

Job Crafting and its Relation to Innovative Behavior and Job Autonomy among Staff Nurses

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Abstract

Context: Job crafting is a phenomenon of modifying tasks to improve productivity, enable employee to develop new skills, fellow innovative behavior, and independence in doing responsibilities, **Aim:** The aim of the study to assess job crafting and its relation to innovative behavior and job autonomy among staff nurses. **Methods: Design:** A descriptive correlational design was employed to carry out this study. **Setting:** Cardiovascular Surgery Hospital, which affiliated with Ain Shams University Hospitals. **Subjects:** All staff nurses working in the specified study setting, their total number are 119. **Tools:** Three tools were utilized namely Job Crafting Scale, Innovative Behavior Scale, and Job Autonomy Scale. **Findings:** display that 70.6% of the studied staff nurses perceived a high level of total job crafting, and 80.6% of them had a high level of total innovative behavior. Additionally, 63.9% of them had a high level of total job autonomy. **Conclusion:** A high statistically significant positive correlation was presented between staff nurses' perception of total job crafting, innovative behavior, and job autonomy. **Recommendations:** Nurse managers encourage nurses to design their jobs through training and feedback on job crafting behavior. As well as inspiring staff nurses to grow personally by offering them a chance to learn about novel innovations and a variety of work assignments.

Keywords: Job autonomy, job crafting, innovative behavior, and staff nurses.

Introduction

Nurses are continually under stress for existence in the present extremely changed work state. Also, accessibility of resources at work, patient demands, collaboration with coworkers, and changes in the work conditions all lead to nursing pressure. Within this multifaceted work atmosphere, job crafting is reflected as a type of proactive performance, that adjustments nurses make to the responsibilities and resources of their jobs to better suit their performance

and skill set (*Topa & Aranda-Carmena 2022*).

Job crafting is the act of enhancing one's work by proactively creating changes to the job's constraints. These changes include tasks performed on the job, interactions with people, relational and cognitive characteristics, and thoughts about the importance of their role in the work. Also, job crafting is the capacity to reimagine their work in a productive, pleasant, and efficient manner and is related to adjustment of

the job to oneself. (Garg and Shuchi Sinha, 2023).

Job crafting is categorized into increasing structural job resources, such as chances for proficient advancement, increasing social job resources in such response as the opportunity of training, increasing challenging job demands in situations where employees must overcome and accomplish the objective, and decreasing hindering job demands, which are requirements that delay employees' growth and attainment of their goals. (Chihyung & SangGon, 2023).

Job crafting action can improve constructive feelings, and resources which, allow the workers to follow innovative behavior. The study, teaching, clinical practices, and further features can all exhibit innovative behavior, which refers to the steps of creation, construction, evaluation, and application of inspired thinking. According to our research, innovative behavior is seeking support, creating ideas, and understanding concepts (Xiang et al., 2023).

Additionally, professionals' innovative work behavior in the healthcare sector can perform in advanced adaptations of current healthcare facilities, procedures, or products as well as innovative real solutions. Thus, innovative behavior is categorized into: idea generation, innovative output, idea search, involving others, idea communication, implementing activities, idea championing, and overcoming difficulties (Akhtar et al., 2020).

Job autonomy is a necessity for personnel to craft their daily duties,

which be defined as the degree to which a job permits workers independence, extensive freedom, choice, and control to plan their work and determine how their work is carried out. Additionally, job autonomy can be categorized into “work schedule autonomy”, “work methods autonomy” and “decision-making autonomy” (Darso, 2021).

Finally, increased job autonomy degree leads to encourage workers to feel a better obligation to share in decision-making and generate innovative behavior inside and outside the work to enhance the job outcome (Zhao et al., 2022).

Significance of the study:

Nurses are usually considered as an important part of the healthcare sector, whose job attitude is carefully allied with patient health outcomes and safety. Although they are working firmer and yield their effort much more extremely, they still appear dissatisfied and low motivated because they remain limited from being employed easily and rarely take decisions about their effort by themselves.

Thus, the argument suggested that job crafting is associated with the employee's behavior namely, to discover meaning, and control certain facets of their work. Furthermore, job crafting and innovative behavior are associated with employee attitudes that organizations must encourage in which, job crafting enables innovative thinking, promoting skills to be utilized for new work processes (Dhanpat et al., 2019).

