

Relationship between role strain and workplace support among staff nurse

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Abstract

Background: Role strain is one such stressor that has been found to be positively associated with work stress and job burnout. Providing workplace support are most often considered in relation to preventing or alleviating stress and burnout. **The aim** of the study was to assess the relationship between role strain and workplace support. **Research design:** a descriptive correlational design. **Setting:** This study was conducted at critical care units in El Minia General Hospital which affiliated to Ministry of Health and Population at Minia governorate. **Subjects and methods:** The convenient sampling included all available staff nurse (100) are working in critical units. **Tools of data collection:** Two tools were used to collect data namely; Role strain scales sheet included demographic characteristics and role strain scale & Work place support survey. **Results:** There was significant statistical weak negative correlation only between total role strain and coworker support. There was significant statistical weak negative correlation between total workplace support and role conflict. **Conclusion:** There was significant statistical weak negative correlation between total role strain and total workplace support. **Recommendation:** Continuous evaluation of nurses' role strain and workplace support. Further researchers, about nurses' role strain with increasing sample size and different settings. Investigation of other factors predicting the level of role strain.

Keywords: Role strain, Staff nurses, Workplace support.

Introduction:

As health care in the world undergo rampant changes, nurses are presented with the task of accomplishing much more than the traditional roles of caring for patients. These challenges are increasing the incidence of role strain within the nursing profession. Role strain has been intellectualized as the result of incongruences in the expectations of a particular role compared to what is actually being accomplished in the role. Understanding the influence of role strain on nurses is integral to the preservation of the profession (Raffenaud, Unruh, Fottler, Liu & Andrews, 2019).

Role strain has been conceptualized as the consequence of disparity between an individual's perception of the characteristics of a specific role and what is actually being achieved by the individual currently carrying out the specific role. In other words, role stress/strain occurs when divergence exists between what are perceived to be the role expectations and what is actually being accomplished within the role (Boudrias, Trépanier, Foucreault, Peterson & Fernet, 2020).

Psychologists, sociologists and empirical researchers have conceptualized role strain from different perspectives .they classified the components of role strain for healthcare

professionals. These dimensions are role conflict, role incongruity, role incompetence, role ambiguity, role overload. Further, an increase in work and family demands was associated with an increased likelihood of fatigue to occur and in a desire to reduce work commitments. Other researches suggest that workplace support may influence role strain (Gautam, et al., 2017 & Lin and Burgard, 2018).

Workplace support refers to actions that include social, emotional, involving expressions of concern, caring and acceptance; instrumental, characterized by tangible assistance, such as money, transportation, task support; informational, including resource provision and direct advice; and validation or appraisal, through which feedback is provided on the normativeness of one's actions, feelings, or status (El Khamali et al., 2018).

Workplace support may derive from several sources, most notably supervisors, coworkers, the organization itself, and key players outside the workplace, including family, friends, and health care workers. Different sources of support in the workplace have various functions and therefore can affect workers differently (Fathi & Simamora, 2019).

The impact of workplace support on role strain, the benefits of providing support are most often considered in relation to preventing or alleviating stress and burnout. Providing support helps to address stress in three ways; Enhancing coping capacity. Support has a direct impact on reducing negative perceptions of work demands (i.e., with support, work demands are perceived to be more manageable). Reducing severity of stress. Support can reduce symptoms of stress (i.e., under demanding conditions less stress will be experienced). Buffering the

impact of work demands on stress. Support reduces the effect of stressful circumstances on workers' wellbeing (i.e., support acts as a buffer between work demands and psychological and physical health and wellbeing) (Poikkeus et al., 2020).

Significance of study

Understanding the influence of role strain on nurses is integral to the preservation of the profession. Nurses have attributed manifestations of role strain to high job demands, dealing with issues of mortality, uncooperative patients and physicians, poor relationships with peers, feelings of the lack of control on the job, and shift rotations. This may lead them for intention to leave, even workplace will support them.

Accordingly the researcher will assess the relationship between role strain and workplace support among staff nurses in El Minia General hospital.

