
Job Conscientiousness and Professional Work Autonomy among Nurses at Zagazig University Hospitals

Wafaa Mostafa Mohamed Sliman¹ & Fatma Mohamed Elnady Abdrabou²

¹. Assistant Professor of Nursing Administration, Faculty of Nursing, Zagazig University, Egypt.

². Assistant Professor of Nursing Administration, Faculty of Nursing, Fayoum University, Egypt.

Abstract

Job conscientiousness for nurses is a critical element in assuring patient safety and quality of nursing care, effectiveness of nursing performance and reducing of missed nursing care. Improved nurse autonomy is regarded as an essential element of nursing development. **Aim** of the study was to determine the relation between job conscientiousness, and Professional work autonomy among nurses. **Design:** The study used a descriptive correlational research design. **Setting:** Current study setting was New Surgical at Zagazig University Hospitals. **Sample:** A Convenience sample was used with a total number of nurse's sample size (265 n). **Tools:** That used for data collection were; 1- Six Factor personality questionnaire and 2- The global work autonomy scale (GWA). **Results:** The majorities of nurses had high professional work autonomy (82%) and (67.9%) percentages of the nurses with "high" agreement on Job conscientiousness., A significant difference between total professional work autonomy and personal characteristics (position, age, place of work, educational level, and nursing experience), While a significant difference between total job conscientiousness and personal characteristics (age, nursing experience) were found. **Conclusion:** Strong positive significant correlation was found between job conscientiousness and professional work autonomy among nurses. **Recommendations:** That the need to provide quality patient care through nurse and creating a working atmosphere which gives meaning to work that will guarantee worker job autonomy and task identify. Encourage junior staff nurses to exercise more autonomy in their everyday work by providing them with constructive criticism.

Keywords: Job Conscientiousness, Professional Work Autonomy & Nurses.

Introduction:

Conscientious nurses are responsible and responsive with a strong sense of occupational motivation, which is a key component in meeting problems and is regarded as a sign of professionalism in the provision of high-quality patient care. Goal orientation, task orientation, and adaptive ability are all connected to conscientiousness, which is thought to be the best predictor of success. Nurses that are conscientious have a greater desire to participate in various situations and perform more actively (Samaneh & Maasoumeh, 2022).

Conscientiousness is the most common term for an aspect that. known as dependability, will to succeed, self-control, restraint, and the propensity to be organized, thorough, and reliable. In addition, it reflects a person's capacity to be dependable, diligent, goal-oriented, responsible, careful, accurately, persistent and leads to higher commitment to their goals. It may also be linked to a reduction in negative emotions, a reduction in anxiety and depression, and successful emotion regulation, as shown by the ability to control emotions. (Chandler, et al., 2017; Mohammdi et al., 2020).

The ability to plan, organize, and carry out duties for nurses demonstrates conscientiousness as a measure

of efficacy and efficiency. Additionally, those with high conscientiousness levels are often well-organized, intentional, motivated, and reliable. While, according to the Big Five Theory of Personality's framework, job conscientiousness is an attribute of the five factor model. Conscientious nurses are more likely to do more or try to accomplish what is required of them, which leads to a higher commitment to their goals. They also tend to be dependable, tenacious, and achievement-oriented (Mehdad & Minaeian, 2020).

Job conscientiousness has been associated with a variety of positive outcomes, including being adhering rigidly to moral obligations and ethical principles, having high aspirations to realize goals, being able to begin and complete tasks, and having the ability to think cautiously before acting, conversely, predicts job performance as indicated by production records, adaptive performance or unusual problem solving, managing uncertainly, and adjusting to new technology, tasks, procedures and work stress, reliability, effort, among working groups. (Ozcan, 2021)

Conscientious people, such as nurses, tend to keep their lives well ordered. In contrast, disorganized, unconsciously people may waste 20 to 30 minutes

searching through their files for the appropriate document, an inefficient process that conscientious people tend to avoid and commitment to one's work. (Yazdanian et al., 2016)

Nurses had a significant role in care provision, determining the quality and cost of healthcare, currently hospitals face greater competition than ever before, as well as serious challenges from both the internal and external environments to achieve their goals effectively and efficiently, according to literature, the ability to contribute to the solutions to significant concerns facing healthcare systems. Professional autonomy and conscientiousness of nurses are placed a high value for administrators and managers in health organizations due to the crucial role they play in their organizations' performance (Blom, et al., 2017).

Professional work autonomy is defined in many ways and opinions as a general term, according to a review of concept analysis papers there, on the idea of professional autonomy, some characteristics of nursing include independence from other people, knowledge, competence, self-governance, freedom in decision-making, support for patients and building relationships with them, judgment, self-control, and responsiveness. (Rouhi-Balasi, et al., 2020)

According to (Rouhi -Balasi et al.,) 2020) who define professional autonomy as "having the authority to make decisions and the freedom to act in accordance with one's professional knowledge base". Three dimensions of autonomy in clinical practice settings. The first is clinical or practice autonomy which refers to independent, interdependent, and accountable decision making by nurses for the primary and immediate benefit of the patient. The second dimension is control over nursing practice autonomy, or organizational autonomy, which relates to the regulation and the development of policies for nursing by nurses. The third is job or work autonomy, which describes unit-level-group decision making for the purpose of organizing the work day and setting priorities among tasks. (Oshodi et al., 2019)

Professional autonomy aids nurses to make proper decisions to achieve and maintain patient safety, improve the quality of care, retain nurses in their profession, and ensure job satisfaction. (Georgiou et al., 2017, Rouhi et al., 2020), Nurses who are working with low professional autonomy and low-level decision-making authority might practice a variety of unpleasant personal and professional feelings such as lack of motivation. (Nouri et al., 2017)

Rao et al., (2017) provide evidence by study that when nurses do not have the ability to exercise their clinical and organizational knowledge, patient safety is put at risk. So, health organizations are responsible

for providing necessary resources for nurses to act autonomously by communicating clear roles, responsibilities and behaviors, and enhancing competence in practice and decision-making.