In addition, job autonomy is an responsibility for workers to craft their

everyday jobs and also inspires them to perform a variety of duties, and will be positively of self-effectiveness and motivation (*Rehab, 2021*). Therefore, the researchers are willing to shed light on the relationship between job crafting, innovative behavior, and job autonomy among staff nurses.

Aim of the study

This study assessed the relationship between job crafting, innovative behavior, and job autonomy among staff nurses through:

1. Assessing job crafting as perceived by staff nurses.
2. Assessing innovative behavior among staff nurses.
3. Assessing job autonomy level among staff nurses.
4. Finding out the relation between job crafting, innovative behavior, and job autonomy among staff nurses.

Research questions:

What is the relationship between staff nurses' job crafting, innovative behavior, and job autonomy?

Subjects and methods

Research Design:

The aim of this study was accomplished using the descriptive correlational design. Descriptive studies intended to supply a depiction of the contemporary state. Correlational studies are designed to discover the relations between variables and to permit the estimate of upcoming events from current information (*Walinga, 2019*).

Research Setting:

This research was carried out at Cardiovascular Surgery Hospital, which is affiliated with Ain Shams University Hospitals. It serves wholly specialties related to cardiovascular diseases. It

contains one building with eight floors that line its emergency department, cardiothoracic surgery OR, chest OR, cardiac cath lab, ICU adult, ICU pediatric, CCU, post-cath, inpatient units "6th and 7th floors". It has a total of 150 beds capacity for use.

Subjects:

All staff nurses working in the specified study setting, their total number was (119).

Tools of Data Collections:

Three instruments were used to gather the study's information: Job Crafting Scale, Innovative Behavior Scale, and Job Autonomy Scale.

1. Job crafting scale:

This scale was developed by (*Times et al., 2012*). It aimed to assess staff nurses' perception of job crafting. This scale contained two parts:

Part A. Is concerned with the personal and job characteristics, such as age, gender, nursing qualifications, marital status, residence, monthly income, and years of experience.

Part B. The scale contained twenty-one statements that were sub-divided into four dimensions: increasing structural job resources (five statements) as "Try to develop myself professionally". Decreasing hindering job demands (six statements) as "Make sure that my work is mentally less intense". Increasing social job resources (five statements) "look to my manager for inspiration". Increasing challenging job demands (five statements) as "When an interesting project comes along, I will offer myself as project co-worker".

Scoring system:

Staff nurses' responses were tested on a 5-point Likert scale. The responses for each item varied from never (1), rarely (2), sometimes (3), frequently (4), and always (5). These scores were summated and converted into a percentage score for

each dimension and the total. Job crafting was rated as low if the percentage score was below 60%; if it fell between 60% and 75%, it was estimated moderate; and if it feel above 75%, it was deemed high (*Mabuza, 2018*).

2. Innovative Behavior Scale:

This scale was developed by (*Lukes & Stephan, 2017*). It aimed to assess staff nurses' innovative behavior. It contained twenty-three items classified under seven main dimensions: idea generation (three items) as "Try to use new ways of doing things at work ", idea search (three items) as "Try to catch new from ideas colleagues", idea communication (four items) as " When I have a new idea, I attempt to encourage my colleagues of it", implementation starting activities (three items) as "Develop appropriate plans and schedules for the application of novel thoughts", involving others (three items) as " When problems happen through the application, I get them into the hands of persons who can resolve them", overcoming obstacles (four items) as " Able to obstinately overcome difficulties when applying thoughts " and innovation outputs (three items) as "I was often positive at a job in applying my ideas and putting them into training"

Scoring System:

Staff nurses' responses were tested on a 5-point Likert scale ranging from never=1, rarely=2, uncertain=3, occasionally=4, and always=5. These scores were summed up and converted into a percentage score for each dimension and the total. Innovative behavior was considered low if the percent score was less than 65%, moderate if the percent score varied from 65% - 75%, and it was considered high if the percent score was more than 75% (*Abd el Razek et al., 2022*).

3. Job autonomy scale:

This scale was developed by (*Laschinger & Wilk, 2002*). It aimed to assess the job autonomy level among staff nurses. It consisted of forty-four items classified under three main dimensions specifically: job empowerment was categorized under three sub-dimensions (five items for each) as "I recognize laws that regulate activities of my job functions". Organizational relationships were categorized under three sub-dimensions (three items for each) as "Having doctors ask your view for care proposal". Self-autonomy were categorized under two sub-dimensions (ten items for each) as "Write the nursing care plan".

