Nurses' Job Crafting and its' relationship with their Job Demands, Job Resources, and Career Competencies

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Abstract: Today, it has been increasingly recognized that job crafting is an important employee proactive organizational behavior which leads to various valuable outcomes for both organizations and employees. The favorable outcome of job crafting results in increasing job resources and reducing the harmful influence of job demands. Thus, job crafting helps employees to adjust the work to achieve career competencies and better attain work goals. Career competencies contain skills, knowledge and attitudes required to successfully perform a job. Therefore, health care organizations should encourage nurses to craft their jobs to be initiative, attain career competencies and take responsibility for their own development of achievement behaviors at work, as well as to perform at high levels. The aim of the present study was to examine the relation of nurses' job crafting with their job demands, job resources, and career competencies at Mansoura University Emergency Hospital. A descriptive design was utilized. Sample of the study consisted of all nurses working at Mansoura University Emergency Hospital (n=143 nurses). Four tools were utilized for data collection, namely; Job Crafting Scale (JCS), Job Demands Scale (JDS) Job Resources Scale (JRS) and Career Competencies Questionnaire (CCQ). Major findings of the present study were statistically significant positive correlation between nurses' job crafting and their job resources. Also, there was a statistically significant positive correlation between job crafting and career competencies. But there was no statistically significant correlation between job crafting and total job demands. It was concluded that job crafting dimensions have important roles for both nurses and organizations. It leads to increasing the level of job resources and career competencies continuously which help nurses to achieve both individual and work-related goals. It was recommended that allowing nurses to participate in new developments in their work, provide nurses with job crafting training programs, enhance effective communication on the superior-subordinate level, and provide nurses with opportunities to craft their jobs by giving them enough autonomy.

Keywords: Job Crafting, Job Demands, Job Resources, and Career Competencies, Job Demands and Resources (JD-R).

1. INTRODUCTION

In a global and flexible working environment with a rapidly changing labor market, nurses should take initiative for their careers and craft their own work roles by navigating self-development opportunities, such as training and challenging assignments, rather than just relying on career paths determined by their organization [1]. In addition to that, nurses should construct a work environment that helps them to attain both personal and organizational objectives. Accordingly, job crafting is employees' driven technique to work redesign that helps them to better attain these goals while using less resources [2]. This well designed environment is not only significant for nurses but also influence patients [3].

Job crafting is significantly pertinent from a practical view, because it indicates how health care professionals enhance the work environment and promote career competency, job performance and well- being [3]. Therefore, health care organizations should make use nurses more efficiently and effectively by recognizing their individual variations and encouraging them to craft their jobs [4].

Based on JD-R model, job crafting was defined as an individualized, self-initiated change and bottom-up approach to job re-design [5]. Job crafting is a proactive behavior that employees make to balance their job demands and job resources with their individual needs and abilities. Job demands include organizational, physical, psychological or social features of the job that need effort from the employee [6]. It contains qualitative and quantitative job demands. Qualitative job demands such as, unfavorable physical work environment, emotional demands, role conflict and role ambiguity. While, quantitative job demands such as time pressure and workload [5]. Moreover, job demands can reduce employee well-being and lead to negative organizational outcomes through a health impairment process if they exceed the employees' adaptive capabilities [7].

While, job resources are job attributes that are beneficial either in attaining work objectives, encouraging personal growth and development, or decreasing job demands [8]. They are located at many levels which include: organizational level as career opportunities and job security; social relation level as team climate and supervisor support; the organization of work level such as decision making participation; and at the task level such as autonomy, task identity, and skill variety [9]. Job resources are the most vital predictors of positive outcomes [10].

Accordingly, JD-R model specified four job crafting dimensions, namely: increasing structural job resources; increasing social job resources; decreasing hindering job demands; and increasing challenging job demands [2]. Employees can increase their structural job resources through creating more chances at work to get more autonomy or job variety and develop themselves [6]. While, they can increase social job resources through getting social support and more feedback [7]. On the other hand, increasing challenging job demands can help employees to attain more challenging objectives, enhance their skills, and avoid boring tasks [11]. While, decreasing hindering job demands represent employees' behaviors directed toward decreasing the physically, mentally and emotionally demanding of job features as time pressure and workload that can limit them in achieving goals [12].

Employees can initiate job crafting in three ways, namely; relational, task, and cognitive crafting [13]. Relational crafting refers to alterations in interpersonal relationships at work during performing a task such as duration and frequency of social interaction with clients and colleagues [14]. Task crafting refers to temporal or physical changing of tasks boundaries by removing or adding a task, considering the effort and time assigned to different tasks [8]. While, cognitive crafting indicates changing the way that employees think about the job. By making such modifications in job, employees are capable of better recognizing their job and using their skills in the best possible technique [15].