Aim of the Study

The aim of the current study is to assess the relationship between role strain and workplace support through:

1. Assessing the levels of role strain among staff nurses
2. Assessing the levels of workplace support among staff nurses.
3. Finding out the relationship between role strain and workplace support among staff nurses

Research Question:

Is there a relationship between role strain and workplace support among staff nurses?

Subjects and Methods

The subjects and methods of the current study were discussed under the following four designs:

Technical Design

a. Research Design: Descriptive correlational design to achieve the objectives of the study design was used to conduct this study.

b. Study Setting: This study conducted at conducted at critical care units in El Minia General hospital which affiliated to Ministry of Health and Population.

c. Subjects: The study sample is a convenient sample The subjects of this study consist of all the available staff nurses working in the critical care units.

Dialysis unit	(25) staff nurses
Intensive Care Unit	(15) staff nurses
Cardiac Care unit	(25) staff nurses
Neonatal Care Unit	(35) staff nurses
Total number of staff nurses	(100) staff nurses

d. Tool of data collection:

Tools of data collection: Data collected through use of the following tools:

1. Role strain scales sheet:

This tool aimed at assessing the level of role strain among staff nurses. It was consisted of two parts:

First part:

It includes data pertaining socio demographic characteristics of study subject as: age, sex, qualification, marital status, and years of experience.

Second part:

The role strain scale which adapted from **Kolagari et al. (2014)** and modified by the researcher based on current environment. It is consisted of 22 items which categorized under five dimensions as follows: role conflict, role incongruity, role incompetence, role ambiguity, role overload.

Scoring system: Responses were measured on a five point's Likert scale as follows: (5) always, (4) often, (3) sometimes, (2) rarely and (1) never. A 5-point Likert scale was considered in which the choice of "always" standing for the high level of strain was scored as 5 and "never", which means the low level of strain, was scored as 1. Through implementing the formula, items impact scores were calculated. Staff nurses considered having high level of role strain if mean total score is more than 60%. Moderate level of role strain when the mean total score is ranged from 40%-60%, and low level of role strain when total score is less than 40% (**Kolagari et al., 2014**).

Second tool: Work place support survey

It was Adapted from **Addy, et al. (2004)** and modified by the researcher. This tool aimed to assess key workplace support processes. It consisted of 29 items which categorized under six domains as follows: Organizational Resources, Workplace Conditions, Opportunity for Input, Staffing Resources, Supervisor Support, and Coworker Support.

Scoring system: Responses were measured on a five point's Likert scale five point's Likert scale as follows: (5) strongly agree, (4) agree, (3) undecided, (2) disagree and (1) strongly disagree. A 5-point Likert scale was considered in

which the choice of “strongly agree” standing for the high level of workplace support was scored as 5 and “strongly disagree”, which means the low level of workplace support was scored as 1. Through implementing the formula, items impact scores were calculated. Staff nurses considered having high level of workplace support if mean total score is more than 60%. Moderate level of workplace support when the mean total score is ranged from 40%-60% and low level of workplace support when total score is less than 40% (Addy et al., 2004).

The validity & reliability of the tool:

Face and content validity of study tools were conducted by jury group consisted of five experts specialized in nursing administration. Two professors from Minia University, one assistant professor from Helwan University and two assistant professors from Ain Shams University. Based on the jury recommendations corrections, the necessary modification was done.

Tools reliability was tested using Cronbach alpha coefficient. Test of reliability for role strain scale questionnaire was (0.80) and workplace support survey was (0.85) which is accepted.

Pilot study:

The pilot study was carried out after developing the study tools and before starting the actual data collection. It was carried out on 10 staff nurses who represented 10% of total study subjects and were excluded from the main study sample. The aim of pilot study was to confirm the applicability of the study, the clarity and feasibility of tools, as well as the time needed for filling the form. The time needed for filling the sheet was

ranged between 20-25 minutes. This stage took two weeks on October 2019.

Field work:

Data collection period took two months from the beginning of November to end of December 2019 three days per week at the morning shift (8am-2pm). Before distributing the questionnaire, the researcher met the subjects in their units. The purpose of the study and the components of the tools were explained to the participants. Then the researcher distributed the data collection sheets to them at their workplace, and was present all the time for any needed clarification. The researcher checked the completeness of each filled sheet after the participant completed it to ensure the absence of any missing data.