Scoring System:

A five-point Likert scale was used to measure study samples responses for separate items ranging from strongly disagree (1), disagree (2), neither disagree or nor agree (3), agree (4) to strongly agree (5). These scores were summed up and converted into a percentage score for each dimension and the total. Job autonomy was considered low if the percent score was minus 50 %, modest if the percent score varied starting $50 \leq 75$ %, and high if the percent marks were above 75% (*Mohamed & Hassan, 2021*).

Validity:

Tools have been validated by five experts in the nursing field, which includes three assistant professors of nursing administration, and two assistant professors of psychiatric mental health nursing at the faculty of nursing at Ain Shams University. The experts examine the instrument's clearness, completeness, consistency, accuracy, and layout regarding the format. Minimal modification was done according to their suggestions by rephrasing some items.

Reliability:

The internal consistency of the instruments was examined using Cronbach's alpha test, which produced results for a job crafting scale of 0.80, innovative behavior scale of 0.90, and job autonomy scale of 0.95.

Ethical Considerations

The research proposal was approved by the Ethical Committee of The Faculty of Nursing, Ain Shams University. Also, an official letter was allotted from the Dean of Faculty of Nursing, to obtain permission from both medical and nursing hospital managers about applying for the research. They were informed about the objective of the study and got their agreement to gather information and obtain their support.

All samples gave their written consent to contribute to the study. They notified us about the study's aim and about their rights to reject or leave the study at any period. privacy of the gained information was ascertained.

Pilot Study:

This was carried out after getting the study instruments and before beginning the definite data gathering. This stage took one month from the beginning to the end of June 2023. It was applied to 12 staff nurses who represented 10% of the total study samples and they were included in the total population. The objective of the pilot study was to confirm the clearness, feasibility, and applicability of the instruments, and to estimate the time needed for filling the research instruments, which ranged from 30-40 minutes.

Filed work:

The study data collection was undertaken over two months, from the beginning of July 2023 to the end of August 2023. The investigators visited the study setting, met the head nurse of each unit to clarify the objective of the study, determined an appropriate time for information gathering, and gained the

acceptance and cooperation of staff nurses to contribute to the study.

Then, the investigators met the study subjects clarified the importance of the study, and the elements of the instruments, and gave directions around methods of filling instruments. Forms were distributed to the participants separately at their workplace during break time and were available throughout filling for any required explanation. Filled instruments were revised by the investigator to ensure their completeness.

Data gathering was done throughout morning shifts matching with a predetermined timetable, three days per week and every day collected around 10-12 instruments, were collected from 9 AM to 3 PM.

Statistical Design:

Data gathered from the participants was reviewed, categorized, tabulated, coded, and recorded using a personal computer (PC). Computerized data entry and statistical analysis were fulfilled utilizing the Excel program and the Statistical Package for Social Sciences (SPSS) version 25.

Data were accessible utilizing descriptive statistics in the method of frequencies, percentages, mean, and SD. Cranach's alpha coefficient was estimated to judge the reliability of instruments over internal consistency. Correlation between variables was done using the Spearman Rank order correlation coefficient for parametric data. Statistical significance was supposed at $P < 0.05$, and with high significance approved at a p-value of ≤ 0.001 .

Results

Table (1) indicates that 50.4 % of the study samples were age between 25-35 years old, 54.6 % of them were female and 52.9 % of them were married. As well as 34.5% of them having a Bachelor of Nursing. Also, 70. 6% of them were from the countryside, and 43.7% of their

monthly income was not enough. While 42% of them had between 5 to 10 years of experience.

Table (2) displays that 77.3% of the studied samples reported a high perception level regarding the “increasing challenging job demands” dimension, and 30.3% had a moderate perception level regarding the “decreasing hindering job demands” dimension.

Figure (1) illustrates that 70.6% of the staff nurses reported high perception levels of total job crafting, while 17.6% of them have moderate perception levels of total job crafting.

Table (3) reveals that 88.2% of the participants had a high level regarding the “implementation starting activities” dimension, while 31.1% had a moderate level about the “innovation output” dimension.

