

## **Resistance or Loyalty?**

### **Interpreting Nurses' Organizational Commitment in Taiwan<sup>\*</sup>**

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**(draft)**

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## Abstract

**Background:** Previous studies of organizational commitment emphasize the influences of job conditions and social support. Regardless of their employment status, women do more household chores and care work in the private domain than men. Most nurses have to do care work in hospitals and at home. They are also frequently the victims of sexual harassment and bully in the hospitals.

**Theme:** This paper adopts a gender perspective in studying nurses' commitment to the hospitals. The authors analyzed how organizational and job characteristics as well as factors concerning gender-and-family interests affect nurses' loyalty to the workplace.

**Data, Methods, and Variables:** The data came from over a self-administered questionnaire survey collected in three hospitals in Taiwan in 2014. There are more than 3,000 valid cases. The structural equation modelling is used in the analysis. The dependent variable is the degree of nurses' inclination to turn down better-paid job offers outside to stay in the current hospitals. Independent variables include organizational and job characteristics, work conditions, and factors representing gender-and-family concerns.

**Findings:** The paper found that long working hours, frequent overtime request and irregular work shifts increased work-to-family conflicts of nurses, and all these factors as well as hostility in the hospitals reduced loyalty. The results indicate the necessity of including gender and family concerns in analyzing organizational commitment of female workers.

**Conclusions:** We interpret the nurses' willingness to accept better-paid job alternatives as signaling their resistance against unfair and unfriendly working environments in hospitals. To increase nurses' commitment, the hospital management need to improve work conditions and implementing gender-and-family friendly policies.

**Key Words:** nurse, commitment, loyalty, work conditions, work-to-family conflicts, hostile work environments, Taiwan.

## **Introduction**

From the perspective of corporatist control, organizational commitment is a mechanism to control workers by increasing the ‘dependency, commitment, and corporate loyalty’ among employees (Wallace, 1995, p. 814). A lack of commitment represents dissatisfaction with the management and would affect job performance. Mueller, Boyer, Price, and Iverson (1994), using a critical perspective, examined the effects of employer-controlled work conditions on workers’ commitment in medical work settings. They found positive effects of organization size, group cohesion, and job control on the loyalty of dental hygienists to organizations. Previous studies using Taiwanese data also show the relations between workers’ commitment to hospitals and job characteristics. For instance, Chang, Wang, Huang, and Wang (2014) found a strong relationship between work excitement (e.g., perceiving work challenging) and nurses’ professional commitment in a local hospital. In contrast, frustrations with work conditions and manpower arrangements negatively affect nurses’ commitment (Chang et al., 2014).

Previous studies focus on the effects of organization and work characteristics but overlook the fact that work environments are not gender-neutral, especially hospitals. The majority of nurses are women and many of them are married and/or have children. They do care in the hospitals and at home. Extended hours spent in the workplace and irregular work schedules are likely to create work-to-family conflicts (Skinner, Van Dijk, Elton, and Auer, 2011). Greater work-to-family conflicts may thus reduce nurses’ loyalty to the hospitals and the willingness to stay. Nurses are constantly required to work overtime, but are only compensated with promises of days off rather than monetary rewards (*Taipei Times*, May 13, 2012). However, because of the increasing work load but insufficient workforce in the hospitals, nurses often cannot utilize their entitled breaks.

A hostile work environment also threatens organizational commitment and turnover of female workers. Incidences of sexual harassment and bullying against nurses, by patients or doctors, are prevalent in hospitals across countries and in Taiwan too (Spector, Zhou, and Che, 2014; Lin and Hsia, 1999). The sex-related practices not only created mental and body stress for nurses but their commitment to the hospitals and the nursing profession. This factor should also be included in analyzing nurses’ loyalty.