Administrative design

To carry out the study, the necessary approvals were obtained. An official letter was issued from Dean of faculty of Nursing- Ain Shams University, to obtain permission from the hospital directors of El Minia General Hospital about conduction of the study. The researcher met both hospital directors medical and nursing to explain the aim of the study and get their approval to collect data and seek their support.

Ethical consideration

Prior the study conduction, ethical approval was obtained from the scientific research committee at faculty of Nursing- Ain Shams University. Official permission to conduct the study was secured. All staff nurses gave their informed consent to participate in the study. They informed about the study aim and about their rights to refuse or withdraw from the study and anytime. Confidentiality of the obtained information was ascertained.

The study interventions/maneuvers do not entail any harmful effects on participants.

Statistical design

Data entry was done using SPSS V25 computer software package. Quality control was done at the stages of coding and data entry. Statistical presentation and analysis of the present study were conducted, using frequency distribution used for description of qualitative variables and mean and standard deviation used for description of quantitative variables. One way

ANOVA test and Independent t test (t) used for comparison between more than two groups of qualitative variables. Pearson correlation coefficient (r) and linear regression was used for assessing the relationship between (quantitative variables) role strain and workplace support. Statistical significance was considered at p value ≤ 0.05 .

Results

Table (1) shows demographic characteristics of staff nurses according to the table: more than three quarters (76%) of staff nurses were (20- <30) years old with Mean \pm SD = 28.69 ± 7.31 , almost (91%) of them were females and more than two thirds (67%) of them were married. As regards their nursing qualification, (38%) of staff nurses had technical nursing. They had median (6.91) years of experience. About two thirds (61%) of staff nurses were from rural areas and also about two thirds of them (64%) of them had not enough income.

Table (2) demonstrates that role strain dimension of role conflict had the highest mean score (72.84%) followed by role incongruity (68.8%). On the other hand, the lowest mean score was in the dimension of role incompetence (50.2%).

The total mean score of role strain dimensions was 63.14%.

As Table (3), the domains of workplace support with the highest percentages of staff nurses having high scores were those of supervisor support (70.04%) and organization resources (69.17%). Conversely, the lowest percentages were in the domain of opportunity for input. The total mean score was 63.5%.

Table (4) shows that there were insignificant statistical differences in staff nurses' perception regarding total role strain according to their age group ($f=.564$, $p=.64$), experience ($f=.161$, $p=.922$), marital status ($f=0.851$, $p=0.47$), qualification ($f=1.598$, $p=0.208$), work department ($f=1.506$, $p=0.218$), sex ($t=0.33$, $p=0.34$), residence place ($t=0.14$, $p=0.13$). But there was significant statistical difference ($t=0.51$, $p=0.01$) in participants perception regarding total role strain according to their income.

Table (5) shows that there were significant statistical differences in participants perception regarding total workplace support according to their age group ($f=.5.115$, $p=.003$), experience ($f=4.191$, $p=.008$). But there were insignificant statistical differences in participants perception regarding total workplace support according to their marital status ($f=.949$, $p=0.42$), qualification ($f=2.185$, $p=0.118$), work department ($f=2.327$, $p=0.079$), sex ($t=1.65$, $p=0.72$), residence place ($t=1.51$, $p=0.18$), and income ($t=0.35$, $p=0.24$).

Table (6): shows that there was significant statistical weak negative correlation ($r=-.275$, $p=.006$) only between total role strain and coworker support.

Table (7): shows that there was significant statistical weak negative correlation ($r=-.207$, $p=.039$) between total workplace support and role conflict.

Also, there was significant statistical weak negative correlation ($r=-.299$, $p=.003$) between total workplace support and role incongruity.

Table (1): Socio-demographic characteristics of the studied sample (n= 100)

Demographic data		%
Age		
	20- <30 Years	76
	30-< 40 years	15
	≥40 years	9
Range		36
	Mean± SD	28.69±7.31
	Median	32.5
Sex		
	Male	9
	Female	91
Marital status		
	Single	33
	Married	67
Qualification		
	Nursing diploma	33
	Technical nursing	38
	Bachelor of nursing	29
Years of Experience		
	5<10 Years	73
	10-< 15 years	17
	≥15 years	10
Range		36
	Mean± SD	7.72±7.71
	Median	6.91
Place of residence		
	Rural	61
	Urban	39
Income		
	Enough	36
	Not enough	64

Table (2): Role strain scores among staff nurses (n=100).

