff nurses' job crafting levels, and work engagement levels. Designing job crafting workshops that focus on encouraging nurses to think about opportunities and techniques they may use to engage in job crafting behaviors. Further research is proposed to job crafting intervention should be conducted

**Keywords:** Job Crafting, Staff Nurses, Work Engagement

### Introduction:

Job crafting is a specific form of proactive work behavior in which employees are actively changing the characteristics of their jobs. Job crafting is about individualized, bottom-up and proactive changes in the job design. Job crafting asserting that job holders can actively change their jobs (i.e. work redesign) to improve the fit with their own needs and skills. Job crafting focused on task, relational and cognitive changes at work by emphasizing changes employees make to discover the meaning and identity of the job (Park& Park, 2023).

Job crafting is a process in which employees shape, mold, and redefine their job boundaries to align with their personal strengths, passions, and motives. It involves making physical, cognitive, or relational changes to one's job tasks or relationships to increase job satisfaction and performance. Job crafting is defined as employees' proactive attempts to balance job demands and resources by expanding resources, seeking challenges, or

reducing hindering demands (Chihyung et al., 2023).

Employees who craft their jobs are seen as assets to the organization, as they are engaged and realize organizational goals and personal goals. Employees who realize their own work goals are expected to achieve a higher performance rating score. Job crafting is used for self-actualization, which suggests that employees may leverage job crafting as a means to engage with various self-actualization benefits (Carmen et al., 2024).

Employees who embark on job crafting proactively work according to the changing work environment and their strengths, aptitudes, and interests. This enables employees to stay challenged in their roles and remain satisfied and enthusiastic about their work. When employees craft their work, they may feel engaged at work. Employees with high levels of engagement are most likely to feel an effective connection to their jobs and be able to deal with job demands (Mohamed, 2024).

In new year's, engagement has acquired more concentration from organizations because they consider there is touch between employee engagement and organizational achievement. Work engagement is a key indicator of a healthy and thriving workplace. Engagement refers to participation, commitment, passion, enthusiasm, assimilation, focused effort, and power. Furthermore, engagement has been defined as a constant, distribute and positive affective motivational state of fulfillment in professionals and the harnessing of members' selves to their work roles (**Mazzetti et al., 2023**).

Engagement is described as the harnessing of organization members' selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally, and mentally during role performances. Moreover, Engagement is defined as the individual's participation and satisfaction as well as enthusiasm for work. Also, defined engagement as the scope to which employees commit to someone or something in their organization (**Wang et al., 2024**).

Work engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any specific object, event, individual, behavior. Work engagement is characterized by a positive, affective-motivational state marked by elevated energy levels, unwavering dedication and a profound focus on professional responsibilities (**Yang et al., 2024**).

Nurses with high work engagement were reported to have higher job implementations and lower turnover intentions. Additionally, these nurses tend to enjoy and happily commit themselves to their work, while performing duties that cover a broader scope. Moreover, they extend their activities to help and collaborate with colleagues to benefit the organization (**Mun et al., 2024**).

Work engagement could help in the coping of this difficult and stressful situation experienced by professionals. As a result of work engagement, higher quality of health care has been identified, although this depends on contextual factors such as structural

empowerment and social support, and predisposing factors such as effectiveness and optimism (**Mazzetti et al., 2023**).

Job crafting is a significant determinant of nurses' work engagement. Employees who craftsmanship their works are extra engaged. Nurses with a greater level of engagement tend to be enthusiastic about functioning, provide patient-centered care and report higher work efficiency (**Baghdadi et al., 2021**). Employees may also engage in job crafting, either physically or cognitively, by changing the boundaries of their job and aligning it with their satisfaction, needs, and self-image. Job crafting in enhancing work engagement (**Oubibi et al., 2022**).

