

The Impact of Transformational Leadership and Empowerment Perception on Nurses' Job Stress

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Abstract

Background: Because of the growing of institution's requirements for patients' safety, quality and service, it has become important for nursing staff leaders to lead the staff to perform as the institution requires, and provide a friendly workplace.

Purpose: This study investigates the correlation between transformational leadership, empowerment perception and work-related stress faced by nursing staff; and further analyzes factors that impact the prediction of work-related stress.

Methods: A cross-sectional correlation research design was used, and nursing staff at a medical center in southern Taiwan were selected as this study's subjects. Data were collected through purposive sampling and structured questionnaires including: personal information, transformational leadership, nursing staff's empowerment perception and nursing staff's work-related stress.

Results: The results show that, nursing staff's ages have significant differences in job stress perception ($F=3.148$, $p < .05$). Age 29-35's job stress is higher than age 36. Work unit and job stress shows significant difference ($F=3.600$, $p < .01$). The nursing staff working in the surgical unit has a higher degree of job stress than those in the obstetrics and gynecology department. Transformational leadership and total job stress shows negative correlation ($r=-.218^{***}$, $p < .001$). Empowerment perception and total job stress shows negative correlation ($r=-.275^{***}$, $p < .001$). Through multiple regression analysis, it shows that empowerment perception and work unit are the predictable factors for work-related stress.

Conclusion: Nursing staff's empowerment perception can affect their work-related stress. It is suggested that trainings be held on a regular basis on topics of leadership efficiency, empowerment techniques, inspiration and mindfulness-based stress reduction in order to create a friendlier workplace for nursing staff.

Keywords: transformational leadership, empowerment perception, work-related stress

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I. Introduction

The study results show that clinical nursing personnel's pressure origins mostly from the burden of the job (Unable to finish work in working hours, day shifts and night shifts affecting living habits, nursing too many patients, etc.); the results also point out that not getting along with other colleagues and medical team, the chief of nursing cannot solve issues with empathy, and the suspicions and inappropriate requests from the patients and their families are also origins of stress for the nursing personnel (Lin, Chuang, Liu, Chen, & Chen, 2011).

Yao, Fan, Guo, & Li (2014) The study found out that supervisor with transformational characteristics can lower the employees' job stress, and also lower their negative actions. Transformational leadership can increase nursing personnel's attendance on patients' safety, and provide the patients safe nursing (Lievens & Vlerick, 2013). The leading style of the department's supervisor has significant positive effect on its leading efficacy (Chou, Shen, & Wang, 2015). Choi, Goh, Adam, & Tan (2016) points out that a transformational leader is the one who shows charisma and has the ability to inspire and motivate subordinates. Job stress means that after the origin of stress and the oppressed interacts, the oppressed might have psychologically subjective and individualized feelings of stress, affecting the performance on work (Wu, Lu, Ku, & Chang, 2010). Gill, Biger, & Bhutani (2010) states that

job stress would lead to health issue: physical (headache, stomachache, or even heart attack) and mental (not satisfied on work, anxiety and depression).

Study shows that transformational leadership has significant negative relations with job stress, which means the higher transformational leadership efficacy there is, the lower employees' feeling of job stress there would be (Gill, Flaschner, & Bhutani, 2010 ; Sosik & Godshalk, 2000 ; Yao, Fan, Guo, & Li, 2014 ; Chen & Lian, 2016).

Gill, Flaschner, & Bhutani (2010) and Lautizi, Laschinger, & Ravazzolo (2009) study shows that the more empowerment perception the nursing personnel has, the lower job stress there will be. Choi, Moon, Nae, & Ko (2013) study shows also that when working team has high empowerment perception atmosphere, it can reduce employee's work stress.

In view of most current studies focus and discuss on the supervisor's leading style, organization commitment, job satisfactory and remaining on current job, rarely aims on how supervisor's leading style, nursing personnel's empowerment perception and job stress affect each other. Therefore, the purpose of this study was to discuss the effect of transformational leadership and nursing personnel's empowerment perception on work stress, and further analyze the predictive factors of nursing personnel's job stress, hoping that through the process and results of this study, this can be provided as a reference for the hospitals to better the operation strategy of manpower management.

II. Methods

1. Study designs

This study uses cross-sectional correlation research design, collecting samples from the nursing staff that meets the inclusion criteria of this study in a Southern medical center, and uses structured questionnaire to collect data.

2. Study subjects

Subjects are nursing staff selected from internal medicine, surgery, obstetrics and gynecology, pediatrics, psychiatry, surgical care units, and medical care units. The clinical nursing staff who meet the inclusion criteria of this study are all subjects.

(A) Inclusion criteria

1. Clinical nursing staff who has passed the six-month probation period in the Nursing Department.
2. Nurses who have qualified license.