Role strain dimensions	Minimum	Maximum	Mean	Std. Deviation	Mean %
Role conflict	10.00	25.00	18.2100	3.22332	72.84
Role incongruity	4.00	15.00	10.3200	2.26471	68.8
Role incompetence	5.00	25.00	13.3000	4.07133	53.2
Role ambiguity	6.00	25.00	15.2200	3.91470	60.88
Role overload	7.00	20.00	15.0000	2.84623	60
Total role strain	32	110	72.05	16.32029	63.144

Table (3): Workplace support scores among staff nurses (n=100).

Workplace support dimensions	Minimum	Maximum	Mean	Std. Deviation	Mean %
Organization resources	7.00	30.00	20.7500	4.16909	69.17
Workplace condition	7.00	35.00	19.5200	4.73858	55.77
Opportunity for input	3.00	15.00	7.5100	3.23958	50.07
Staffing resources	8.00	30.00	19.3300	3.91334	64.43
Supervisor support	5.00	25.00	17.5100	4.60894	70.04
Coworker support	4.00	20.00	13.5700	3.44144	67.85
Total workplace support	34	155	98.19	24.11097	63.35

Table (4): Comparing staff nurses' perception regarding role strain according to their demographic variables (n=100).

Demographic variables	Categories	Mean	SD	F/t	P
Age	20- <30 Years	72.7763	10.01812	.564**	.640
	30-< 40 years	69.4000	9.69389		
	≥40 years	70.1429	12.41543		
Experience	5<10 Years	72.0822	9.76211	.161**	.922
	10-< 15 years	72.7059	11.49872		
	≥15 years	71.2222	10.97472		
Marital status	Single	69.9697	9.44221	.851*	.470
	Married	73.2667	10.56195		
Qualification	Nursing school	69.5758	9.17888	1.598**	.208
	Nursing institute	73.7105	10.59043		
	Nursing faculty	72.6897	10.04669		
Work department	Dialysis	72.6800	11.99555	1.506**	.218
	ICU	67.5714	8.73291		
	CCU	74.4615	9.17924		
Sex	NICU	71.6000	9.37832	.33*	.34
	Male	73.1111	12.32319		
	Female	71.9451	9.86843		
Residence place	Rural	71.9344	9.39480	.14*	.13
	Urban	72.2308	11.11296		
Income	Enough	72.7222	11.57981	.51*	.01
	Not enough	71.6719	9.14791		

*means independent t-test, **means one way ANOVA.

Table (5): Comparing staff nurses' perception regarding workplace support according to their demographic variables (n=100).

Demographic variables	Categories	Mean	SD	F/t	P
Age	20- <30 Years	95.5263	16.42394	5.115**	.003
	30-< 40 years	101.8667	14.97077		
	≥40 years	109.0000	16.10383		
Experience	5<10 Years	95.1233	16.44515	4.191**	.008
	10-< 15 years	102.0000	14.92900		
	≥15 years	114.2222	20.69890		
Marital status	Single	94.6970	19.46710	.949*	.420
	Married	100.3667	16.81400		
	Nursing school	103.0303	16.70607		
Qualification	Nursing institute	97.0526	18.65468	2.185**	.118
	Nursing faculty	94.1724	15.62294		
	Dialysis	104.6800	15.97060		
Work department	ICU	92.3571	23.24653	2.327**	.079
	CCU	93.9231	18.87840		
	NICU	99.0571	13.11251		
Sex	Male	107.2222	14.60974	1.65*	.72
	Female	97.2967	17.45374		
Residence place	Rural	96.0984	16.01219	1.51*	.18
	Urban	101.4615	19.10063		
Income	Enough	99.0000	18.80274	.35*	.24
	Not enough	97.7344	16.67642		

*means independent t-test, **means one way ANOVA.

Table (6): Correlation between total role strain and workplace support dimensions (n=100).