### **Significance of the Study**

Job crafting plays an important role for nurses as it helps them to control certain aspect of their jobs, motivating them to create positive sense, satisfy their basic wants with the joining with others and achieve better performance as well as better wellbeing condition (**Castner, 2020**). Job crafting was positively related to work engagement and meaningful work and increase job satisfaction (**Tian, et al, 2021**).

From the experience of the researcher he watched that during investigation practical training period at Ain Shams University Hospital, , I noticed that employees have a low level of cooperation and connection in their work and they do not have a commitment to achieve the organization goals. And when an employee's personal abilities match their job abilities, they will be more engaged in the work, and they will have the needed abilities to be successful job crafters. Job crafting is considering a new approach to work redesign and there have also been very few empirical investigations of "job crafting" in Egypt. So, this study aims to assess job crafting and its influence on work engagement among staff nurses.

### **Aim of the study**

This study aimed to assess job crafting and its influence on work engagement among

staff nurses through:

1. Assessing job crafting level among staff nurses.
2. Assessing work engagement level among staff nurses.
3. Finding out influenced job crafting and work engagement among staff nurses.

### Research question:

What is the influence of job crafting on work engagement among staff nurses?

### Subjects and Methods

#### Research design

A descriptive correlational design was used in this study.

#### The study setting:

This study was conducted at Ain Shams University hospital which was affiliated to Ain Shams University. It provided general and medical services; the total bed capacity is (618).

#### Subjects of the study:

The subjects of the study were 186 from 350 of staff nurses were selected by simple random sampling technique.

#### Sample size

The sample was selected by simple random sampling technique, it was (186) out of (350) staff nurses calculated by the following equation which developed by (Thompson, 2012).

$$n = \frac{Np(1-p)}{(N-1)(d^2/z^2) + p(1-p)}$$

n = sample size

N = number of population

Z = confidence level 95%

d= margin of error (0.05)

p = probability 0.5

### Tools of data collection:

Data for this study was collected by using two different tools namely, job crafting scale and work engagement scale.

#### First tool: Job Crafting Scale

It consisted of two parts.

**Part I:** This part was intended to collect data related to the personal and job characteristics of staff nurses including (unit name, age, gender, marital status and qualifications, and years of experience).

**Part II:** This part was used to assess job crafting level among staff nurses, this tool was adopted from Times et al., (2012). This scale consisted of 21 items, divided into four main dimensions as following: increasing structural job resources 5 items, decreasing hindering job demands 6 items, increasing social job resources 5 items, and increasing challenging job demands 5 items.

#### Scoring system:

Staff nurses' responses were measured on a 3- point Likert scale ranging from (Never=1, Sometimes=2, Always=3). All items were summed up and a mean score is calculated. Study subjects had low perception levels if the total score was less than 60%. While it was considered moderate if the score ranged from 60-75% and it was considered high if the total score was more than 75% (Mekhael et al., 2023).

#### Second tool: Work Engagement Scale

This tool was used to assess work engagement level among staff nurses, this tool was adopted from Abd Elkader., (2017). This scale consisted of 17 items, divided into three main dimensions as following description: vigor

6 items, dedication 5 items, and absorption 6 items.

#### Scoring system:

The responses of participants were measured on a 5 points Likert scale ranged from Always, Usually, Sometime, Rarely, and Never. Always was scored as “5”, while never was scored as “1”. All items are summed up and a mean score is calculated. Study subjects had low engagement if total score was less than 60%. While it was considered moderate level if the score was from 60% to 75% and it was considered high Level if the total score was more than 75% (Ahmed et al., 2024).

#### Operational Design:

The operational design for this study included three phases namely: preparatory phase, pilot study and field work.

#### Preparatory phase:

This phase started from February 2024 till March 2024, the researcher reviewed the national and international related literature, the material in textbooks & scientific journals were used in the study to be acquainted with study subject.

#### Validity:

The validity of the tools was ascertained by three experts in the field of nursing administration from Ain Shams University. Those experts reviewed the content of the tools to check their comprehensiveness, accuracy, clarity and relevancy. Their opinion was under-considered and followed.