(B) Exclusion criteria

1. Not from the study subjects' units.
2. Staff whose level is above (including) specialist nurse, case manager, chief of nursing.
3. Those who do not have nursing license.

3. Study procedure

This study proceeded questionnaires and data collection visits from 1st October, 2016 to 30th October, 2016. Researchers explained the study purpose, methods and questionnaire answering ways to the respondents that met the sample selection conditions; also informed that the data are only for academic use, personal information are confidential and will not be opened to public, in case the subjects had psychological stress. The supervisors were asked to leave temporarily, making sure of the correctness of responses. There were 500 questionnaires handed out in total, 455 questionnaires were retrieved (recovery rate 91%). Excluding 25 invalid questionnaires, there are 430 valid questionnaires (94.5%) in total.

4. Ethical considerations

This study was approved by the appropriate research ethics committee (Case number: 201600761B0). Each and every participant was required to sign an informed consent form.

5. Instruments

(A) Transformational leadership scale

This study uses the questionnaire from Lu (2011), and got the agreement letter, measuring the four variables including 13 questions for charisma Influence, 8 questions for Inspirational motivations, 6 for Intelligence Inspiration, and 7 for intellectual stimulation according its reference on Bass & Avolio (1990) to the categorization of transformational leadership. Using Likert Scale's Five-point scale, the higher the total score is, the higher recognition there is for the transformational leadership.

(B) Empowerment perception scale

This study uses the questionnaire from Wang & Lu (1998), and got the agreement letter, its questionnaire referred to Klakovic's Reciprocal Empowerment Scale (RES) in 1995. Through back-translation after translating the content, and reviewed by a Doctor of Nursing Philosophy and Klakovich himself in order to make sure the questionnaire is in accordance with the original text. There are three facets in this questionnaire, including 13 questions of reciprocity, 11 questions of synergy and 12 questions of ownership, using Likert Scale's Five-point

scale, the higher the total score is, the higher total empowerment perception there would be.

(C) Nursing personnel's job stress scale

Nursing Personnel's job stress scale was created by Benoliel, McCorke, Georgiadou, Denton, & Spitzer in 1990. This study uses the scale from Tsai & Chen (1996), translated into Chinese version after getting the original authors' agreement. After using factors induction analysis, we get for factors, 16 questions for personal responses, 13 for work concerns, 11 for competency, and 3 for incompleteness of personal arrangement. The higher score there is for stress scale, the higher work stress there is for nursing personnel.

6. Statistical Analysis

This study uses SPSS Statistics 22 computer suite software to run the data statistical analysis, using descriptive statistics analysis to analyze nursing personnel's basic data times, percentage, mean, standard deviation, and independent-sample ttest to test if there is significant difference between the average of two groups; ANOVA analyzes if there is significant difference between the average of three (including three) or more groups, scheffe tests, correlation analysis, and through regression analysis to view the predicted situation of demographic variables, transformational leadership and empowerment perception on nursing personnel's job stress.

III. Results

1. Analysis of differences in demographic variables and job stress

The results show that, nursing personnel's ages have significant differences in job stress perception ($F=3.148$, $p < .05$). Age 29-35's job stress is higher than age 36. Work unit and job stress shows significant difference ($F=3.600$, $p < .01$) (Table 1). The nursing personnel working in the surgical unit has a higher degree of job stress than those in the obstetrics and gynecology department.

2. Correlation analysis between transformational leadership and job stress

Table 2 shows that, there is negative correlations between transformational leadership and job stress ($r=-.218^{***}$, $p < .001$), and the other four facets all reach statistical negative correlations; the correlation coefficients are work concerns ($r=-.101^*$, $p < .05$), personal responses ($r=-.213^{***}$, $p < .001$), competency ($r=-.126^{**}$, $p < .01$), incompleteness of personal arrangement ($r=-.160^{**}$, $p < .01$). That is to say, the higher the nursing personnel's recognitions to the supervisor's transformational leadership are, the less job stress perception there will be.

3. Correlation analysis between empowerment perception and job stress

Study shows that there is negative correlation between total empowerment perception and job stress ($r=-.275^{***}$, $p < .001$). The four facets all reach statistical negative correlations with job stress. Which means the higher the nursing personnel's empowerment perception is, the less job stress there will be (Table 3).

4. Demographic variables, transformational leadership, and empowerment perception's effect on job stress

According to Table 4's regression analysis, mode 1 shows that the obstetrics and gynecology and transformational leaders in the workplace have a significant negative impact on job stress. That is to say, with every score added to transformational leader, the nursing personnel's job stress score goes down by 0.345, the overall explanatory power is 8.3%. In mode 2, the obstetrics and gynecology and empowerment perception in the workplace also have a significant negative impact on job stress. With every score added to empowerment perception, the nursing personnel's job stress goes down by 0.518, the overall explanatory power is 10.4%. In mode 3, the obstetrics and gynecology and empowerment perception in the workplace also have a significant negative impact on job stress, the overall explanatory power is 10.2%, but transformational leader does not show significance in this mode.