Research finding has shown that, improving patients, nurses and organizations outcomes are associated with positive working environment which supports autonomy among nurses with regard to patient care, clinical decisions, and unit operational decisions. Nurses with high level of autonomy were linked with lower mortality in patients and a higher rescue success (Rao, et al., 2017), besides higher levels of autonomy have been regarded as an essential determinant of work satisfaction (AllahBakhshian et al., 2017), and safety performance (Ko, et al., 2021). There is some evidence to suggest that higher levels of professional autonomy for nurses are associated with higher levels of safety and productivity as well as reduced patient mortality and failure to rescue rates. Additionally, more professional autonomy results in better outcomes for the nurses themselves, including enhanced morale, reduce depression and absenteeism, and improved job satisfaction. As a result, maintaining nurses with a high level of professional autonomy in healthcare services would support high-quality of practices and safe medical care while preserving the nurses' own well-being (Kyoko & Takashi, 2020)

Significance of the study:

According to the perspective of nursing care, nurses today are faces challenging situations that require them to make difficult conscientious decisions when providing health care to patients and cause them to experience dilemmas more than usual (Eagen & Levi (2020). According to the results of several studies, conscience is a factor that, motivating, satisfying nurses, and a valuable tool in the provision of high-quality by directing actions to good values during patient care, Conscientiousness was a positively significant predictor of worker's burnout. (EZE et al., 2018; Lak et al., 2018; Jokwiro, et al., 2020).

Autonomy is valuable to nurses since it gives nurses more opportunity for invention with a more flexible work process for performing tasks., While professional work autonomy allowed nurses to gain a high level of experience in the delegation of decision-making from the physician to the professional nurses in life-threatening situations and to boost their self-esteem, acquire new skills, and increase their knowledge, nurses will also have greater levels of autonomy and will participate more in organizational decisions. Based on literature, professional autonomy had examined with other variables and found a significant relation with as satisfaction, Job

Performance and autonomy was a significant positive predictor of nurses' job stress. (Faisal et al., 2018; Khoshnaw & Alayi 2020; Asl, et al., 2022)

By reviewing the literature numerous scientific researches in Egypt and limited studies internationally were done to investigate the relation between job conscientiousness and professional work autonomy. Therefore, researchers choose to carry out this study to assess the relation between job conscientiousness and professional work autonomy among nurses at New Surgical Zagazig University Hospitals.

Aim of the study

Aim of the study was to determine the relation between job conscientiousness and professional work autonomy among nurses in New Surgical Hospital at Zagazig University Hospitals through: -

1. Assess the level of job conscientiousness among nurses.
2. Assess the level of professional work autonomy among nurses, and
3. Estimate the relation between job conscientiousness and professional work autonomy among nurses.

Subjects and Methods:

Research design:

A quantitative descriptive correlational research design was used to attain the aims of this study.

Research questions:

Is there a relationship between job conscientiousness and professional work autonomy among nurses working in New Surgical Hospital at Zagazig University Hospitals?

Research settings:

The study was operated in New Surgical Hospital at Zagazig University Hospitals with total bed number 386 beds (which reflected the rural region), in Egypt, that includes multi-specialty departments as the Surgical department (138 beds), ENT department (42 beds), Orthopedic department (64 beds), Urology department (60 beds), Gynecology (40 beds), Neurology department (24 beds), Kidney Transplantation Unites 2 beds, the Operating Room and Intensive Care Units contain (16 beds). Selection of these hospitals was done because of high patients flow as a central hospital so, nurses' high work load in shifts presented.

Sample:

A Convenience sample was used. The total number of the nurses working in hospital departments was (420). The required sample size was (265) they having (technical nurses n=167, professional nurse n=80 and head nurses n=18), according to the following formula (Yamane, 1967) $n = N / 1 + N$ (n= sample size, N= population size, e= margin error) Inclusion criteria of at above one year of experience was used.

Inclusion criteria were configured as male and female nurse equally presented, and exclusion criteria as nurses who not willing to participate in the study.

Tools of data collection:

To achieve the aim of the current study, two tools were prepared and applied to gather the necessary data. First Tool: Six Factor Personality Questionnaire (S F P Q) A structured self-administrative questionnaire was constructed based on Jackson et al., (2000), and had modified by Kirkwood. (2006) to measure perception of nurses regarding job conscientiousness which consists of two parts:

Part 1: Included data related to personal characteristics such as age, position, experience, educational, marital status, and place of work.

Parts 2: Aimed to assess the level of job conscientiousness which encloses 24 items covered two main domains were: first domain (18 items) consists of conscientiousness cognitive :(6) items, conscientiousness deliberateness (6 items), and conscientiousness order (6) items. Second domain includes conscientiousness endurance (6 items). Using five point Likert scale ranged from (strongly disagree, disagree, natural, agree, strongly agree) the scored as (5, 4, 3, 2, 1) respectively for each items.