#### The reliability:

Tools of data collection were examined through assessing their internal consistency by Cronbach alpha. It represented in the following table:

Data Collection items	NO. of items	Cronbach's Tools Alpha
Job Crafting Scale	21	0.954
Work Engagement Scale	17	0.937

#### Pilot study:

The pilot study was carried out on 35 staff nurses who representing 10% of the total of the study subjects. The aim of the pilot study was to examine the applicability of the tool, clarity of language, test the feasibility and suitability of the designated tools. It also served to estimate the time needed to complete the forms by each study subject and identifying potential obstacles and problems that may be encountered during data collection. The time for filling the scales took around 15-20 minutes. The pilot study was conducted in April 2024. The study subjects who participated in the pilot were excluded from the main study sample.

#### Ethical Consideration

Prior to the study conduction, ethical approval was obtained from the scientific research ethical committee affiliated to the Faculty of Nursing at Ain Shams University. In addition, the researcher met with the directors of the hospital and explained the aim of the study to gain their approval. The subjects were informed about their right to withdraw at any time without giving any reason and the collected data kept confidential and used for scientific work only. Written informed consent was obtained from each participant in the study. The anonymity of each participant was assured by allocation of a code number to the questionnaire sheets. Subjects were informed that the collected data were used for research purposes only. Each participant was also informed that he/she has the right to withdraw from the study at any time without giving any reason.

**Ethical code:** 24.04.283

**Administrative design:**

To carry out the study, the necessary approvals were obtained. An official letter was issued from Dean of Faculty of Nursing, Ain Shams University. The researcher met both hospital directors, medical and nursing to explain the aim of the study and get their approval to collect data and seek their support. These letters clarified the aim of the study and its procedures. A photocopy of data collection forms was attached to the request letter.

**Field work:**

The fieldwork of the study started after getting official permissions to conduct the study using authorized channels. The researcher met the head nurse of each unit to determine the suitable time to collect the data from the staff in each unit. The researcher introduced herself to staff nurses in the workplace, explained the aim and component of the scales and distributed the sheets to staff nurses in their work settings at different times. The researcher was present during the data collection period to explain how to fill the scales, clarify any ambiguity and answer any questions. Data was collected two days per week at the morning and afternoon shifts. The researcher collected about fourteen to sixteen scales every week. The filled forms were handed back to the researcher to check each one to ensure its completeness. The fieldwork of the study took three months starting in May 2024 and completed at the end of July 2024.

**Statistical Design:**

Recorded data were analyzed using the statistical package for social sciences, version (25). Quantitative data were expressed as mean $\pm$  standard deviation (SD). Qualitative data were expressed as frequency and percentage. The following tests were done:

- The Chi-square test was used to compare qualitative data .
- Pearson's correlation coefficient (r) test was used to assess the degree of association between two sets of variables.

• Cronbach's Alpha: Reliability statistics was used to assessed using Cronbach's Alpha test.

• The confidence interval was set to 95% and the margin of error accepted was set to 5%. So, the p-value was considered significant as the following: P-value  $\leq 0.05$  was considered significant. P-value  $> 0.05$  was considered insignificant.

**Results**

**Table (1)** the study sample consisted of 186 staff nurses whose (45.2%) were aged ranged between more than 30 years old, and more than three-quarters (78.5%) were female, As well as the majority of them married (86%) respectively. Also, slightly more than two-fifths of them had more than 25 years of experience (46.8%).

**Figure (1)** indicates that two fifths (46%) of the studied staff nurses were technical institute of nursing and one third of them (32%) had nursing diploma. While one-fifth (22%) of them were bachelor of nursing.

**Table (2)** displays that more than half (53.8%) of the studied staff nurses had a high level regarding the dimension of increasing structural job resources. While less than one-third (31.7%) of them had a moderate level regarding the dimension of decreasing hindering job demands. Also, more than one-fifth (23.6%) of them had a low level regarding the dimension of increasing social job resources.