Workplace support dimensions	Pearson Correlation	Total role strain
Organization resources	r	-.074-
	p	.464
Workplace condition	r	.021
	p	.838
Opportunity for input	r	-.110-
	p	.276
Staffing resources	r	-.032-
	p	.754
Supervisor support	r	-.189-
	p	.059
Coworker support	r	-.275-**
	p	.006

Statistical significant at $p < .05$

Table (7): Correlation between role strain dimensions and total workplace support (n=100).

	Total workplace support	Pearson's correlation	
		r	p
Role strain			
Role conflict		-.207*	.039
Role incongruity		-.299**	.003
Role incompetence		-.045-	.659
Role ambiguity		.084	.405
Role overload		-.089-	.376

Statistical significant at $p < .05$

Discussion:

Nursing is considered one of the most stressful health care professions. Strain is highly subjective and every nurse perceives and responds differently to strain. Nurses who are working in stressful units such as Intensive care units (ICU), Critical care units (CCU) and Emergency Rooms (ER) are vulnerable to highly stressful events than nurses who are working in other units (Higazee, Rayan, & Khalil, 2016).

In the nursing circumstances, staff needs organizational support to keep them provoked and deliver best care for patients. Additionally, with workplace support the turnover ratio and burnout decrease, staff enjoy with their job, and deliver best care for patients.

Therefore, this study aimed to assess the relationship between role strain and workplace support through assessing the levels of role strain among staff nurses, assessing the levels of workplace support among staff nurses, finding out the relationship between role strain and workplace support among staff nurses (Bano, Ramzan, Anjum, & Dapeng, 2017).

Regarding to the demographic characteristics, the finding of the current study revealed that, more than three quarters of staff nurses' age ranged

between (20- <30) years old. It may be due to the administrators selected young age nurses to be able to perform mainly tasks in the critical units effectively. These results are similar with **El-enin & Mohammed (2017)** who carried out their study at Belkas Central Hospital to determine Occupational Stress and Level of Performance among Staff Nurses, and indicated that the highest percentage of them range from 20 to 30 years old.

In relation to sex and marital status of the studied nurses, the results of the current study indicated that most of them were females and more than two thirds of them were married. This could reflect that the profession of nursing in Egypt was mostly females. These results approved with the study performed by **Mathew & Thomas (2019)** which entitled "Occupational stress among nurses: Government versus private sector" who stated that more than three quarters of the studied nurses were female. In addition these results appropriate with the study performed by **Adriaenssens Hamelink, & Van Bogaert (2017)** which entitled "Predictors of occupational stress and well-being in First-Line Nurse Managers" who indicated that more than two thirds of the studied sample were married.

According to level of education and Years of Experience, the finding of the current study indicated that more than one third of staff nurses had technical nursing and one third of them had

Nursing diploma. Also less than three quarters of the staff nurses their years of Experience ranges from 5-<10 years, with mean of SD 7.72 ± 7.71 year. Having most of bedside nurses who work in governmental hospitals diploma nurses "from the researcher's point of view "could be due to preference of bachelor degree nurses to work at private hospitals and travel abroad, and when working in the governmental hospitals, bachelor degree nurses work as a head nurses not as bedside nurse. These study result is in similarity with the result of study performed by **Yasin, Kerr, Wong, & Bélanger (2019)** which entitled "Factors affecting nurses' job satisfaction in rural and urban acute care settings", who indicated that more than one third of the studied nurses had technical nursing. And more than half of them have more than 5 years of experience.

In relation to total mean score of studied staff nurses regarding Role Strain dimensions. The present study revealed that the highest mean score of studied staff nurses' feelings were related to Role conflict. While the lowest mean score was related to Role incompetence. The result of the present study was consistent with **Trousselard et al. (2016)** who conducted study about "Stress among nurses working in emergency, anesthesiology and intensive care units depends on qualification". They indicated that the highest mean score of studied staff nurses feeling were related to Role conflict.