Second Tool: The global work autonomy Scale (GWA) include (9 items) based on literature review was developed by Breugh, (1998 a), and had modified by Carolyn, (2006) who aimed to measure professional work autonomy among nurses. It consists of 9 items that classified into three types:

Scoring system, the responses were scored for Six factor personality questionnaire, and professional work autonomy questionnaires items using a five point Likert scale ranged from (strongly disagree, strongly agree disagree, natural, agree) and scored as (5,4,3,2,1) respectively for each items, the scores of the items were summed up and the total divided by the number of the items giving a mean score for the part. These scores were converted into percent score. The domain was considered high if the percent score was 70% or higher, considered moderate if percent score was above 60% to less than 70% and labeled low if the score, moderate indicated a low degree of less than 60%.

Tool Validity and Reliability:

Content Validity Data were collected using a self-administered questionnaire, after the translation of the instrument to Arabic. The content and face validity were established by a jury of experts (5 professors & assistant professors from nursing administration department) from academic nursing staff, Zagazig and Ain-Shams Universities. According to their opinions, all necessary modifications were done.

Reliability:

The pilot study served to assess the reliability of the scales used in the data collection tool. Cronbach Alpha coefficient was calculated to assess the reliability through measuring their internal consistency. The results showed ranged from 0.91 to 0.95. Reliability of the test was high.

Pilot Study:

A pilot study was carried out on 27 nurses (10% of the study sample) of nurses from New Surgical hospital to check the clarity of the tools and to estimate the time needed to fill in the questionnaire sheets by each participant. Required modifications were done. The time consumed in answering the questionnaires was about 25-30 minutes, and the subjects who participated in the pilot study were excluded from the main study sample.

Ethical Considerations

Administrative and Ethical Consideration of this study was approved by pertinent ethical committee of the Faculty of Nursing, Zagazig University. Official permissions to conduct the study were secured from the medical and nursing directors of the hospitals and the head nurses of the units after explaining the aim of the study. The participants were informed that their participation in the study is completely voluntary and the attached letter introducing the study addressed the confidentiality of the participants' information given. Consent from each participant was established with the completion of the questionnaire.

Field Work:

The first phase of the work was taking two months for reviewing of literature related to the topic and theoretical knowledge of various aspect of the problem using national and international journals, text books, and articles. The study field work was executed in five months started from beginning of January 2020 till the beginning of June 2020, a meeting was occurred with the director and heads of departments of the selected setting, with an official letter signifying the purpose of the study, and its rationale, their permissions were obtained to start the data collection process. Researchers had met 4 nurses / day for three weeks separately in the morning and afternoon shifts after finishing their work distribute the questionnaire under guidance, supervision and each individual was given the time spent to answer each questionnaire sheet ranged from 25 to 30 minutes.

Statistical analysis:

Data entry and statistical analysis was done by using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency, while ANOVA test was used for more than two groups. Pearson correlation was done to measure correlation between quantitative variables. P-value indicate significance at 5%, 1%, and 10% respectively.

Results

Table (1): The Frequency Distribution of the Nursing Staff According to them Personal Characteristics (n=265).

Nurses Characteristics	H.N (n=18)		Nurses				Total nursing staff (265)	
			Prof. (n=80)		Tech (n=167)			
	N	%	N	%	N	%	N	%
Age (years)								
20 -	4	22.2	20	25	70	41.9	94	35.5
30 -	4	22.2	39	48.7	54	32.3	97	36.6
40 -	3	16.7	11	13.8	33	19.8	47	17.7
50 and above	7	38.9	10	12.5	10	6	27	10.2
Mean ± SD	20.4 ± 1.1							
Marital status								
Single	4	22.2	44	55	54	32.3	106	40
Married	12	66.6	20	25	95	56.9	127	46.3
Widow	2	11.2	14	17.5	13	7.8	29	11.1
Divorced	0	0	2	2.5	5	3	3	2.6
Educational level								
SND	0	0	0	0	95	56.9	95	35.8
THID	0	0	0	0	70	41.9	70	26.4
BSC	15	83.3	78	97.5	0	0	93	35.1
Others	3	16.7	2	2.5	2	1.2	7	2.6
Experience in nursing								
1- (years)	0	0.0	28	35	91	54.5	119	44.9
5-	3	16.6	42	52.5	42	25.8	87	32.8
10-	3	16.6	8	10.0	11	6.1	22	8.3
15-	3	16.8	2	2.5	13	7.7	18	6.8
20 and above	9	50	0	0	10	5.9	19	7.2
Mean ± SD	29.6 ± 7.95							
Place of work								
ICU	4	22.2	39	48.7	33	19.7	76	28.6
Surgical unit	3	16.7	20	25.8	78	46.7	101	38.2
ENT	4	22.2	11	13	46	27.9	61	23.1
Other units	7	38.9	10	12.5	10	5.7	27	10.1
Unit Experience (years)								
1-	0	0	50	62.5	40	23.9	90	33.9
5-	5	27.7	20	25.5	10	5.9	35	13.4
10-	3	16.6	10	12.0	13	7.9	26	9.8
15-	6	33.5	0	0	50	29.6	56	21.1
20 and above	4	22.2	0	0	54	32.7	58	21.8

SND = secondary diploma

H.N = head nurse

THID = Technical health institute diploma

Professional nurses = bachelor of nursing degree and working as nurses in unit

Table (2): Job Conscientiousness as Reported by Staff Nurses (n=265).