**Figure (2)** shows that more than half (53.2%) of the studied staff nurses had a high level of total job crafting. While slightly more than a quarter (25.30%) of them had a moderate level. While one-fifth (22%) of them had a low level.

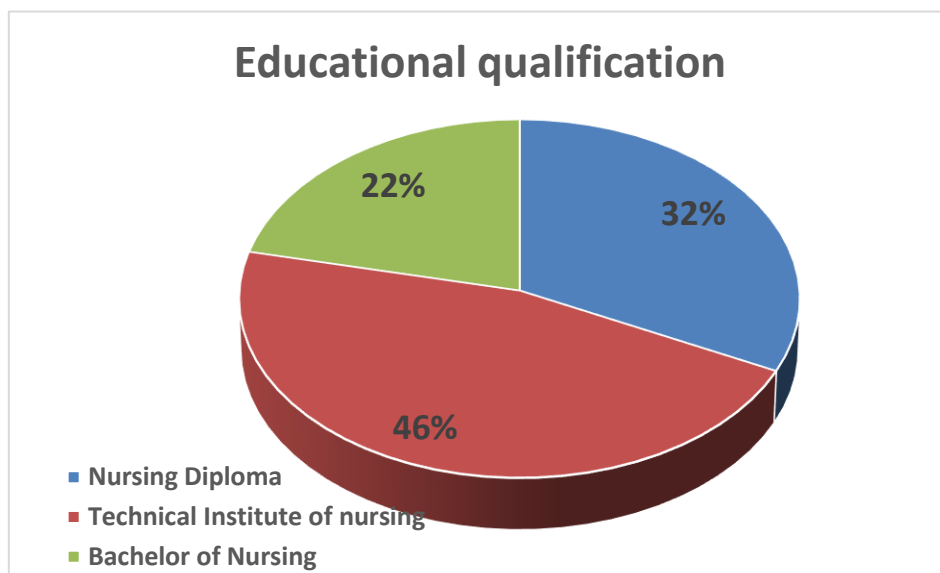
**Table (3)** reveals that less than two-thirds (64.5%) of the studied staff nurses had a high level regarding the dimension of vigor. While less than one-third (29%) of them had a moderate level regarding the dimension of absorption.

**Figure (3)** indicates that more than half (58.60%) of the studied staff nurses had high levels of total work engagement. While less than one-fifth (21.50%) of them had moderate levels. While only (19.90%) of them had a low level.

**Table (4)** presents that there was a highly significant positive correlation between total staff nurses' job crafting levels, and work engagement levels ( $P = < 0.01$ ).

**Table (1): Staff nurses personal and job characteristics (n=186)**

Demographic Characteristics	Frequency ( N )	Percent ( % )
<b>Age (year)</b>		
<25	38	20.4
25-30	64	34.4
>30	84	45.2
Mean±SD	30.05±5.59	
<b>Gender</b>		
Male	40	21.5
Female	146	78.5
<b>Marital Status</b>		
Married	160	86
Unmarried	26	14
<b>Years of experience</b>		
Less than 15 years	36	19.4
From 15 to 25 years	63	33.9
More than 25 years	87	46.8
Mean±SD	21.32±7.35	



**Figure 1: Distribution of the studied staff nurses regarding educational qualifications (n= 186)**

Table (2): Total distribution of studied staff nurses according to their job crafting dimensions(n=186)

Job crafting dimensions	Job crafting dimensions among staff nurses					
	High level ≥75		Moderate level 60-75%		low level ≤60 %	
	N	%	N	%	N	%
Increasing structural job resources	100	53.8	58	31.2	28	15.1
Decreasing hindering job demands	97	52.2	59	31.7	30	16.1
Increasing social job resources	90	48.4	52	28	44	23.6
Increasing challenging job demands	92	49.5	54	29	40	21.5