## **Theoretical Framework and Hypotheses**

The theoretical framework of the study is shown in Figure 1. Based on literature, we include three dimensions of factors to predict loyalty of nurses. The first dimension is work

structure, including organizational characteristics and the control of work. The size of organizations has significant effects on workers' commitment (Lincoln and Kalleberg, 1990, p. 220-223). Large organizations usually have more formalized personnel policies and work shift arrangements than small ones. The bureaucratic labor control decreases manipulation of authority by first-line supervisors, which helps to increase nurses' identification with the organization. *We hypothesize that nurses in large hospitals will have stronger loyalty than those in small ones.*

— Figure 1 —

Another source of structural influences of organizations contain job fulfillment and job rewards. These concepts include autonomy in the work process, the fairness of work outcomes, and social support as being used in previous works, such as Mueller, De Coster, and Estes (2001). Alienation means the loss of control over work processes, a feeling of powerlessness in the organization and meaningless of one's work, and experiencing low achievement in one's career (Seeman, 1959). The opposite concept is job empowerment. The lack of job fulfillment, including the lack of control in labor process and doing mostly routine works discourage nurses' commitment to hospitals (Tummers and Den Dulk, 2013). Previous studies about Taiwanese nurses showed that having social support from the superiors reduced workers' dissatisfaction with their working conditions and increased commitment to organizations (Chang and Chang, 2007; Wang and Tsai, 2014). *We expect that experiencing job fulfillment, fair rewards, and supportive work environments will increase nurses' loyalty.*

The medical organization is one of the workplaces where existing a clear occupational segregation by gender: most doctors are male and most nurses are female. The segregation also contains hierarchical power relations that doctors are viewed as more professional and valuable than nurses. Even though nursing is also a profession requiring many years of school education and clinical training, care work is seen as identical with the feminine characteristics and nurses are viewed as women first and professional workers second. Unequal power relations between gender and occupations made nurses become the easy targets of nonsexual as well as sexual harassments. Violence and sexual harassment against nurses from male doctors and/or male patients had been prevalent in medical facilities worldwide (Spector et al., 2014). Studies using Taiwanese data also documented the proportions of nurses experiencing sexual harassments or bully from male colleagues, patients and/or their family members, relatives or friends (Lin and Hsia, 1999; Chen, Yang, Chen, and Yang, 2010). Mueller et al. (2001) studied how organizational commitment affected the perception of sexual harassment by medical workers and found a positive relation. However, the relation can be recursive that the perception or experiences of sexual harassment and nonsexual violence also affect the

loyalty of nurses to the workplaces. It is expected that the existence of sexual harassment and bully in the hospitals would negatively affect nurses' loyalty.

For contemporary employees long working hours and overtime demand have been common labor practices as a tradeoff for employment stability and/or stable income. However heavy work load and long hours also become causes of labor disputes in the workplace. Nurses' poor work conditions have triggered constant protests by nurses and labor activists in recent years in Taiwan (*The China Post*, May 13, 2016; *Gettyimages*, May 1, 2013; *Taipei Times*, May 13, 2016). Nurses' unions called for the hospital management to cut work hours, reduce the demand for overtime, and raise their pay, and asked the government to seriously oversee the violations of labor laws by these organizations (Taiwan Nurses Union, May 1, 2015). Nurses' protests signaled the resistance against the management in the hospitals and stressful work conditions are expected to decrease their loyalty to the hospitals.

In addition to physical and mental stress, hard work conditions cause conflicts with the private life, especially for married women or working mothers. As women do most of the household chores and care work regardless of their employment status, a demanding work environment would increase the conflicts of work to the family. Thus work conditions affect the balance between work and family and all these factors would decrease nurses' identification with the hospitals and greater possibility of leaving for other job offers if possible.

As personal characteristics also affect worker's organizational commitment (e.g., Mueller et al., 2001), we also include background factors in the paper. These factors include biographic characteristics such as age, and social-economic status such as marital status, parenthood, education, and income level. Since these factors are mainly used as controlling variables in the analysis, we omit the discussion of hypotheses as to their effects on nurses' loyalty.