Figure (2) illustrates that 80.6% of the studied participants had a high total level of innovative behavior, and 16% had moderate total levels of innovative behavior.

Table (4) indicates that 75.6% of staff nurses had a high level regarding self-autonomy patient care sub-dimension, and 28.6% had a moderate level regarding recognition sub-dimension.

Figure (3) shows that 63.9% of the studied samples had a high total level of job autonomy, while 31.1% had a moderate total level of job autonomy.

Table (5) clarifies that a highly statistically significant positive correlation between total job crafting, innovative behavior, and job autonomy at ($P = < 0.01$).

Table (1): Frequency and percentage distribution of studied staff nurses' job and personal characteristics (n=119).

Items	N	%
Age (year)		
<25	59	49.6
25-35	60	50.4
Mean± SD	26.41±4.41	
Gender		
Male	54	45.4
Female	65	54.6
Nursing Qualification		
Nursing Diploma	30	25.2
Technical Institute of nursing	30	25.2
Bachelor of Nursing	41	34.5
Advanced Studies	18	15.1
Marital Status		
Single	42	35.3
Married	63	52.9
Divorced	8	6.7
Widow	6	5
Residence		
Countryside	84	70.6
Urban	35	29.4
Monthly income		
Enough	41	34.5
Hardly Enough	26	21.8
Not Enough	52	43.7
Years of experience		
> 5		39.5
5 > 10		42
< 10		18.5

Table (2): Frequency and percentage distribution of staff nurses’ perceptions of job crafting dimensions (n=119).

Job Crafting dimensions	Job Crafting perception level among staff nurse					
	High >75		Moderate 60≤75%		Low <60 %	
	N	%	N	%	N	%
Increasing structural job resources	80	67.2	35	29.4	4	3.4
Decreasing hindering job demands	83	69.7	36	30.3	-	-
Increasing social job resources	86	72.3	31	26.1	2	1.7
Increasing challenging job demands	92	77.3	25	21.0	2	1.7

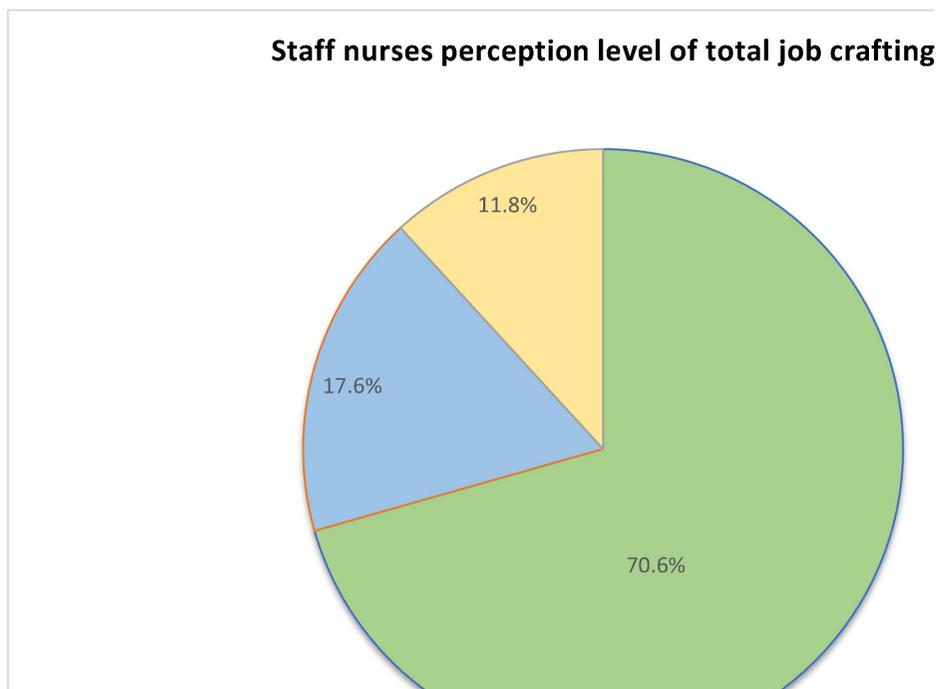


Figure (1): Percentage distribution of staff nurses’ perception level of total job crafting (n=119).