Regarding to the total workplace support, the findings of the current study demonstrated that, the mean score of staff nurses related to workplace support was 98.19 ± 24.11 These results agree with the study achieved by **Salem, Baddar & AL-Mugatti (2016)** who conducted study to assess the Relationship between nurses' job satisfaction and organizational commitment. They mentioned that the

studied sample had highest mean score related to organizational support 96.34 ± 8.91 . But these results disagree with **Mohamed & Gaballah (2018)** who carried out their study to assess Study of the Relationship between Organizational support and Nurses' Performance and found that the mean score of participants related to role Strain was 75.51 ± 10.41 .

According to the correlation between participants age, experience and role strain, the present study revealed that there was insignificant statistical correlation between participants' age, experience and their role strain. This could be explained as, there was no difference between nurses' age, experience regarding to total role strain.

The results of the present study was consistent with **Godifay, Worku, Kebede, Tafese, & Gondar (2018)** who carried out their study to assess Work related stress among health care workers in Mekelle City Administration Public Hospitals, who stated that there were insignificant statistical correlation between demographic data of the studied sample as age and experience and their total Work related stress. But these results disagree with the study achieved by **Gharibi et al. (2016)** about Effects of work-related stress on work ability index among Iranian workers, and found that experience of the studied sample had a significant effect on work-related stress.

According to the correlation between participants age, experience and workplace support, the present study revealed that there was a highly significantly statistical positive correlation between participants' age, experience and their perception about workplace support. This result may be due to workplace support improvement with increasing years of experience because it helps to cope with stress. This

result agree with the study achieved by **Kong & Eo (2019)** which entitled Influence of Job Stress, Team Cohesion and Organizational Justice on Workplace Bullying in Clinical Nurses, who stated that age and experience of the participants had a significant effect on workplace support level.

In addition, there was an insignificant statistical difference in participants' perception regarding total workplace support according to their sex, marital status and qualification. This could be explained as, there was no difference between nurses' sex, marital status and qualification level regarding to total workplace support. This is in harmonizing with the study achieved by **Pandey, Bhandari, & Dungal (2017)** who carried out their study to assess Workplace support and its associated factors among nurses and mentioned that there was statistically an insignificant relation between Workplace support of the studied nurses and their sex, marital status and qualification level. But this result disagree with the study achieved by **Zacher & Schmitt (2016)** who found that qualification level of the participants had a significant effect on workplace support level.

According to the correlation between total role strain and workplace support dimensions, the present study revealed that there was significant statistical weak negative correlation only between total role strain and coworker support. This could be explained as, role strain level were lower among nurses with high coworker support. This result is supported by the study done by **Mohamed (2016)** who emphasized that there was a significant statistical negative correlation between total role overload and coworker support.

In addition, there was a significant statistical weak negative correlation between total workplace support and role conflict and role incongruity. This could be explained as, workplace support level were higher among nurses with lower role conflict and role incongruity. These results agree with the study achieved by **Pecanac & Schwarze (2019)** who mentioned that role conflict and role incongruity level of the nurses under study affected by organization support.

Related to the correlation between total role strain and total workplace support, the present study revealed that there was significant statistical weak negative correlation between total role strain and total workplace support. This could be explained as, workplace support level was higher among nurses with lower role strain. These results agree with the study achieved by **Kong & Eo (2019)** which is entitled Influence of Job Stress, Team Cohesion and Organizational Justice on Workplace Bullying in Clinical Nurses, who found that there was significant statistical negative correlation between total Job Stress of the studied sample and Organizational Justice.

Additionally the current study discovered that there was significant statistical weak negative effect from total workplace support and coworker support on role strain. At the researcher point of view, workplace support decreases stressful events and enhance burnout. This is consistent with the study achieved by **Al Sabei et al. (2020)** who stated that there was significant statistical effect from total Organizational support on role stress.

Conclusion:

The finding of this study can be concluded that There was significant statistical weak negative correlation ($r=-$

.144, $p=.04$) between total role strain and total workplace support.

Recommendations:

Based on the findings of the current study, the following recommendations are suggested:

- Preparation of an educational program for nurses about role strain and workplace support
- Continuous evaluation of nurses' role strain and workplace support
- Further researchers, about nurses' role strain with increasing sample size and different settings.
- Further studies on role strain and other sources of support would contribute to better understanding of the phenomenon of role strain.
- Investigation of other factors predicting the level of role strain.

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Conflict of interest

No

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