Job conscientiousness	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Mean ±SD
	N	%	N	%	N	%	N	%	N	%	
A- Methodical ness											
Cognitive	0	0.	15	5.7	60	22.6	170	64.2	20	7.5	4.5 ± 1.8
deliberateness	20	7.5	10	3.8	20	7.5	40	15.1	175	66.0	3.5 ± 0.6
Order	30	11.3	60	22.6	140	52.8	20	7.5	15	5.7	2.7 ± 0.7
B- Industriousness											
Endurance	21	7.92	24	9.05	180	67.9	28	10.6	12	4.52	3.5 ± 0.7

Table (3): Professional Work Autonomy as Reported by Staff Nurses (n=265)

Professional work	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Mean ±SD
	N	%	N	%	N	%	N	%	N	%	
Autonomy items											
Autonomy method	3	1.13	2	0.75	0	0	30	11.3	230	86.79	57.09±20.33
Autonomy scheduling	2	0.75	11	4.15	233	87.9	6	2.26	13	4.9	55.51±9.21
Autonomy criteria	18	6.79	9	3.39	10	3.77	226	85.2	2	0.75	20.24±2.85

Table (4): Total scores for job conscientiousness and Professional work autonomy as reported by staff nurses (n=265).

Variable	Low		Moderate		High	
	N	%	N	%	N	%
Professional work autonomy scale	9	3.39	38	14.33	218	82.2
Job conscientiousness items	5	1.88	80	30.18	180	67.9

Table (5): Relationship between professional work autonomy and Personal characteristic among nursing staff (n=265).

Nurses characteristics	Professional work autonomy			
	Method	Scheduling	criteria	Total autonomy
	M ±SD	M ±SD	M ±SD	M ±SD
Position				
HN	4.30 ±.651	4.76 ± .65	4.65 ± .84	4.87 ±.83
Prof. N	3.54 ±.96	3.67 ± .83	3.87 ± .45	3.54 ±.82
Tech. N	3.95 ±.64	3.45 ±.74	3.76 ± .65	3.65 ± .64
F-test	2.69	6.97	2.81	3.9
P-value	0.07	0.01 **	0.06	0.02 **
Place of work				
ICU	3.543 ± .98	3.87 ± .76	3.87 ± .83	3.98 ±.32
Surgical unit	4.54 ± .76	4.65 ± .83	3.94 ±.34	2.08 ± .85
ENT	4.96 ± .54	4.65 ± .87	2.87 ± .82	4.54 ± .34
Other units	3.97 ± .64	3.95 ± .54	4.87 ± .65	3.65 ± .65
F-test	1.13	2.72	3.21	3.95
P-value	0.02 **	0.54	0.02 **	0.01 **
Marital status				
Single	3.54 ± .65	3.87 ± .76	3.43 ± .94	3.76 ±.87
Married	4.43 ± .85	3.87 ± .43	3.12 ± .75	4.84 ± .76
Widow	3.87 ±.64	4.47 ± .86	4.09 ± .65	3.76 ± .97
Divorced	5.87 ± .53	4.74 ± .82	4.76 ± .98	3.98 ± .86
F-test	1.73	1.42	2.56	2.52
p-value	0.16	0.24	0.06	0.06
Educational level				
STNS	3.65 ± .76	2.76 ± .87	4.65 ± .87	2.09 ± .87
THI	3.76 ± .73	3.54 ± .76	4.87 ± .93	4.98 ± .65
BSC	3.52 ± .123	2.97 ±.54	3.84 ± .82	5.98 ± .98
Others	3.85 ± .654	3.65 ± .98	3.87 ± .23	3.87 ± .76
F-test	2	6.71	0.98	7.46
p-value	0.050 **	0.03 **	0.41	0.02 **
Age (years)				
20 –	4.87 ± .54	3.54 ± .98	3.36 ±.98	4.98 ± .87
30 –	3.21 ± .64	3.98 ± .95	3.98 ± .98	3.89 ± .87
40 –	3.87 ± .37	4.65 ± .65	4.98 ± .76	3.98 ± .86
50 and above	5.53 ± .63	4.87 ± .86	4.87 ± .87	3.65 ± .76
F-test	22.7	10.2	20.3	5.7
P-value	0.001 ***	0.002 ***	0.001 ***	0.011 **

Nurses characteristics	Professional work autonomy			
	Method	Scheduling	criteria	Total autonomy
	M ±SD	M ±SD	M ±SD	M ± SD
Nursing Experience (year)				
1-	3.32 ± .76	4.98 ± .98	3.76 ±.76	2.98 ± .86
5 -	3.87 ±.43	3.4 ± .64	3.65 ± .86	2.65 ± .86
10-	3.85 ± .32	3.09 ± .86	3.98 ±.98	2.08 ± .75
15 –	3.86 ± .29	2.76 ± .65	3.98 ± .76	2.75 ± .53
20 and above	4.76 ±.64	3.76 ± .69	2.76 ± .87	2.98 ± .76
F – test	2.66	3.96	3.24	3.9
P – value	0.03 **	0.001 ***	0.045 **	0.09
Experience in unit (years)				
1–	2.43 ± 87	3.98 ± .86	2.76 ± .95	4.34 ± .76
5 –	3.54 ±.98	3.09 ± .43	3.81 ± .54	44.8 ± .98
10 –	3.75 ± 76	3.06 ± .75	3.07 ± .23	4.96 ± .85
15 –	3.87 ± .54	3.54 ± .84	3.96 ±.53	4.97 ± .74
20 and above	4.76 ± .84	4.86 ± .73	4.64 ± .54	3.65 ± .74
F – test	1.16	1.24	1.25	1.03
P – value	0.33	0.3*	0.29	0.4*

Note: ***, **, * indicate significance at 1%, 5% and 10% respectively.