Therefore, job crafting is a successful way for controlling work problems and assist nurses in decreasing hindering job demands and achieving challenges work objectives [10].The main characteristic of job crafting behaviors is that nurses are able to change their tasks or other features of work environment on their own initiative, which results in changing the work meaning or work identity and usually leads to improving job performance and career competencies and therefore attaining higher levels of productivity [16].

Moreover, proactivity at the career level indicates career competencies development. It ensures the right people at the right organizational level are prepared to attain high performance outcomes [17]. Career competencies had been defined as career-related skills, knowledge, and abilities that enable good performance in a particular role and are associated with career progress and career success [18]. In addition, both job crafting and career competencies were linked to work engagement which is a significant feature of employee well-being [19].

Career competencies describe the capability of nurses to demonstrate effectively a set of features as personal attributes, professional knowledge, skills, values, and attitude. A competent nurse should gain these characteristics, have the ability and motivation to use them effectively to provide professional, safe and effective nursing care to patients [20]. Therefore, nurses must possess three characteristics to acquire nursing career competency. First, essential personal characteristics such as problem-solving, critical thinking and self-control ability. Second, professional behaviors and attitudes such as being autonomous, promoting continuous learning and respecting patient rights. Third, the capability to give care based on professional skills and knowledge such as the ability to cooperate with healthcare professionals, instruct, educate and, manage nursing care and ensures quality of nursing care [20].

Career competencies composed of three dimensions which are behavioral, reflective and communicative career competencies. First, behavioral career competencies contain; "work exploration", that means active discovering and searching for opportunities regarding work and career on the external and internal the organization; and "career control"

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which means actively impact on work and education methods of employee's career through defining goals and planning to achieve them [12]. Second, reflective career competencies include "reflection on qualities", which involves career skills, strengths and shortcomings; and "reflection on motivation", that is contain career motivations, values and passions. Finally, communicative career competencies which composed of "networking", that contain employees' knowledge regarding the existence and professional value of network and their capability to utilize it for career-related purposes, and "self-profiling", which refers to introducing and communicating one's individual skills, knowledge and capabilities, to the labor market internally and externally [21].

Significance of the study:

The rapid and constant changes have directly and indirectly effect on both employees and organizations and required them stronger personal initiative [7]. In health care organizations, nursing care is the most significant element of hospital services and health care quality influenced by nurses' competency to a large degree [22]. In addition to that, health care organizations are constantly under pressure for survival. These pressures demand nurses who are able to craft their jobs to take control of their own working life [23]. Job crafting helps nurses to change their job elements and relations with others to redefine their work meaning and therefore enhance their career competencies. Accordingly, nurses' job crafting seems to be effective because it lead to increasing in the level of job resources over time which assists nurses to attain their work related goals [24]. It also influences nurses' job attitudes and performance levels that enable them to accomplish their duties and roles with high quality [8].

In short, job crafting not only gives nurses meaning to the work, but also changes everything about the work [25]. It presents one way for nurses to alter their own experiences at work in positive and meaningful ways [26]. Career competency also is very significant for nurses and act as personal resource. It includes the skills required to successfully perform a job. In nursing field generally and Mansoura University Emergency Hospital specifically, nurses need to apply their skills, knowledge, and essential discrete characteristics to each circumstance and be able to adjust them to various situations through crafting their jobs [24]. Accordingly, job crafting is shown to be related to job demands, job resources, and career competency. In addition to that, no researchers have examined the relationship between these variables at the selected setting. Therefore, investigating the relationship of job crafting to job demands, job resources and career competencies at Mansoura University Emergency Hospital represents a significant contribution to the field.

Research hypothesis:

1. Nurses' job crafting is correlated with job demands.

2. Nurses' job crafting is correlated with job resources.

3. Nurses' job crafting is correlated with career competencies.

Aim of the study:

The aim of the present study is to examine the relation of nurses' job crafting with their job demands, job resources and career competencies at Mansoura University Emergency Hospital.

2. SUBJECTS AND METHODS

Design:

A descriptive design was used in carrying out this study.

Setting:

The study was conducted at Mansoura University Emergency Hospital which provides a wide spectrum of health services at Delta Region.

Subjects:

All nurses working in Mansoura University Emergency Hospital (n=143) who fulfills the criteria of having a minimum of one year experience and available at time of data collection were included in the study to express their opinion about job crafting and its effect on job demands, job resources and career competencies.

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Tools of data collection:

Four tools were used for data collection, namely; Job Crafting Scale (JCS), Job Demands Scale (JDS), Job Resources Scale (JRS) and Career Competencies Questionnaire (CCQ).