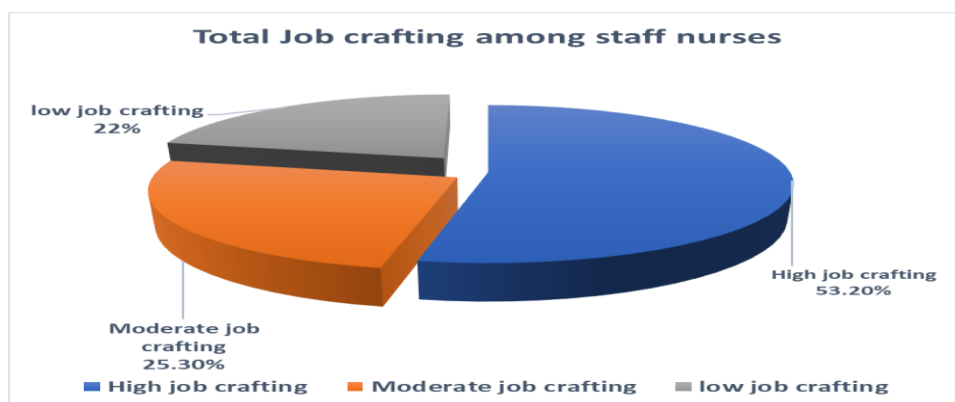


Figure (2): Total job crafting levels among staff nurses (n=186)

Table (3): Total distribution of studied staff nurses according to their work engagement dimensions(n=186)

Work engagement dimensions	Work engagement dimensions among staff nurses					
	High level ≥75		Moderate level 60-75%		low level ≤60 %	
	N	%	N	%	N	%
Vigor	120	64.5	44	23.7	22	11.8
Dedication	115	61.8	46	24.7	25	13.4
Absorption	102	54.8	54	29	30	16.1

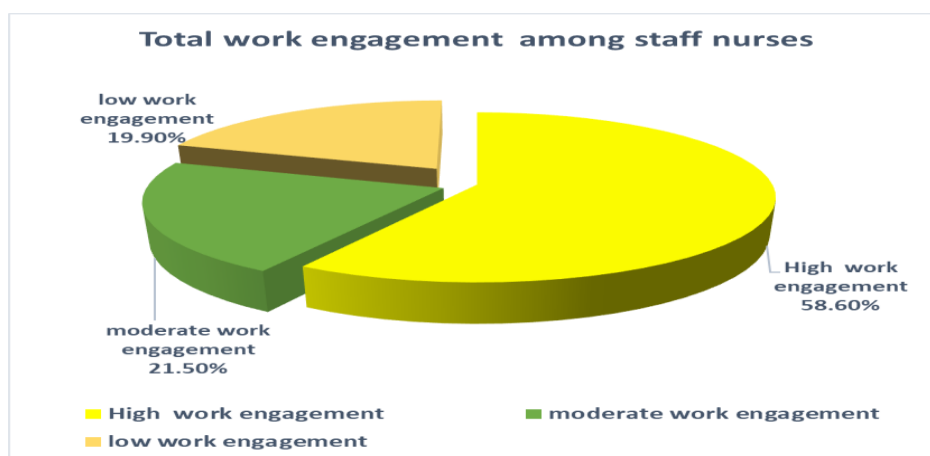


Figure (3): Total work engagement levels among staff nurses (n=186)

Table (4): Correlation between total staff nurses' job crafting, and work engagement total scores

Items	Total work engagement
Total job crafting	r = 0.714 P = 0.000 **

### Discussion

Job crafting is a sort of proactive behavior characterized as modifications made by nurses in their job demands and job resources to better suit their own preferences and skill sets (**Abou Shaheen & Mahmoud, 2021**). Staff with a high job crafting are more likely to feel safe in their organization. In addition, job crafting can contribute to a staff's sense of belonging, causing the staff to feel more responsible for the organization. This is likely to induce active engagement or positive behaviors in the employees, such as being engaged in their work (**Tsai, 2021**).