Table (6): Relationship between of job conscientiousness and personal characteristics of study sample (n=265).

Nurse's Characteristics	Job conscientiousness		
	Industriousness	Method logicalness	Total job conscientiousness
	M ± SD	M ± SD	M ± SD
Position			
HN	3.32 ± 54	4.96 ± .86	3.876 ± .97
Prof. N	3.57 ± .45	3.08 ± .54	3.831 ± .95
Tech. N	3.98 ± .59	3.64 ± .52	3.765 ± .54
F-test	1.96	1.79	1.11
P – value	0.04 **	0.02 **	0.33
Place of work			
ICU	3.09±.654	3.97 ± .64	3.876 ± .76
Surgical unit	2.86 ± .74	3.72 ± .90	3.543 ± .87
ENT	3.54 ± .008	3.63 ± .64	3.876 ± .65
Other units	2.38 ± .076	3.75 ± .43	3.654 ± .43
F-test	1.35	1.34	0.5
P – value	0.26	0.26	0.68
Marital status			
Single	4.53 ± .87	3.21± .52	3.098 ± .64
Married	4.72 ± .300	3.82 ± .53	3.976 ± .56
Widow	4.97 ± .93	3.64 ± .56	3.654 ± .93
Divorced	3.80 ± .43	3.84 ± .74	4.987± .75
F-test	1.54	1.56	1.8
P – value	0.66	0.05 *	0.15
Educational level			
STNS	3.44 ± .51	3.07 ± 45	3.876 ± .65
THI	3.47 ± .43	3.94± 48	3.976 ± .93
BSC	3.33 ± .65	3.76 ± .46	3.865 ± .74
Others	3.70 ± .25	3.65 ± .49	3.123 ± .95
F-test	1.36	2.3	0.91
P – value	0.26	0.08	0.44
Age (years)			
20 –	3.34± .45	3.98 ± .87	2.975 ± .86
30 –	3.87 ± .903	4.83 ± .45	2.875 ± .54
40 –	4.86 ± .07	3.65 ± .89	2.543 ± .76
Above 50	4.98 ± .324	4.45 ± .96	2.875± .43
F-test	2.22	10.2	18.6
P – value	0.09	0.002 ***	0.01 **

Nurse's Characteristics	Job conscientiousness		
	Industriousness	Method logicalness	Total job conscientiousness
	M ± SD	M ± SD	M ± SD
Nursing Experience (years)			
1-	2.86 ± .509	2.65 ± .95	3.876 ± .96
5 -	2.84 ± .085	2.75 ± .86	2.098 ± .190
10 -	2.65 ± .589	2.64 ± .87	2.987± .123
15 –	2.34 ± .97	3.76 ± .07	2.65 ± .76
20 and above	3.76± .32	3.86 ± .65	2.876 ± .876
F-test	1.17	0.54	4.32
P – value	0.33	0.020 **	0.001 ***
Experience in unit (years)			
1-	3.45 ± .86	3.76± .09	4.87 ± .76
5 -	3.09 ± .38	2.76 ± .75	4.908± .654
10 -	3.54 ± .64	3.86 ± .45	4.765 ± .976
15 –	3.87 ± .82	3.64 ± .78	4.876 ± .765
20 and above	3.75 ± .200	3.87 ± .96	3.86 ± .09
F – test	3.41	4	4.92
P – value	0.03 **	0.09	0.05 *

Note: ***, **, * indicate significance at 1%, 5% and 10% respectively.

Table (7): Relationship between job conscientiousness and professional work autonomy as reported by staff nurses (n=265).

Variable		Total professionalwork autonomy	Total Conscientiousness
Total professional work autonomy	R-value	1	0.17
	P-value		0.01**
Total conscientiousness	R-value		1
	P-value		

Note: ***, **, * indicate significance at 1%, 5% and 10% respectively.

Table (8): Correlation coefficient values for relationship between job conscientiousness and its subscale as reported by staff nurses (n=265).

Job conscientiousness items		Method logicalness Conscientiousness			Industriousness	Total Conscientiousness
		Cognitive	Deliberateness	Order	Endurance	
Total conscientiousness method logicalness: Conscientiousness cognitive	R-value	1	.378	.381	.184	.516
	P-value		.023 **	.037 **	.048 **	.019 **
Conscientiousness deliberateness	R-value		1	.265	.232	.634
	P-value			.029 **	.034 **	.017 **
Conscientiousness order	R-value			1	.309**	.047**
	P-value					
Conscientiousness industriousness: Endurance.	P-value				1	.848**
	R-value					.049 **
Total conscientiousness	R-value					1

Note: ***, **, * indicate significance at 1%, 5% and 10% respectively.

Table (9): Correlation coefficient value for relationship between professional work autonomy and its subscale

Professional work autonomy		Autonomy method	Autonomy Scheduling	Autonomy Criteria
Autonomy method	R-value	1		
Autonomy scheduling	R-value	.540	1	
	P-value	.032 **		
Autonomy criteria	R-value	.515	.616	1
	P-value	.036 **	.04 **	
Total autonomy	R-value	.809	.845	.854
	P-value	.046 **	.039 **	.031 **

Note: ***, **, * indicate significance at 1%, 5% and 10% respectively.