## **Data, Methods, and Variables**

The data came from a self-administered questionnaire survey to nurses in three hospitals in Taiwan conducted in 2014. All three hospitals are located in the northern part of Taiwan. Based on their size and location, we refer to them here as Mega (2,100 beds), Metropolitan (Metro) (407 beds), and Regional (376 beds). All nurses in the three hospitals were invited to participate in the survey. The author and her research assistants personally sent out the questionnaires to the participants on site through the help of hospital staff. We went back several times to collect all the returned questionnaires afterwards. The return rate was 94.8% in Mega, 74.4% in Metro, and 94.5% in Regional. Some of the returned questionnaires were

entirely blank or lacked background information of respondents. Several participants marked the same answers for all substantive questions, and in a few cases back-to-back questionnaires had exactly the same answers for all questions including background information. All these questionnaires (48 cases in total for all three hospitals) were treated as invalid and excluded from the analyses. We study female nurses only and the total sample size is 3,719.

The main dependent variable, loyalty, is measured by the following question: *Would you turn down another job that offered quite a bit more pay in order to stay with this hospital?* This variable represents more than the concept of the intention to move, or turnover possibility. The condition is ‘quite a bit more pay’, which shall test the strength of organizational identity against external economic incentives. It is used as one of the multiple measures of organizational commitment in previous literature (Price, 1997, p. 337; Lincoln and Kalleberg, 1990, p. 64-65). The indicators used include: Willing to work harder to help the hospital, have strong loyalty to the hospital, and proud to be working for this organization. However, these indicators are plain, one-direction statement while the indicator used in the paper asked the nurses to weigh between loyalty to the organization and better income in other places, which is probably more reliable in representing nurses’ inclination. The question is measured on a 5-point Likert scale: Strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. It will be used as a continuous variable in the model. This paper explores causal effects of organizational structure and factors related with gender-and-family interests on nurses’ loyalty by using structural equation model.

Following the conceptual framework discussed above, there are four dimensions of independent variables: organizational structure and work environments, job fulfillments and rewards, work conditions, work and family conflicts, and individual background. Organizational structure is measured by the size of hospital, named Mega, Metro, and Regional in subsequent analysis. As to variables measuring hostility of work environments, in the survey the nurses were asked: *Do you know any instances of sexual harassment in language or body against employees at the hospitals that you ever worked for?* The answers include: Yes, not sure, and no. I combine respondents answering “yes” and “not sure” into one group to represent being aware of the sexual harassment in the hospitals. The other question about the work environment is the following: *Have you ever been bullied in language or physically at the hospital?* The answers include: Never, yes but seldom, yes and sometimes, yes and often. It is used as a continuous variable with higher values representing more experiences of being bullied.

Variables measuring job fulfillments and rewards include job fulfilments and distributive justice. There are three questions representing the extent of job fulfillments, including: *Your work allows you to keep learning new things (or skills), you think your work is meaningful,*

and *you can see the outcomes of your work*. The first question is measured on a four-point Likert scale: Strongly agree, agree, disagree, and strongly disagree. The latter two questions are measured on a 5-point Likert scale: Strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. As to the fairness of treatment compared to work efforts being perceived by nurses, the following question is used as the indicator: *In your opinion, would it be fair to say that your income matches your ability and working conditions?* It is measured on a 4-point Likert scale: Very fair, fair, unfair, and very unfair. In the questionnaire the nurses were asked about the relations with their superiors in the work place. It is measured on a 5-point Likert scale: Strongly agree (having good relations), agree, neither agree nor disagree, disagree, and strongly disagree. I also include the measure of job satisfaction in the analysis, to represent an overall evaluations of work conditions and rewards. The original question asked in the survey is the following: *To what extent are you satisfied with your work overall?* The answering items include: Very satisfied (5), satisfied (4), fairly satisfied (3), unsatisfied (2), and very unsatisfied (1).