Regarding staff nurses' personal characteristics. The present study finding revealed that more than two-fifths of the staff nurses aged between more than 30 years old, had a technical Institute of nursing and had more than 25 years of experience. This may be due to the setting of conducting study was university hospital not newly hospital, so the highest percentage of essential staff nurses was between more than 30 years old not graduated staff. So, staff nurses had more than 25 years of experience.

This finding was in the same line a study conducted a study in China by **Liu et al., (2022)** entitled "Job Crafting and Nurses' Presenteeism: The Effects of Job Embeddedness and Job Irreplaceability", and reported that more than two-fifths of the staff nurses aged between more than 30 years old. Additionally, a study conducted in China by **Zhang et al., (2024)** entitled "The influence of psychosocial work environment, personal perceived health and job crafting on nurses' well-being: a cross-sectional survey study", and indicated that more than two fifth of nurses had a technical Institute of nursing and had more than 25 years of experience.

Concerning staff nurses' personal characteristics. The present study finding revealed that more than three-quarters were married female. This result may be due to

faculties of nursing in Egypt was available only for females' students until few recent years males' students entered nursing faculty. So, all hospitals include almost of staff was females. The highest percentage were at marriage age and older than 30 years.

The present study was agreement with **Kassem & Ibrahim, (2022)** who applied the study in Egypt entitled "Effect of Job Crafting Training Program on Staff Nurses Work Involvement at Mansoura University Hospital", and revealed that the majority of nurses were married female.

As regards job Crafting as perceived levels among staff nurse regarding dimensions. The current study findings revealed that more than half of the studied staff nurses had a high level regarding the dimension of increasing structural job resources. From the researcher point of view, these findings may be due to hospital was providing adequate resources, such as tools, training, and support, can help staff perform their tasks more efficiently and effectively.

This present study was consistent with **Baghdadi et al.,(2021)** who applied the study in Saudi Arabia who reported that high level regarding the item of " I make sure that I use my capacities to the fullest ". Also , the current study finding was agreement with **Elziny et al.,(2020)** who conducted a study in Egypt entitled "The Effect of Transformational Leadership on Job Crafting in Hotels: The Mediating Role of Psychological Capital" who reported that the highest mean score was related to increasing structural job resources dimension.

These present findings was in disagreement with **Abou Shaheen & Mahmoud, (2021)** who applied in Egypt entitled "Relation between Job Crafting, Nurses' Job Satisfaction and Counterproductive Work Behaviors", who reported that the highest mean score regarding decreasing hindering job demands dimension. Additionally ,these finding



was disagreement with **Hussein et al.,(2023)** who applied a study in Egypt entitled “The Impact of Human Talent Management on Organizational Entrepreneurship the Mediating Role of Job Crafting “, who reported that the highest mean score was related to increasing social resources dimension.

As regards total perception levels of staff nurses according to their job Crafting. The present study finding showed that more than half of the studied staff nurses had a high level of total job crafting. From the researcher point of view, this may be due to come back to nurses thinking about in what way their job gives their life purpose, thinking about the methods in which their work positively impacts their life, and revealing the role their job. Job crafting helps nurses adapt to changing demands and challenges in their work environment, making them more resilient and effective in their roles.

The present study was constant with **Hassan et al., (2022)** who conducted the study in Egypt entitled “Relation between Job Crafting and Job Satisfaction among Staff Nurses “, who reported that more than half of the studied sample had a high-level regarding job crafting. The second present study was consistent with **Elgales et al., (2023)** who conducted study in Egypt entitled “Effect of Job Demands-Resources and Job Crafting on Nurses Work Engagement” who reported more than half of the studied sample had a high-level regarding job crafting.

However, with these present the study finding disagreed with **Saad & Ahmed, (2020)** who applied study in Egypt entitled “Emotional Stability of Nurses and its Relation to Their Job Crafting”, who reported that near to half of the studied nursing staff had low job crafting levels. Also, these present study findings was in disagreement with **Sakuraya et al., (2020)** who conducted study in Tokyo entitled " Effects of a Job Crafting Intervention Program on Work Engagement among Japanese Employees: A Randomized Controlled Trial", who reported that low level job crafting.