Table (1): Shows personal characteristics of the study sample. It is clear from the table that all the study sample were females with ages ranged from (20 – 53) years, with a mean score age of (20.4 ± 1.1). The highest percentage (66.6%) of head nurses and more than half of technical nurses were married represented (56.9%) as compared to (55%) of professional nurses who were single. Regarding to educational level the majority of both head nurses (83.7%) and professional nurses (97.5%) had bachelor compared with technical nurses (56.8%) who had second technical of nursing. However, half of the head nurses had nursing experience (21 years and above). While more than half of professional nurses (52.5%) had (5 to less than 10) years, and technical nurses (54.5%) had (1 to less than 5) years of experience.

Table (2): Shows job conscientiousness as reported by the study sample. It is clear from the table that the highest mean score was (4.5±1.8) for conscientiousness cognitive, While the lowest mean score was (2.7±0.7) with conscientiousness order.

Table (3): Illustrates professional work autonomy as reported by staff nurses, this table shows that the highest mean score (57.09±20.33) was for Autonomy Method, While the lowest mean score was (20.24±2.85) with Autonomy Criteria. Besides results indication that, highest percentage (87.9%) of nurses were having agreement related to autonomy scheduling, while (85.2%) of nurses were having "high" agreement upon the autonomy criteria.

Table (4): Show that total scores for job conscientiousness and professional work autonomy as reported by staff nurses, it is clear from the table that, the highest percentage of "high" agreement was upon the Professional work autonomy scale (82.2%). and the job conscientiousness scale (67.9%).

Table (5): illustrate that, there were statistically significant differences were observed between total professional work autonomy and personal characteristics as position (P-value =0.02), age (P-

value =0.011), place of work (P-value =0.01), and educational level (P-value =0.02), While no statistically significant difference between marital status, nurses experience in unit with professional autonomy. However, there were statistical significant difference between method, scheduling autonomy and personal characteristics as Place of work (P-value =0.02), age (P-value =0.001), educational level (P-value =0.050), and nursing experience (P-value =0.03), while no statistically significant differences were found between nursing experience, marital status, place of work, position, experience in unit and method, scheduling autonomy.

Table (6): This table shows that, there was statistically significant correlation difference between total job conscientiousness and personal characteristics (age, nursing experience), While no statistically significant correlation between total job conscientiousness and (position, place of work, marital status, educational level, experience in unit). However, method logicalness conscientiousness positive significant with nursing experience (r=0.54), age (r=10.2).

Table (7): Shows that highly statistically significant correlation between total job conscientiousness and total professional work autonomy (r=0.17 p=0.01). There was statistical significant correlation between job conscientiousness, professional work autonomy

Table (8): Shows that correlation values for the relation between job conscientiousness and its subscale, the result revealed that all subscales dimension of job conscientiousness were positively correlated for each other ranged between strong and low correlation.

Table (9): This table shows that there was a highly positive statistically significant correlation between total professional work autonomy and its subscale (methods, scheduling, criteria). Meanwhile, there was a highly statistical correlation between subscale with each other.

Discussion:

Currently hospitals face greater competition than ever before, as well as serious challenges internally and externally to achieve their goals effectively and efficiently, according to literature professional autonomy and conscientiousness of nurses are placed a high value for administrators and managers in health organizations due to the crucial role they play in their organizations' performance (Blom, et al 2017).

The current study purpose was to determine the relation between job conscientiousness and professional work autonomy among working nurses at New Surgical Zagazig university Hospitals. The study findings indicate generally high level of professional work autonomy among nurses in the study setting, these variables can improve quality of patient care, increase productivity, enhance job satisfaction, and create healthy work environment (Traynor, 2019).

The present study results reveal that, job conscientiousness that got the "high" agrees among nurses, especially the items of Conscientiousness industriousness were agreed upon by high percentage of them. This result was consistent with the research done by Yildirim & Altunbas., (2021) who found that, nurses had high level of job conscientiousness; and Kadioglu et al., (2016); Lak et al., (2018) in relevant studies. However, these finding disagreements with a study conducted by Guh, & Zhang, (2009) who investigated the effect of accountability on the job conscientiousness for nurses working in ICU units in Islam Abad Hospitals at Pakistan and found that nurses have low level of job conscientiousness and negative correlation between interaction of job conscientiousness and accountability.

It may be because conscientiousness plays a significant role in forming nurses' personalities and elevating their sense of self-worth. It may also be because they work in an environment with sufficient supervision, opportunities for advancement, teamwork, adequate nursing training, supplies, equipment, and a strong connection to the nursing unit, making them more deliberate in their decisions as they gain experience and more responsibility.

The majority of the nursing staff had agreements about professional work autonomy, according to the results of the current study. This result was in line with a study by Georgiou et al., (2017) that examined the relationships between nurse-physician teamwork and perceived autonomy in Cypriot critical care nurses., who found that, nurses who perceived high level of professional autonomy had high level for decision making and nurses perception for decision making and professional

work autonomy was not tendency to leave the employing in hospital; besides Shohani et al., (2018) showed that the professional autonomy of ICU nurses working in the hospitals of Ilam was high in line with our findings, However, this result incongruity with recent study by Lapena et al., (2018), then the of study ASI et al., (2022) done on the relationship between professional autonomy and job stress among intensive care unit nurses had found a moderate level of professional autonomy among nurses.