I. The Job Crafting Scale (JCS). It was developed by **Tims et al.,** [27].

This questionnaire divided into two parts: -

The first part:

It was used to identify demographic characteristics of the nurses as age, years of experience, educational qualifications and department.

The second part: It includes 21 items related to nurses' job crafting at their workplace. It was developed by **Tims et al.,** [27] to assess the behavior of job crafting. These items were grouped under four subscales namely; increasing social job resources (5 items), increasing structural job resources (5 items), increasing challenging job demands (5 items), and decreasing hindering job demands (6 items). The assessment was done on 5-point Likert scale ranging from one (never) to five (always).

II. Job Demands Scale. It was developed by **Gabr & El-Shaer**, [28] and modified by the researcher. It includes 30 items related to the nurses' job demands items at their workplace. It defined the nurses' job demands that refer to social, organizational, physical, and psychological job features that need an effort by the employee **Bakker et al.,** [29]. These items were grouped under four categories namely; role ambiguity (6 items), job insecurity (10 items), workload (9 items) that and role conflict (5 items). The assessment was done on 5-point Likert scale varying from 1 (strongly agree) to 5 (strongly disagree).

III. Job Resources Scale. It was developed by **Gabr & El-Shaer**, [28] and modified by the researcher. It aimed at assessing nurses' job resources that help them to accomplis work goals, encourage personal growth or decrease job demands **Bakker et al.,** [29]. It includes 37 items grouped under six job resources subscales namely; autonomy (4 items), organizational support (8 items), job feedback (5 items), development opportunities (3 items), support & coaching from supervisors (7 items), and job control (10 items). Each response was allocated a score from along a 5-point likert scale, ranging from 1 (strongly agree) to 5 (strongly disagree).

VI. Career Competencies Questionnaire (CCQ). It was developed by **Akkermans et al.,** [18] and modified by the researcher. It consists of 21 items aimed at assessing career competencies. These items were grouped under six categories namely; networking (4 items), work exploration (3 items), reflection on motivation (3 items), reflection on qualities (4 items), career control (4 items) and self-profiling (3 items). Response categories was done on 5-point scale ranged from 1 (completely dis agree) to 5 (completely agree).

Methods of data collection:

1. Permission was gained from the director of Mansoura University Emergency Hospital to implement the study.

2. All participants interviewed for clarifying the procedures and purposes of the study, and they have the right to withdrawal from the study any time during the study. Oral consent was gained from participants to participate in the study.

3. Tools of data collection were translated into Arabic and were tested for its relevance and content validity by a jury consisted of 3 academic staff in Nursing Administration Department at Faculty of nursing, Mansoura university, 4 nurses from the study hospital. The essential modifications were done.

4. A pilot study was conducted on 10% of nurses at the study hospital in order to ascertain its clarity and feasibility.

5. The questionnaires were distributed to the nurses to answer the questions. Each sheet took 20-25 minutes to be answered. Data collected in two months starting March 2018.

Statistical analysis:

The collected data were organized, tabulated and statistically analyzed using SPSS software statistical computer package version 19. Data summarized using mean and standard deviation for numerical variables. The maximum score depends on the number of items of each topic. In order to test the hypotheses, standard linear regression analyses were conducted. The r-test was used for correlation analysis between quantitative variables. The threshold of significance was fixed at the $p<0.01, 0.05$ level.

3. RESULTS

Table 1: Demographic characteristics of the study subjects (n= 143).

Characteristics	No.	%
Age		
< 25	22	15.4
25- 35	63	44.1
>40	58	40.5
Mean + S.D	33.538+ 8.303	
Years of experience:		
<10	47	32.8
10-	43	30.1
>20	53	37.1
Mean + S.D	14.111 +8.323	
Qualifications:		
-Bachelor of nursing	12	8.4
-Technical nursing institute	43	30.1
- Nursing school diploma	88	61.5
Job:		
Staff Nurse	132	92.3
Head Nurse	11	7.7
Department:		
Reception	47	32.8
Medical Units	25	17.5
Surgical Units	32	22.4
Intensive care units	13	9.1
O R (Operation Room)	26	18.2
Marital status:		
Married	128	89.5
Single	15	10.5

Table 1 shows the demographic characteristics of the study subjects. As regard to the age, about 44% of nurses their age ranged from 25 to 30 years and 15.4% aged less than 25 years. Regarding experience in nursing profession, 37.1% of nurses had experience more than 20 years. Most of the study subjects were staff nurses and about 61% of them held nursing school diploma. More than quarter of them (32.8%) were working in reception unit and most of them were married (89.5%).

Table (2): Descriptive statistics of job crafting dimensions as perceived by the study subjects (n= 143).