Variables representing work conditions in the analysis include average weekly regular working hours, job shift (whether having a fixed shift or shift rotations), and frequencies of overtime requirements by the superiors. The last factor is measured by the following question: *How many times were you requested to work overtime or longer hours by superiors or had to do so due to unexpected factors per month?* The response choices include: never, 1 to 2 times, 3 to 4 times, 5 to 6 times, and 7 times or more. This variable is used as a continuous measure in the analysis.

As to the conflicts of work to the family, there are two related questions in the questionnaire: 1) *I have come home from work too tired to do the chores (including taking care families) which need to be done*, and 2) *It has been difficult for me to fulfill my family responsibilities because of the amount of time I spent on my job*. Both are measured on a 4-point Likert scale: Strongly agree, agree, disagree, and strongly disagree. The higher values represent more conflicts between work and family. I also ran a factor analysis and found both loading on one factor.

As for individual socio-demographic factors, we include nurses' age, marital status and parenthood, the highest education achieved, tenure accumulated in the current hospital, and average monthly earnings.

## **Findings**

Figure 2 shows the distributions of loyalty scores among the three hospitals. The overall results show weak loyalty of nurses to the hospitals since the proportions of accepting a

better-paid job offer to leave the current hospitals are higher than those choosing to turn down the alternative. However, there are still differences among hospitals as nurses in the private hospital have even lower loyalty than those in the other two hospitals. Nurses in Metro (the private hospital) had more diverse distribution of their commitment to the hospital. In general nurses in Metro are the least likely to refuse better external offers than those in the other hospitals. More than a half of nurses in Metro would take a better-paid job and leave the hospital. The comparable statistics are 40% in Regional and 41% in Mega. And, about 24% of nurses in Mega indicated that they would stay even if jobs in other places were paid more, while only about 15% of nurses in the private hospital would do so. The proportion of having neutral attitudes is also lower in Metro than in Mega or Regional.

— Figure 2 —

Descriptive statistics of independent variables are listed in Table 1. For each dimension as specified in Figure 1, we provided multiple measures. Average age of studied nurses is 34 and more than a half of them are not married during the survey. There are significant differences in educational background among nurses in the three hospitals. More than 70% of nurses had a university or more advanced degree in Mega, while the comparable figures were less than 30% in the other two smaller hospitals. Nurses in Mega had the longest tenure among the three hospitals, which may be related with the longer history of establishment of Mega.<sup>1</sup> The average tenure of nurses was over 11 years in Mega, which was longer than that in Metro (6.4) or Regional (5.8). Nurses are on average paid better in Mega than in the other two hospitals. About 40% of nurses earned less than \$40,000 (New Taiwan Dollars) per month in Metro and 33% in Regional, while the comparable statistics was only 10% in Mega.

As to variables measuring organizational structure and job fulfillments, close to 30% surveyed nurses knew about sexual harassment incidences in the workplaces. About 37% had been bullied in words or behaviors. Most nurses felt their pay matching with their work effort in Mega (62%), while only 33% of nurses experienced fairness in their pay considering their contributions in Metro. Most respondents claimed to have good relations with the hospital management. The majority nurses are positive about their work, being able to learn new things in the labor process and see outcomes of their efforts, and feeling their work meaningful.

As to work conditions, about three-fourths of nurses had to regularly rotate their work shifts. Nurses all worked more than 40 hours per week, excluding overtime, in the three hospitals. Weekly work hours in Metro (43.9) were on average slightly longer than in Mega

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<sup>1</sup> Mega was established in 1958, Metro in 1996, and Regional in 2002..



(42.9) and in Regional (41.5). However, nurses in Mega were more often to be asked to work overtime by their superiors than those in Metro and in Regional. The majority of nurses felt the conflicts of their hospital work to the family life.