IV. Discussions

Age of nursing personnel have significant differences regarding job stress perception. Among them, 29-35 year-olds have higher levels of job stress than those over 36 years of age. Speculation suggested it is related to the fact that most nursing staff of this age are preparing for the promotion report. Compared with domestic scholars, the results showing that the younger the age, the greater the pressure of work is still slightly different (Lue, 2006; Lin, 2010; Wang, Huang, Lu, & Ho, 2007).

The nursing personnel working in the surgical unit experienced a higher level of job stress than the gynecology department. This is similar to the study of Wang, Huang, Lu, & Ho (2007) pointing out that the working pressure of the nursing staff working in the surgical ward and the extended care unit is higher than that of the pediatric ward, emergency ward and dialysis unit. It is inferred that the flow of patients in the surgical wards is relatively large, and it takes extra time to handle the patient's admission procedures. In addition, because of the effective use of beds in the surgical wards of the sample hospitals, there are cases in which non-attendance patients which also is an influential factor.

The higher nursing personnel's degree of recognition for supervisor and transitional leaders, their job stress perception will be relatively reduced. Similar to the study of Chen & Lian (2016) on the leadership style of the National Primary School Principals, the higher the leadership style is, the lower the degree of perception of the pressure of part-time job duties for the administrative teachers. Some studies show that the correlation between transitional leadership and work pressure also has the same results. (Gill, Flaschner, & Bhutani, 2010; Sosik & Godshalk, 2000; Yao, Fan, Guo, & Li, 2014).

There was a negative correlation between perceptions of empowerment and work stress ($r = -.275^{***}$, $p < .001$). Which means when nursing personnel has higher level of perception of employee empowerment, the level of job stress perception relatively reduced. This is the same as the foreign studies by Gill, Flaschner, & Bhutani (2010) investigating the Indian hotel industry and found that increased managerial empowerment will reduce the pressure on customer contact service personnel, and the study by Lautizi, Laschinger, & Ravazzolo (2009) surveying mental health nurse workplaces in two medical institutions in Italy and showed that high degree of empowerment can reduce the work stress of nursing staff. And also the study by Choi, Moon, Nae, & Ko (2013) which studied 90 working groups in South Korea and found that the workforce can reduce the pressure on employees if they have an empowering environment.

In order to explore the predictors of the work pressure of nursing staff, this study used multiple regression analysis to conduct statistical analysis of data. According to the results of the regression model 1, the transitional leaders showed significant predictive ability, which explained the variance of work pressure by 8.3%. The result of model 2 showed that the perception of power has a significant predictive ability, which can explain the variation of work stress by 10.4%. In model 3, when transitional leadership and empowerment perception variables were added to the regression analysis at the same time, it was found that only the empowerment experience has a significant predictive ability, which can explain the variation of job stress by 10.2%. This is similar to the results of previous study on transitional leadership and empowerment for predicting the pressure on Indian hotel customer contact service staff (Gill, Flaschner, & Bhutani, 2010). The reason for inference possibly is that transitional leadership and perception of empowerment both involve leadership-level issues. And the correlation between the two is high (the correlation coefficient is above 0.7), which leads to only empowerment perception has significant predicting ability when put into regression analysis at the same time. The low explanatory ability for predicting may be related to the sample hospitals' preparation for Accreditation. Due to the supervisor's cooperation for the hospital Accreditation, the leadership of its role was brought out the atmosphere in the clinical workplace. In short, the nursing personnel will still be affected by the leadership mode of the supervisor and the perception of empowerment, which will result in different levels of work pressure.

V. Conclusion

In short, the higher recognition of transformational leadership a nursing personnel has toward the immediate supervisor, the empowerment perception would be elevated as well. The higher recognition of transformational leadership nursing personnel has toward the immediate supervisor, the job stress level would be reduced. The higher empowerment perception a nursing personnel has, the job stress level would be reduced relatively. After using multiple regression analysis, the result shows that empowerment perception and work unit are job stress predictors.

Study limitations

This study conducts research and discussion on nursing personnel from only one medical center. Although the samples are statistically and inferentially meaningful, due to the limitations of time, manpower and finance, it was not able to expand to more medical institutions; therefore, the verification of the popularity of study results is limited.