Table (3): Frequency and percentage distribution of staff nurses' level of innovative behavior dimensions (n=119)

Innovative Behavior dimensions	Innovative Behavior levels among staff nurse					
	High ≥ 75		Moderate $65 < 75\%$		Low $< 65\%$	
	N	%	N	%	N	%
-Idea generation	94	79	20	16.8	5	4.2
-Idea Search	95	79.8	12	10.1	12	10.1
-Idea communication	85	71.4	24	20.2	10	8.4
-Implementation starting activities	105	88.2	11	9.2	3	2.5
-Involving other	90	75.6	17	14.3	12	10.1
-overcoming obstacles	76	63.9	15	12.6	28	23.5
-Innovation output	50	42.0	37	31.1	32	26.9

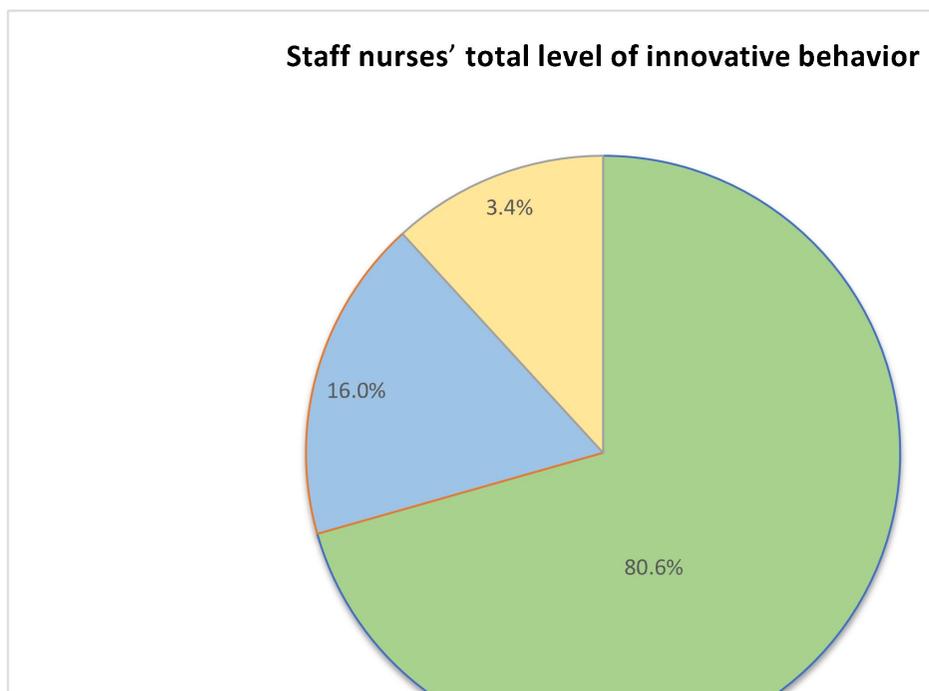
**Figure (2):** Percentage distribution of staff nurses' level of total innovative behavior (n=119)

Table (4): Frequency and percentage distribution of staff nurses' of job-autonomy sub-dimensions (n=119).

Job -autonomy sub-dimensions	Job -autonomy levels among staff nurse					
	High >75%		Moderate 50≤75 %		Low <50 %	
	N	%	N	%	N	%
Job empowerment dimension						
Recognition	70	58.8	34	28.6	15	12.6
participation in problem solving	78	65.5	24	20.2	17	14.3
creating opportunities for nurses	76	63.9	26	21.8	17	14.3
Organizational relationship dimension						
Collaboration with patient care	86	72.3	26	21.8	7	5.9
Sponsors Support	86	72.3	18	15.1	15	12.6
peer networking & subordinates	75	63.0	31	26.1	13	10.9
Self-autonomy dimension						
Self-autonomy of patient care	90	75.6	11	9.2	18	15.2
Self-autonomy of unit operation	71	59.6	24	20.2	24	20.2

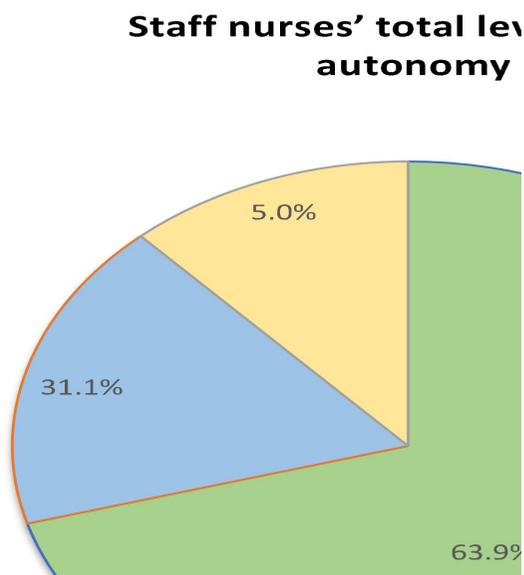
**Figure (3):** Percentage distribution of staff nurses' level of total job autonomy (n=119).