Job Crafting Dimensions	Max.score	Study nurses (n=143)	
		Mean ±SD	% *
Increasing structural job resource	25	21.000+ 2.978	84%
Decreasing hindering job demands	30	23.132+ 3.847	77.11%
Increasing social job resources	25	19.573 + 2.839	78.29%
Increasing challenging job demands	25	19.216 + 3.129	76.86%
Total Job Crafting	**105**	**82.923 + 9.362**	**78.97%**

* Percentages are calculated relative to maximum score.

Table (2) shows descriptive statistics of job crafting dimensions as perceived by the study subjects. The overall job crafting was 82.923 representing 78.97% of maximum score. The dimension of increasing structural job resource had the highest mean score 84% of maximum score and followed by increasing social job resources 78.29%. While the least was increasing challenging job demands 76.86% of maximum score.

Table (3): Descriptive statistics of job demands and resources dimensions as perceived by the study subjects (n= 143).

Dimensions	Max. score	Study nurses (n=143)	
		Mean ±SD	% *
Work Demands/ Workload	45	31.580+ 4.318	70.18
Role conflict	25	17.419 + 3.679	69.68
Role ambiguity	30	13.608 + 4.155	45.36
Job insecurity	50	26.349 + 7.068	52.70
• *Total Job demands scores*	*150*	*88.958 +10.067*	*59.31*
Autonomy	20	12.510 + 2.313	62.55
Organizational support	40	24.825 + 8.735	62.06
Job feedback	25	19.510 + 3.030	78.04
Development opportunities	15	12.132 + 2.007	80.88
Support & coaching from supervisors	35	27.566 + 4.571	78.76
Job control	50	39.042 + 6.968	78.08
• *Total Job resources*	*185*	*135.587 + 19.195*	*73.29*

* Percentages are calculated relative to maximum score.

Table (3) shows descriptive statistics of job demands and resources dimensions as perceived by the study subjects. Total job demands mean score was 88.958 representing 59.31% of maximum score. The highest mean score dimension of job demands were work demands/ workload 31.580 representing 70.18% of maximum score and role conflict 69.68% of maximum score. While, role ambiguity was the lowest 13.608 representing 45.36 % of maximum score. On the other hand, total job resources mean score was 135.587 representing 73.29% of maximum score. The highest mean score dimension of job resources was development opportunities 12.132 representing 80.88% of maximum score while the lowest two dimensions were organizational support 24.825 representing 62.06 % of maximum score and autonomy representing 62.55% of maximum score .

Table (4): Descriptive statistics of career competencies dimensions as perceived by the study subjects (n= 143) .

Career competencies dimensions	Max.score	Study nurses (n=143)	
		Mean ±SD	% *
Reflection on motivation	15	12.111 + 2.191	80.74
Reflection on qualities	20	16.377 + 2.306	81.88
Networking	20	15.664 + 2.755	78.32
Self-profiling	15	11.692 + 2.359	77.95
Work Exploration	15	11.447 +1.893	76.31
Career control	20	14.769 + 2.978	73.84
Total Career competencies	105	82.062 + 10.536	78.15

* Percentages are calculated relative to maximum score.

Table (4) shows descriptive statistics of career competencies dimensions as perceived by the study subjects. Total career competencies was 82.062 representing 78.15% of maximum score. The highest mean score dimension of career competencies was reflection on qualities16.377 representing 81.88% of maximum score followed by reflection on motivation 80.74% while, career control was the lowest 14.769 representing 73.84 % of maximum score.

Table 5: Relationship between job crafting and job demands dimensions in the selected settings (n= 143).

Dimensions of job demands	job crafting dimensions				
	Increasing structural job resource	Decreasing hindering job demands	Increasing social job resources	Increasing challenging job demands	Total Job Crafting
Workload	.035	-.060	-.082	.033	-.027
	.678	.475	.331	.697	.745
Role conflict	.234**	.254**	.172*	.071	.255**
	.005	.002	.040	.400	.002
Role ambiguity	-.175*	-.283**	-.260**	-.414**	-.389**
	.036	.001	.002	.000	.000
Job insecurity	.024	.324**	.095	.175*	.228**
	.772	.000	.258	.037	.006
Total Job demands	.045	.178*	-.013	-.008	.081
	.591	.033	.878	.920	.337

*Correlation is significant at the 0.05 level (2-tailed).

**Correlation is significant at the 0.01 level (2-tailed).

Table (5) presents relationship between job crafting and job demands dimensions in the selected settings. The overall results in this table revealed that the relationship between total job crafting and total job demands is not significant (p> 0.05). While, job crafting has significant positive relationship with both role conflict and Job insecurity. On the other hand, job crafting has significant negative relationship with role ambiguity (p< 0.05), and nonsignificant negative relationship with workload.