Table 1 Demographic variables and job stress differences (N=430)

Item	Number	Mean ± SD	F / t Value	P Value	Scheffetest
age			F=3.148	.044*	②>③
①aged 28 and below	150	3.46±1.24			
②aged 29-35	145	3.65±1.35			
③aged 36 and above	135	3.27±1.28			
Sex			t=-.497	.619	
Male	5	3.18±1.15			
Female	425	3.47±1.30			
Education			F=.656	.580	
College	62	3.33±1.18			
University	366	3.49±1.32			
Garduate school and above	1	4.78			

Years served in college			F=1.413	.218	
Below i year	20	3.82±1.22			
1-5 years	178	3.46±1.26			
6-10 years	108	3.63±1.37			
11-15 years	51	3.32±1.34			
16-20 years	51	3.35±1.32			
21 years and above	22	3.01±1.14			
Years served total			F=.660	.654	
Below i year	13	3.70±1.51			
1-5 years	159	3.49±1.24			
6-10 year	109	3.56±1.41			
11-15 year	55	3.47±1.24			
16-20 year	57	3.31±1.33			
21 years and above	37	3.22±1.18			
Rank			F=.770	.572	
N	18	3.32±1.58			
N1	13	3.72±0.90			
N2	154	3.44±1.26			
N3	151	3.59±1.35			
N4	58	3.30±1.24			
AHN	36	3.29±1.34			
Marriage			F=2.024	.110	
Single	250	3.58±1.34			
Married	176	3.30±1.23			
Divorced	3	2.89±1.38			
Widowed	1	4.61			
Employer			F=3.600	.002**	②>③
①Internal Medicine	141	3.50±1.25			
②Surgical	108	3.72±1.13			
③Gynecology		2.74±1.15			
④Pediatrics	31	3.37±1.58			
⑤Psychiatry	27	3.21±1.22			
⑥Surgical care unit	31	3.06±1.36			
⑦Internal care unit	59	3.69±1.45			
In-service training			t=.817	.414	
Yes	25	3.67±1.08			
No	405	3.45±1.31			
Been clinical instrutor within a month			t=.460	.646	
Yes	119	3.52±1.32			
No	310	3.45±1.30			

Note:*P<.05 **P<.01 ***P<.001

Table 2 Analysis of correlation between transformational leadership and job stress(N=430)

Items	A	A1	A2	A3	A4	C	C1	C2	C3	C4
A Total transformational leadership	1									
A1 charisma Influence	.976***	1								
A2 inspirational motivation	.970***	.943***	1							
A3 intellectual stimulation	.982***	.947***	.942***	1						
A4 individual consideration	.945***	.885***	.867***	.914***	1					
C Total job stress	-.218***	-.229***	-.223***	-.208***	-.184***	1				
C1 work concerns	-.101*	-.106*	-.095*	-.101*	-.086	.771***	1			
C2 personal responses	-.213***	-.220***	-.224***	-.196***	-.182***	.843***	.649***	1		
C3 competency	-.126**	-.133**	-.114*	-.116*	-.124*	.299***	.095*	.052	1	
C4 incompleteness of personal arrangement	-.160**	-.169***	-.171***	-.155**	-.121*	.789***	.419***	.561***	-.056	1

Note:*P<.05 **P<.01 ***P<.001

Table 3 Correlation analysis of empowerment perception and job stress (N=430)

Items	B	B1	B2	B3	C	C1	C2	C3	C4
B Total empowerment perception	1								
B1 reciprocity	.838***	1							
B2 synergy	.966***	.715***	1						
B3 ownership	.929***	.612***	.910***	1					
C Total job stress	-.275***	-.254***	-.230***	-.273***	1				
C1 work concerns	-.148**	-.153**	-.110*	-.147**	.771***	1			
C2 personal responses	-.246***	-.208***	-.209***	-.256***	.843***	.649***	1		
C3 competency	-.207***	-.183***	-.158**	-.231***	.299***	.095*	.052	1	
C4 incompleteness of personal arrangement	-.176***	-.172***	-.163**	-.150**	.789***	.419***	.561***	-.056	1

Note: *P<.05 **P<.01 ***P<.001

Table 4 Regression analysis of demographic variables, transitional leadership, empowerment perception, and job stress (N=430)

Variant	Mode 1	Mode 2	Mode 3
(Constant)	4.734	5.131	5.154
Age [#]			
Aged 29-35	.112	.086	.086
Aged 36 and above	-.243	-.225	-.226
Employer [@]			
Surgical	.205	.207	.205
Gynecology	-.674**	-.630**	-.628**
Pediatrics	.065	.079	.084
Psychiatry	-.242	-.193	-.194
Surgical care unit	-.404	-.389	-.389
Internal care unit	.329	.321	.326
Total Transitional Leadership	-.345***		-.033
Total Empowerment Perception		-.518***	-.488**
R ²	0.102	0.123	0.123
Adj R ²	0.083	0.104	0.102
F Value	5.306	6.555	5.893

Note: *P<.05 **P<.01 ***P<.001

[#]Age 28 and below is reference group.

[@]Use internal medicine as the reference group.

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