Table (5): Correlation between total job crafting, total innovative behavior, and total job autonomy.

Variables	Total innovative behavior	Total job autonomy
Total job crafting	r = 0.463 P = 0.000**	r = 0.534 P = 0.000**

**highly significant at $p < 0.01$.

Discussion

Job crafting exists as a sort of proactive behavior characterized by modifications made by nurses in their work demands and resources to better uniform their preferences and skill sets (*Abou Shaheen & Mahmoud, 2021*). Staff with a great job crafting are more likely to feel a sense of belonging, more responsible, and safer in their organization. This is likely to encourage constructive behaviors in the workers, such as being engaged in their work (*Tsai, 2021*). Thus, this study assesses job crafting and its relation to innovative behavior and job autonomy among staff nurses.

As regards job crafting dimensions. The present findings reveal that more than three-quarters of staff nurses had a high perception level of increasing challenging job demands dimension. While around one-third of them had a moderate perception level regarding decreasing hindering job demands dimension.

In the investigators' opinion, this might be because of boredom and increased enjoyment in nurses' jobs, they should seek to widen the possibility of their job or mixture and remix the tasks of the job to make it more challenging. Nurses tried to perform their tasks and functions to diminish the physical, intellectual, and emotional strains of the job to meet employee wants and abilities.

The current finding was consistent with *Baghdadi et al., (2021)* who applied a study in Egypt entitled "The relationship between nurses' job crafting behaviors and their work engagement", who

reported that the highest mean was regarding increasingly challenging job demands. While, the findings were inconsistent by, *Abou Shaheen & Mahmoud, (2021)* who applied a study in Egypt entitled "Relation between Job Crafting, Nurses' Job Satisfaction and Counterproductive Work Behaviors", who reported the highest mean score regarding decreasing hindering job demands dimension.

The finding was also, incongruent by *El Ziny et al., (2020)* who applied a study in Egypt entitled "The Effect of Transformational Leadership on Job Crafting in Hotels: The Mediating Role of Psychological Capital", which reported that the highest mean score was associated to increasing structural job resources dimension.

Furthermore, this finding is similar to *Hussein et al., (2023)* who applied a study in Egypt entitled "The Effect of Human Talent Management on Organizational Entrepreneurship the Mediating Role of Job Crafting", who reported that the greatest mean score was associated with increasing social resources dimension.

According to total job crafting. The current finding shows that less than three-quarters of staff nurses perceived a high level of total job crafting, and a minority of them perceived a moderate level of total job crafting.

This finding might be because nurses think around in what system their work provides their life resolution, the technique in which their job impacts their life, and the role their work has for their overall

well-being. In addition, they provide preference to work duties that suit their capabilities or benefits.

The present study was consistent with *Fekry & Moustafa, (2021)* who conducted a study in Egypt entitled "Job Demands, Job Resources and its Relationship with Job Crafting among Head Nurses", who reported that more than half of the studied sample had a high level about job crafting. Also, in the same line with *Attia & Elsayed, (2021)* who applied a study in Egypt entitled "Relationships among Organizational Identification, Cynicism, Job Demands- Resources and Nurses' Job Crafting" who reported more than half of the studied sample had a high level regarding job crafting.

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

Regarding innovative behavior dimensions, the current result report that most of the staff nurses had a high level regarding the dimension of implementation starting activities. While one-third of them had a moderate level regarding the innovation output dimension. From

the investigators' viewpoint, this is because organizations provide their employees with interplanetary freedom for innovation and support them in implementing innovative thinking. Supervisors and organizations provided chances and opportunities for the implementation of ideas.