This might be due to more opportunities to learn new skills and knowledge, a decrease in absenteeism and turnover, increased access to support that includes feedback and guidance from supervisors, the importance of professional work autonomy among nurses as a result of experience, the occurrence of delegation from physicians to professional nurses in making decisions in life-threatening situations that require immediate intervention to save patient life, and more.

The current study discovered a strong statistically significant relationship between job conscientiousness and professional work autonomy. This finding was reinforced by a study conducted by Taylor et al., (2010) who investigated the association between job conscientiousness and autonomy in a health team in Germany. Norcross et al., (2012), who studied nurses in a hospital in Portland, Oregon, in the United States, disagreed with the findings of the previous study and found no statistically significant relationship between job conscientiousness and work autonomy. This may be the cause because nurses who report high levels of conscientiousness and autonomy are expected to exhibit traits and attitudes including self-control, perseverance, goal-setting, and attainment, as well as responsibility and adherence to moral values. Nevertheless, nurses who experience

Our study results demonstrated that, statistically significant positive correlation between professional work autonomy and position. This result was in congruent with a study conducted by Hagbaghery (2013), who carried out a study on nurses at Germany and found that, statistically significant differences between autonomy subscale and position. Similar finding was also revealed in studies carried out among nurses at Alexandria University Albakoor, (2014) and other as Georgiou et al., (2017) & Shohani et al., (2018).

This finding that, head nurse had the high level professional work autonomy may be due to the nature of their managerial work in making decisions, their increased expertise and knowledge, and the opportunities provided for head nurses to develop their skills and take action in handling

challenging situations. They are also all professionals who can be trusted to make decisions that will reduce turnover.

The present study result revealed that, there is no statistically significant relation between total job conscientiousness and position for nurses. This result goes corresponding to previous study in California through **Della Porta & Serenity Sarah, (2013)** who found a negative correlation between conscientiousness and position also, with **Eze. et al, (2018)**. However, these results were in disagreement with the prior study carried out by **Kirkwood. (2006)** in Canada which demonstrated that significant between total conscientiousness and position for nursing staff, as well as with **(Kadioglu et al., 2016; Lak et al., 2018)**. It might be because nurses are conscientious and have a wide range of feelings, emotions, principles, and values that control their impulses to be influenced by other people's behavior and maintain their feelings while also respecting their rights to work with self-health and keep a distance from the incorrect set of ideas that are unrelated to their position.

Concerning place of work: This study showed that no relation between total job conscientiousness and place of work. This finding agreed with the study of **William (2012)** who conducted a study on health team in university of Fort Hare at South Africa to explore the conscientiousness as a moderator of the relationship between work family conflict and stress, found that no statistically significant between total conscientiousness and place of work. At the same line with **Yildirim & Altunbas., (2021)**. And disagreed with the finding of **Avci & Yilmaz, (2021)**. It was not found statistically this due to place of work not affected by personal conscientiousness because conscientiousness is feelings and emotions, principles and values that control of impulses.

The current study showed that positive relations with work place and professional work autonomy. This result supported with a study conducted by **Lissa, (2013)** who done a study on nurses in Laurentian University at Canada to described professional work autonomy of Nurses in Cancer patient care, found a significantly relation between work place and professional work autonomy in some unit; and study finding of **Sarkoohijabalbarez et al., (2017)** on ICU nurses; and **Abdolmaleki et al., (2018)** who studied nurses working in ICUs and emergency rooms despite disagreeing with **Mohadeseh, et al (2015)**, who observed that nurses employed at psychiatric and intensive care wards had higher professional autonomy, as well as a more positive attitude towards their medical practice. and exposed the

relation between professional job autonomy and site of employment. Also, **Pakizekho & Barkhordari's (2022)** who found no significant relationship between conscientiousness level and job factors. Being individually accountable, responsible, and frequently possessing specialized knowledge, in addition to having undergone extensive academic preparation, may explain why highly qualified nurses in the surgical care unit and intensive care unit had the highest mean score of professional work autonomy. These nurses have the right to be the most autonomous group in the nursing profession.

According to the present study findings, no significant relation between job conscientiousness, professional work autonomy with marital status. These results were in agreement with the prior study carried out by **Ferguson, (2011)** who conducted a study on nurses in the Queen's university at Canada and proved the negative significant relation between total conscientiousness and marital status, this may be due conscientious nurses' marital status not affected because of conscientious persons which are tendency to achieve work tasks and feeling a moral responsibility to do their work carefully. Meanwhile previous literature identified certain individual and organizational variables that helped to explain autonomy among nurses such as their age, gender, nurse – patients' ratio, number of nurses in the hospital, type of hospital, and work experience, as marital status is not included **(Georgiou et al., 2017)**. Our study found a statistically significant positive association between educational degree and total professional work autonomy. According to **Puriso et al. (2021)**, who found that education increases nurses' professional autonomy, bachelor degree holders have higher decisional autonomy than diploma holders, and baccalaureate degrees were associated with higher autonomy as diploma was associated with the work autonomy. This result in congruent with **Amini et al. (2015)**, who noticed a relation between age, years of experience and educational level and so did **Faisal, et al. (2018)**. In some studies, Findings indicated that nurses who attained higher education tended to have a greater degree of professional autonomy in their jobs. **(Labrague et al., 2019; Traynor, (2019); Avci & Yilmaz, (2021)**.