Concerning work engagement dimensions. The present study findings reported that less than two-thirds of the studied staff

nurses had a high level regarding the dimension of vigor. From the researcher point of view, this may be due to a positive organizational culture and supportive work environment can significantly boost nurses' energy and enthusiasm. Also, access to adequate job resources, such as training, equipment, and support, helps nurses perform their tasks more effectively and feel more energized.

In the same line with **Ahmed & Abd-ElGhani,( 2021)** who applied in Egypt entitled" First Line Nurse Managers' Managerial Competency and its Relationship with their Staff Nurses' Work Engagement at Main Mansoura University Hospital", who reported that the highest mean score regarding vigor dimension . The current study finding was inconsistent with **Abd Elhamed & Hessuin, (2022)** who reported that high mean regarding absorption dimension. Also, these findings were disagreement with **Abdelaziz et al., (2023)** who revealed high mean regarding dedication dimension.

Concerning total level of studied staff nurses according to work engagement. The present study finding showed that more than half of the studied staff nurses had high levels of total work engagement. From the researcher point of view, this finding may be due to effective leadership and supportive management practices can significantly boost nurses' motivation and engagement. Also, access to adequate job resources, such as training, equipment, and support, helps nurses perform their tasks effectively and feel more engaged.

The present study was agreement with **Akeel & Elghannam, (2023)** who applied the study in Egypt who reported that more than half of nurses had high levels of engagement. A similar finding was consistent with **Elgales et al., (2023)** who conducted in Egypt who reported that most of nurses had high levels of engagement. Also, another study was inconsistent with **Ahmed & Abd-ElGhani,( 2021)** who reported high percentage of nurses had moderate level of engagement.

Regarding the correlation between the total nursing staff's job crafting levels, and work engagement levels. The present study revealed

there was a highly significant positive correlation between total staff nurses' job crafting levels, and work engagement levels. From the researcher point of view, this may be due to crafting their jobs, nurses can gain more control over their work, which enhances their sense of autonomy and empowerment. Job crafting enables nurses to tailor their tasks to align with their personal strengths and interests, making their work more enjoyable and fulfilling.

The present study is a similar study with **Han, (2023)** who conducted a study in Korea entitled "Nurses' job crafting, work engagement, and well-being: a path analysis", and reported that there is a strong correlation between job crafting, and engagement. The present study was consistent with **Yue et al., (2024)** who conducted a study in China entitled "Effects of a Nurse-Manager Dualistic Intervention (NMDI) Program on Work Engagement and Job Crafting of ICU Burnout Nurses: A Quasi-Experimental Study", which revealed that was a highly significant positive correlation between nurses' job crafting, and work engagement.

Also, another study consistent with these findings conducted in Saudi Arabia by **Baghdadi et al., (2021)** entitled "The relationship between nurses' job crafting behaviours and their work engagement", and indicated that job crafting is a significant determinant of nurses' work engagement.

### Conclusion

The study results lead to the conclusion that more than half of staff nurses had a high level of total job crafting, and more than a quarter of them had a moderate level. As well as, more than half of staff nurses had high levels of total work engagement, and less than one-fifth of them had moderate levels. There was a highly significant positive correlation between total staff nurses' job crafting levels, and work engagement levels. These present findings answer the research question which stated that what is the influence of job crafting on work engagement among staff nurses?

### Recommendation

**In the light of results of this study, the following recommendations were suggested:**

- Conduct regular performance evaluation of staff to provide constructive feedback and identify areas for improvement.
- Designing job crafting workshops that focus on encouraging nurses to engage in job crafting behaviors
- Implement mentorship programs where experienced nurses support newer staff.

### For further studies:

- Assess the relationship between job crafting and organizational performance: the mediating role of psychological capital.
- Assess relationships between job crafting and staff retention.

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