The current findings were consistent with *Kamel & Aref, (2017)* who applied a study in Egypt entitled "Staff Nurses Perception Toward Organizational Culture and Its Relation to Innovative Work Behavior at Critical Care Units", who reported that idea of championing and implementation dimensions had a greatest mean score. However, the finding was disagreed by *Mahgoub, (2019)* who applied a study in Egypt entitled "Relationship between Work Environment and Innovative Behavior among Staff Nurses", who reported that the highest dimension of innovative behavior by staff nurses was innovation outputs.

Concerning total innovative behavior, the current finding show that most of staff nurses had a high level of total innovative behavior, and a minority of them had a moderate level of total innovative behavior. From the investigators' perspective, this is because the nurses' characteristics provide innovative performance near organization traits that provide personnel a chance to display their pioneering capabilities.

This study result was agreed with *Mahgoub, (2019)* who applied research in Egypt termed "Relationship between Work Environment and Innovative

Behavior among Staff Nurses", who described that the most studied sample had a high innovative behavior level.

A similar finding was consistent with *Jung & Yoon, (2018)* who applied a study in South Korea entitled "Improving Frontline Service Employees' Innovative Behavior using Conflict Management in the Hospitality Industry: The Mediating Role of Engagement", who reported that the majority of the study sample had a high innovative behavior level.

Considering job autonomy sub-dimensions, the existing results describe that around three-quarter staff nurses had a high level of self-autonomy patient care sub-dimension. At the same time, less than one quarter had a moderate level of recognition sub-dimensions.

As for the investigator's opinion, these results may be because when staff nurses enjoy the greatest autonomy, they are liable to meet up with their job demands. The current findings are agreed by *Moreira, (2019)* who applied a study in Spain entitled "Teachers' ICT-related self-efficacy, job resources, and positive emotions: Their relations with autonomous motivation and work engagement", who indicated that studied participants had a high level regarding self-autonomy dimensions.

Regarding total job autonomy, the result reveal that more than two third of staff nurses had a high level of total job autonomy, and about one third had a moderate level of total job autonomy. From an investigators' viewpoint, this is because head nurses greatly empower them for self-

autonomy and organizational relationships.

The current result contradicted by *Ali & Mohamed, (2020)* who applied a study in Egypt entitled "Unit Nurse Managers' Role for Empowering Staff Nurses Job Autonomy" and who reported that nurses' independence or limitation over work was extremely inadequate.

Also, the current finding is similar to *Lei, (2022)* who applied a study in Italy entitled "Relationship between risk perception of COVID-19 and job withdrawal among Chinese nurses: The effect of work-family conflict and job autonomy" who presented that most study participants had a low total job autonomy level.

Finally, concerning the correlation among the total job crafting, innovative behavior, and job autonomy. The current findings confirm a highly statistically significant positive correlation between total job crafting, innovative behavior, and job autonomy among staff nurses.

As for the investigators' viewpoint, this finding is because when there is high job crafting will help all staff to work innovatively and have a high sense of job autonomy. This finding is agreed by *Nie et al., (2023)* who applied research in China termed "Job Autonomy and Work Meaning: Drivers of Employee Job-Crafting and Innovative Behaviors in the VUCA Times", and who reported that there is a positive correlation among job crafting, innovative behavior, and job autonomy.

Also, this finding is similar *Supriyanto et al., (2020)* who applied a study in Indonesia named “Factors Affecting Innovative Work Behavior: Mediating Role of Knowledge Sharing and Job Crafting”, and revealed that job crafting is affected by innovative behaviors. Additionally, a sense of relief with a work outcome in a stable environment contributes and is free from exciting tension which leads to a better shift for advance.

Conclusion

Based on the existing results, it can be inferred that less than three-quarters of the studied staff nurses perceived a high level of total job crafting, with most of them exhibiting a high innovative behavior level and more than two third had a high job autonomy level. Additionally, there is a highly statistically significant positive correlation between total job crafting, innovative behavior, and job autonomy among staff nurses.

Recommendations

- Nurse managers create a work atmosphere where nurses feel empowered to design their jobs, by providing training and feedback on job crafting activities.
- Nurse managers inspire staff nurses to grow personally by offering them a chance to learn about novel innovations and a variety of work assignments.
- Designing seminars and workshops that encourage hopeful nurses to think about chances and methods they can use to be involved in job crafting behaviors.

- Examine the impacts of job crafting on staff outcome and organization outcome.

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