The current study demonstrated that, older nurses had significantly better relation with job conscientiousness this congruent with, **Seyed & Mardan (2017)** who found that participants who were in late middle age more conscientious and more successful in their career related to independent of cognitive ability, which also predicted success., **Faisal, et al. (2018)**. who

noticed a relation between age, gender and job conscientiousness, this may due to increasing nurses age will increase ability to plan and cognitive thinking and able to think in problem for long time until they solve it, this mean the older nurses were more had opportunity to better one's position in the work so that the staffs who had older than years had highest dimensions of job conscientiousness compared to others.

The results of this study indicated a statistically significant positive relation between professional job autonomy and age. This finding consistent with a previous study conducted by **Sheldon & Houser (2009)** on nurses in Turkey, who discovered a positive relationship between professional work autonomy and age. The older workers in that study reported feeling more autonomous because they followed rules, assisted distant relatives, and kept up with current events. This outcome consistent with those of **Amini et al. (2015) & Faisal, et al (2018)**. who stated that certain factors including age, tenure, years of experience at the current position, and education have been shown to affect a nurse's autonomy. This may be due to elder nurses had the higher level of autonomy, which increasing empowerment, information support, the opportunities for promotion and growth, the capability to make accurate choices related to patient care and sequencing of nursing activities.

The present study found that a positive correlation between professional work autonomy, job conscientiousness and nurses experience. This finding in agreement with **Sayed (2013)** who conducted a study on employee in College Hospital at Saudi Arabia to assess conscientiousness, autonomy and Burnout and found that relation between autonomy, conscientiousness and nurse's experience. At the same line with **Kadioglu et al., (2016); Peacock-Johnson, (2018); Cleary & Lees, (2019); Yildirim, et al (2021)**. In disagreement with **Gerhard et al, (2014)** who Conducted a study on Health team in Bonn Hospital at Germany to described how political skills, openness to experience, and conscientiousness affect work performance and noticed negative association between the two. This finding indicated that, older nurses had the highest experience with professional work autonomy this could be related to increase responsibility and ability to make accurate decision in relation to care of patient and sequencing of nursing activities.

Concerning the job Conscientiousness: The current study showed that all subscales of job conscientiousness were positively correlated for each other ranged between strong and low correlation. As well as, **Baster Weel (2014)** who

carried out a study on health team in Maastricht Hospital at Netherlands to explore important conscientiousness for socio-economic outcomes, found that positive correlation for total conscientiousness to each other. While this finding disagree with a study in Chang Gung Hospital at China conducted by **Si Man Lam & Chingl (2014)** who examine the relation between time pressure, nurse conscientiousness and patient safety, demonstrated that nurses with low conscientiousness, time pressure was negatively related to patient safety and all subscales of conscientiousness were negative correlated for each other. This attributable to nurses has effectiveness and efficiency level with the ability to plans, organizes and carries out tasks, the control of impulses to meet work responsibilities.

Concerning the professional work Autonomy: The present study showed that all subscales of professional work autonomy (methods, scheduling, criteria) were highly statistical correlation for each other. In agreement with **Sayed, (2013)** whose study on nurses in chest hospital at Alexandria to described relationship between work autonomy, job Satisfaction and self-efficacy, found that all subscales of professional work autonomy (methods, scheduling, criteria) were positive relationship for each other. Theses finding disagree with a study in Germany by **David & Lawrence, (2011)** who found that no statistically significant relation between (method, scheduling) and Job Tenure, autonomy. This may be due to increase nurses' ability to expression of one's views and plans, take decision make, innovation, broader experiences, opportunity for high quality results, save time and decrease work pressure, will achieve high performance standard.

Conclusion

In the light of the current study findings, it can be concluded that, a significant positive strong correlation was found between job conscientiousness and professional work autonomy among nurses. Majority of nursing staff were having high professional work autonomy. A significant difference between total professional work autonomy and personal characteristics (position, age, place of work, educational level, and nursing experience), While a significant difference between total job conscientiousness and personal characteristics (age, nursing experience) were found.

Recommendations:

In view of the study finding the proposed recommendations are as follows:

- Provide in-service training courses for nursing staff that emphasize on managerial abilities, communication abilities, and conflict resolution abilities. These courses should also cover stress management, coping mechanisms, problem-solving techniques, and other assertiveness methods.
- Enlightening professional work autonomy between nursing staff these considerations be taken as given clear and specific job description, flexible work schedules, increasing participation in decision making, fair treatment, adequate staffing. Promote greater feeling of psychological empowerment, top management should clearly articulate a vision that inspires employees to take greater responsibility for their work at all organizational level and intervene on necessary.
- Creating a working atmosphere which gives meaning to work that will guarantee worker job autonomy and task identify. Head nurses should be enthusiastic to empower nurses, acting as a model such as promote nurses feeling of freedom and control in performing their job tasks "autonomy", give them a chance to influence and producing job outcomes and have input into the organizational goals "participation as well as provide them a choice in initiating actions in the work place "self-determination. These behaviors would improve nurses' autonomy.
- Encourage junior staff nurses to exercise more autonomy in their everyday work by providing them with constructive criticism, and offering opportunities for specialized nursing certification.
- Head nurse should be focus on creating positive emotional atmosphere by setting a side time for regular confidence, providing rewards for achievements.
- Future research should address pre- and post-assessments of job conscientiousness perceptions before and after the implementation of strategies to provide work environment through attaining access to opportunity, resources, information and support.

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