Table 6: Relationship between job crafting and job resources dimensions in the selected settings (n= 143).

Dimensions of Job resources	Job Crafting dimensions				
	Increasing structural job resource	Decreasing hindering job demands	Increasing social job resources	Increasing challenging job demands	Total Job Crafting
Autonomy	.187*	.001	.135	.044	.116
	.025	.990	.107	.602	.169
Organizational support	-.070	.508**	.289**	.337**	.387**
	.407	.000	.000	.000	.000
Job feedback	.261**	.489**	.368**	.391**	.526**
	.002	.000	.000	.000	.000
Development opportunities	.252**	.349**	.303**	.383**	.443**
	.002	.000	.000	.000	.000
Support & coaching from supervisors	.334**	.216**	.516**	.363**	.473**
	.000	.009	.000	.000	.000
Job control	.411**	.399**	.577**	.405**	.605**
	.000	.000	.000	.000	.000
Total Job resources	.287**	.541**	.570**	.494**	.652**
	.001	.000	.000	.000	.000

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table (6) shows relationship between job crafting and job resources dimensions in the selected settings. The overall results in this table revealed statistical significant positive relation between job crafting and all its dimensions with total job resources (p<0.01, 0.05). Moreover the results revealed significant positive relation between total job crafting and all dimensions of job resources except autonomy. This table also revealed significant positive relations between all job crafting dimensions with three dimensions of job resources which were job feedback, development opportunities and support & coaching from supervisors. Also, there is a significant positive relation between increasing structural job resource and autonomy.

Table 7: Relationship between job crafting dimensions and career competencies in the selected settings (n= 143).

Dimensions of career competencies	Job Crafting dimensions				
	Increasing structural job resource	Decreasing hindering job demands	Increasing social job resources	Increasing challenging job demands	Total Job Crafting
Reflection on motivation	.368** .000	.302** .000	.441** .000	.563** .000	.563** .000
Reflection on qualities	.521** .000	.277** .001	.401** .000	.348** .000	.517** .000
Networking	.289** .000	.358** .000	.402** .000	.468** .000	.517** .000
Self-profiling	.431** .000	.291** .000	.465** .000	.352** .000	.515** .000
Work Exploration	.379** .000	.356** .000	.372** .000	.398** .000	.513** .000
Career control	.171* .041	.656** .000	.301** .000	.444** .000	.564** .000
Total Career competencies	.479** .000	.531** .000	.541** .000	.591** .000	.733** .000

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 7 depicts relationship between job crafting dimensions and career competencies in the selected settings. The overall results in this table showed statistically significant positive relation between job crafting and career competencies. This table also showed statistically significant positive relation between all dimensions of job crafting with all dimensions of career competencies (p<0.01, 0.05).

Table 8: Correlation between job crafting with job demands, job resources and career competencies, at the study hospital (n= 143).

	Correlation with job demands		Correlation with job resources		Correlation with career competencies	
	r.value	p.value	r-value	p.value	r.value	p.value
Job Crafting	.081	.337	.652**	.000	.733**	.000

Table 8 shows correlation of job crafting with job demands, job resources and career competencies at the study hospital. There was no statistical significant correlation between job crafting and total job demands. While, there was a statistical significant positive correlation between job crafting and job resources. Also, there was a statistical significant positive correlation between job crafting and career competencies.

4. DISCUSSION

In facing rapid changes in the health care system, health care organizations need professional nurses who are able to craft their jobs [30]. Job crafting is a form of proactive work behavior that aimed at increasing structural and social job resources and challenging job demands as well as decreasing hindering job demands [2]. It helps nurses to manage their career and take more initiatives for delivering quality outcomes [31]. In addition to that, nurses whose work is too significant may become consumed by it, at the expense of their external activities, relations with others, and physical and mental health. Thus, they should be alert to warning signs and adjust their job crafting consequently [32]. Moreover, the JD-R model considers nurses as active agents in the changing work frame, who can be encouraged to maximize their job resources and enhance their career competencies to achieve their work goals [33].

Findings of the present study revealed that there was no statistically significant relationship between job crafting and total job demands while there was a statistically significant relationship between crafting decreasing hindering job demands and total job demands. This finding agreed with **Bakker,** [3] who reported that, job crafting assists doctors and nurses to decrease their hindrance job demands. In this regard and according to the JD-R model job crafters modify either the level of job demands, job resources, or both. While, this finding disagreed with **Tims et al.,** [34] who found no effect of crafting hindering job demands on the demands level as reported by employees.

Job demands include social, physical and psychological organizational features required for a particular job [35]. They are divided into hindrances and challenges job demands. Hindrances job demands include unfavorable work conditions that interfere with an employee's capability and prevent goal attainment such as workload and are considered bad demands. While, challenges can enhance employees' development such as high levels of responsibility, and are considered good demands [36].

Findings of the present study revealed that there were statistically significant relationship between nurses' job crafting and two dimensions of job demands which were role conflict and job insecurity. This may be explained that nurses usually craft their jobs to be able to deal with high levels of hindrance job demands such as conflicting roles and job insecurity. In this same respect **Gordona, et al.,** [33] reported that, job crafting provides nurses with daily control in the changing work environment because it assists them to fit the job to their favorites and needs by seeking challenging demands and resources and decreasing hindering demands [37].

In this same respect, **Tims, et al.,** [34] reported hindering job demands, are considered stressors because they induce negative emotions and hinder optimal performance, personal growth and goal attainment. Employees initially try to resist these hindering demands through investing more resources. When employees face these health-threatening demands for a long time, they eventually need other ways for adapting.

On the other hand, findings of the present study revealed role ambiguity as a dimension of job demand has been negatively related with job crafting and it's all dimensions. It means that increasing nurses job crafting is associated with decreasing role ambiguity. It could be related to that, job crafting help nurses to clarify their roles, make sure that their work is emotionally and mentally safe, develop their capabilities and ask supervisors to coach them. This is the same line of **Bakker & Demerouti** [14] who stated that employees who craft their jobs; ask for training and feedback, have greater autonomy, initiate opportunities for self-development at work, share in new projects, and decrease role ambiguity and workload.

Role ambiguity occurs when nurses' roles are not clear. It can cause anxiety and fatigue for them and make it difficult to perform well. Moreover, **Sakuraya, et al.,** [38] mentioned that challenging job demands for example, high levels of responsibility enhance personal growth and mastery while, hindering job demands for instance; role ambiguity is a stressor that can inhibit employee's learning and goal achievement. Therefore, **Bahmani, et al.,** [36] reported the positive outcomes of job crafting can be explained by the appropriate psychological state that aims at increasing the advantage of job resources and decreasing the harmful aspects of job demands that help nurses to control work problems effectively [10].

The results of the present study revealed that the highest dimension of job demands was workload. It could be related to staff shortage that increase work pressure and make nurses have much work to do in a very short period especially at emergency hospital. In this same line, **Inoue et al.,** [39] found that time pressure had high score among job demands. This finding also agreed with **Hu, et al.,** [35] who stated that, workload is the most broadly used job demand. It was used to describe aspects such as work difficulties, time pressure and amount of work. This also consistent with **de Naeyer,** [40] who concluded work pressure, and role ambiguity were more common job demands within innovative organizations rules.

This finding also is consistent with **Tims, et al.,** [41] who stated that the number of work hours at the hospital was strongly linked to job pressure and poor psychological health. Moreover **Colombo & Zito,** [9] reported that nursing coordinator should monitor the workload continuously and assign work duties effectively among the nursing staff, since this load can result in personal and organizational negative outcomes. Thus, decreasing demands includes proactive behaviors that are concentrated on reducing employee's workload and the physically, mentally, or emotionally demanding job features [36].

Regarding nurses' job crafting and job resources, findings of the present study revealed job resources has been positively related to nurses job crafting. It means that, increasing nurses' job crafting was associated with increasing job resources. It could be related to that job crafting encourages nurses to seek resources as requesting advice from supervisors or peers, asking feedback on a person's career performance, or searching for development chances. They tend to expand these resources to keep healthy and satisfied. Accordingly, nurses invest resources to defend against resources loss, and to acquire new resources [42].

Job resources are job features that assist nurses learn new skills, achieve their work goals and treat with job demands [43].This finding agreed with **Gordona, et al.,** [33] who reported that job crafting can increase job resources, which help nurses and medical specialists to attain work related goals. Therefore, **Bakker,** [3] mentioned that consequences of job crafting in the form of increasing job resources assist doctors and nurses to deal effectively with bureaucracy problems and proactively optimize work environment which lead to a better personal organization fit. So, nurses with high job resources be inclined to have higher level of an active, positive, work-related state [38].

This finding agreed with **Kim & Beehr,** [1] who reported that employees who successfully craft their job characteristics are willing to invest increased resources in their tasks, such persisting and doing extra work and thinking of ways to do the job better. This is in line with results of study done by **Gabr & El-Shaer,** [28] who concluded job resources help nurses to experience high levels of pride, challenge and enthusiasm in their work to achieve work goals and organizational success. Moreover, the organization should increase the level of social and organizational support, and development chances. In this same respect, **Bakker,** [3] reported that job crafting is positively correlated to job resources. Thus, health care professionals who demonstrate job crafting behavior seem to increase their job resources and make the organization more suitable with their own capabilities and favorites.

In this regard, **Wingerden, et al.,** [24] reported that nurses who crafted their job resources, also reported optimize their work environment through building more job resources which assist them to accomplish their work-related goals. Therefore, **Mahmoud** [30] emphasized that managers should create resources and a suitable environment for promoting nurses job crafting.

The present finding also revealed that there were significant positive relations between all job crafting dimensions with three dimensions of job resources which were job feedback, development opportunities and support & coaching from supervisors. This means that, supervisors have vital roles in enhancing nurses' job crafting through promoting development chances, support and frequent constructive feedback for nurses.

Furthermore, **Grigsby** [44] reported social support is frequently seen as the safeguarding job resource in the workplace, such as supervisor support against high job demands. This is the same view of **de Naeyer** [40] who mentioned that supervisors' feedback and support not only assist employees to work effectively, but may also ensure better cooperation between employee and the immediate superior. This finding also is consistent with **Thun & Bakker** [45] who mentioned that, behaviors of empowering leader which confirm motivational support and delegation are likely to assist employees craft their jobs to become more challenging and resourceful. This also in line with a study done by **Wang, et al.,** [46] who reported, seeking challenges and resources, which are motivation-promoting job crafting behaviors, were positively related to transformational leadership. This is because a transformational leader motivates subordinates to perform beyond their own expectations.

This finding in line of **Van den Heuvel, et al.,** [47] who reported that, crafting job resources, such as performance feedback and obtaining more development opportunities are associated with increasing these job resources later. Therefore, **Tims et al.** [27] suggest items for increasing challenging job resources such as encouraging nurses to share in new projects and developments, spend more time on interesting activities, and take on extra tasks in suitable times. Moreover, effective job crafting maximizes the positive work environment in terms of increasing available job resources [48].

Again, the finding of the present study revealed a statistically significant positive relationship between increasing structural job resource as a dimension of job crafting and nurses' autonomy. It could be related to that; job crafting encourages nurses to make everyday modifications in job characteristics voluntarily and decide on their own what they are doing that help them to increase structural job resource. This is in the same line with **Chavarria** [49] who mentioned that when employees experienced higher job autonomy, they responded by seeking resources and reducing demands. This finding also agreed with, **Bipp & Demerouti** [4] who found that, participants highly intend to seek challenging resources when they had the autonomy to choose goals according to their preference.

Autonomy is important for nurses' health and well-being because it gives them more opportunities to cope effectively with stressful conditions. Nurses tend to be independent in their decisions and work approaches. They decide voluntarily which method and how well they can care for patients. In this same respect **Nell & Boonzaier** [11] reported job crafting is not negotiated with a supervisor, but rather a self-directed bottom-up method to attain good consensus between the employee and the job.

Again, **Petrou, et.al.,** [37] reported job autonomy is positively linked to overall job crafting. In this same respect, **Petrou, et al.,** [50] reported positive correlation of job autonomy with increasing social and structural job resources and increasing challenging job demands because it gives employees chances and essential information to modify their job features according to their capabilities and needs. Additionally, employees who catch job resources are self-assured about their future, and can create more environmental aspects that facilitate goal achievement [51].

In this same line, **Elbanawey** [21] reported autonomy is considered a motivating job-design component and beneficial particularly for job crafting. So, jobs with greater autonomy are easier to craft than those with less autonomy. Thus, **Thun & Bakker,** [45] reported that, it is important for healthcare organizations to hire and retain nurses who are capable of crafting their jobs to deal effectively with the frequent world challenges and changes.

Regarding nurses' job crafting and career competencies, the findings of the present study revealed that there were statistical significant positive relationship between nurses' job crafting and career competencies and all dimensions of nurses' job crafting were positively related with all career competencies dimensions. That means nurses' job crafting is essential for career competencies. It may be related to that, job crafting help nurses to develop their own knowledge, skills and experiences at work and be able to apply and adjust them to numerous circumstances.

On this regard, career competency involves the necessary skills, knowledge, and attitudes a nurse must have in order to perform a set of defined activities to an expected standard. This may be explained that crafted nurses, who proactively constructed a challenging and resourceful work environment, tend to be open to new information and encouraged to perform well. In this regard **Bahmani, et al.,** [36] reported job crafting helps employees to decrease tasks they dislike either by decreasing the energy spent on them or by assigning them to subordinates or colleagues. Thus, nurses who understand their abilities and needs can therefore modify their work behaviors accordingly and better match career competencies.

Similarly, **Van Wingerden, et al.,** [51] reported that employees who have been trained to craft their jobs, started to expand their structural job resources such as creating more learning opportunities and asking for autonomy. These initiative behaviors lead to an enhanced work environment that facilitates their career competency. In this respect, **Bakker,** [3] reported doctors and nurses who engaged in job crafting, maximize their own functioning in the workplace and gain more profits. Moreover, nurses who achieve hard goals are likely to gain competency, which are likely to enhance how tasks are conceptualized and implemented, how, when and to whom they interact at work, and how they understand the importance and meaning to their jobs [38].

This finding was consistent with **Akkermans et al.** [19] who used JD-R model to frame career competencies as a personal resource and indicated that it assist employees to better identify and create available job resources. Thus, Career competencies are linked to job resources and changes that are made on it i.e. job crafting behavior. For example, employees who are capable of introducing their personal skills and knowledge will be better able to expand their challenging job demands to meet this additional challenge. Similarly, skilled employees in discovering their career choices could be better at recognizing the work features needed to adapt and can increase challenging job demands and structural job resources to attain career objectives.

In this same respect **Akkermans & Tims**, [12] reported that career competencies serve as a personal resource that can lead to a motivational process linked to career success through extensive job crafting. In addition to that, employees who actively crafting their jobs by asking for support and feedback could increase their communicative career competencies because it assist them to increase development opportunities, the professional network or could improve reflection on qualities and motivation.

This finding also agreed with **Elbanawey** [21] who found a positive significant relationship between career competencies and job crafting. She added that career competencies may inform employees the available job crafting behaviors in a more deliberate and specific way. Therefore, possessing behavioral, reflective and communicative career competencies work as the foundation for crafting one's job because employees who know their needs and their capabilities can therefore adjust their work-related behaviors to suit those competencies [12].

In this same respect, **Cenciotti, et al.,** [7] reported that job resources represent essential human needs as competence and autonomy. For example, proper feedback promotes learning that increases career competence, while decision latitude and social support meet the need for autonomy. Thus, job crafting is an effective technique for obtaining better work and career competency [52].

These findings agreed with **Gordona, et al.,** [33] who reported the trained nurses on improving their working environment proactively and positively through job crafting, were able to enhance their work strategies, processes, and performance which lead to organizational and personal benefits. Additionally, **Bipp & Demerouti** [4] stated that proactive work behavior includes a broad tendency to initiate change and looking at the future, not only at the workplace level, but also within a broad organizational perspective or employee's career.

Again, this finding was consistent with **Kim & Beehr** [1] who reported job crafting activities appear to be an effective method of optimizing employee–job suitability and therefore help employees in attaining career competencies and success. In this same respect job crafting occurs in the design of one's job. It provides new approaches that add favorite tasks or reduce unenjoyable tasks, change standard job procedures and enhance employee's work. Such changes can satisfy nurses' core needs, enhance job meaning, give them more job autonomy and become more competent [53].

In this regard, **Akkermans, et al.,** [54] reported employees who know what they want, who can get closer for counseling, and how they can look for growth chances are the employees who will become later more competent both internally and externally. Those employees who have a clear idea regarding their desires and preferences, able to put goals and act upon them, are most likely to accomplish high segmentation and integration degree between the home and work fields. Accordingly, there is some experimental evidence relate job crafting to career competencies.

5. CONCLUSION AND RECOMMENDATIONS

The present study confirms that nurses' job crafting has greater importance to their job resources and career competencies which help them to achieve their work-related goals. Based on the results of this study, it can be concluded that nurses' job crafting plays a significant role in expanding job resources, decreasing hindrance job demands and improving career competencies. Job crafting was related to three dimensions of job demands which were role ambiguity, role conflict and job insecurity. Role ambiguity has been negatively linked to job crafting and it's all dimensions. Also, all job crafting dimensions were related with three dimensions of job resources which were job feedback, development opportunities and support & coaching from supervisors. In addition to that, all dimensions of job crafting were related to all dimensions of career competencies. Based on the findings of the present study, the following can be recommended:

1. To promote nurses' career competencies, managers should provide nurses with opportunities to craft their jobs by giving them enough autonomy to decide how to optimize the work environment in terms of increasing available job resources and decreasing hindrance job demands.

2. Superiors should construct a suitable work environment for their subordinates to exercise job crafting through which proactive work behaviors and intuitive decision making reflected on career competencies.

3. Managers should provide job crafting training programs to nurses and prepare them to meet future job challenges with greater control.

4. Managers should increase challenging job demands by allowing nurses to participate in new developments and projects in the workplace.

5. Promote open communication on the subordinate-leader level, so that both parties can express expectations openly.

6. When hiring new employees managers should attract and select persons who are capable of crafting their jobs to deal effectively with the frequent world challenges and changes.

7. Future intervention studies of job crafting should be carried out in future research.

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