— Table 1 —

The results of using structural equation modelling in analyzing nurses' loyalty are listed in Table 2. The dependent variable — staying with the current hospital despite a better-paid offer outside — is treated as a continuous variable and the higher values mean greater loyalty to the hospitals. When using census data in the analysis, as what we used in the paper, a significance test is not necessary to account for the significance level of parameters, according to some researchers (Cowger, 1984, 1985; Hair, Black, Babin, and Anderson, 2010, p. 193). However, other statisticians still suggest to conduct significance testing nevertheless, as any 'population' is only temporary and the components of the population vary over time (e.g., Rubin, 1985). Since not all nurses participated in the survey, this paper provides the results of the significance test to show the relative importance of independent variables in the model.

— Table 2 —

The fitness measure (RMSEA) is about .054, which represents a good fit of our model (Hair et al., 2010, p. 667). For the results of measure model (listed at the bottom of Table 2), the Cronbach's  $\alpha$  for the two measures of work-to-family conflict is .86. Doing meaningful work and being able to see the outcomes of the work are loaded onto the same factor, and the Cronbach's  $\alpha$  is .80.

In the conceptual framework listed in Figure 1, although loyalty is the main dependent variable in the model, there is a path of showing the influences of work conditions on work and family conflicts. The results for this path are shown in the first column of Table 2. Longer work hours and frequent overtime work decrease nurses' loyalty, while having a fixed work shift has positive effects on loyalty. The results support our hypothesis that hard work conditions create conflicts for female workers as they usually take the dual roles as breadwinners and homemakers.

The results of the complete model were shown in Column 2. Differences of loyalty among the three hospitals which we observed in Figure 2 are still significant after controlling for structural and individual variables. Nurses in Metro are more likely to leave the current workplace to take another better-paid job than those in Mega. Metro, located in the urban area of northern Taiwan, serves patients in the populous city. Being a private hospital, Metro is

likely more profit-oriented and may have higher demand for care work and thus resulting low loyalty from employees.

The hostility in the work environments has negative effects on nurses' loyalty, especially with the experiences of being bullied verbally or physically. In contrast, feeling distributive justice, having good relations with the management, and experiencing job fulfillment and satisfaction have significantly positive effects on loyalty.

The results in column 1 shows the direct effects of long working hours, frequent requests of overtime work and unstable job shifts on increasing work-to-family conflicts for nurses. Column 2 further shows the impacts of work conditions and work-to-family conflicts on loyalty of nurses. As coefficients are smaller in column, the results indicate that part of the effects of work conditions on nurses' commitment happened through the former's impacts on work and family conflicts.

As to individual socio-demographic variables, the loyalty to the hospitals decreased with age. All variables measuring degree of job fulfillments, fairness of rewards, and job satisfaction have significant effects on loyalty. Feeling justice about the reward for their work, having support from the superiors, feeling achievement and empowerment in jobs, and having greater job satisfaction all have positive effects on nurses' loyalty to the hospitals. Among control variables, education and tenure had no significant effects on loyalty.

## **Conclusions**

Most variables specified in the conceptual framework had significant effects on nurses' loyalty as expected. Changes in managerial practices in the hospitals, such as reducing work intensity and overtime demand, providing fixed shifts and job empowerment opportunities shall increase loyalty. Differing from previous studies, this paper includes factors measuring gender- and family-concerns in the model as most of nurses are women and/or working mothers. The authors found that having hostile working environments and conflicts of work to the family have negative effects on nurses' commitment to the hospitals.

It is noticeable that part of work-to-family conflicts partly came from demanding work conditions, which explains the strong protests from nurses against their heavy work load and long work hours. A recent study shows that heavy workloads, low payment, and work-family conflict are the reasons for the increasing shortage in the supply of nurses in Taiwan (Chen, Yu, and Hsiao, 2015). The shortage of nurses has been a concern for many hospitals in Taiwan. Nurses have strong commitment to their work and take pride in working in their present workplace. However, overtime work and underpay decrease their loyalty and make them

willing to take alternative, better-paid job offers. Thus, in addition to empowerment and provision of family- and women- friendly policies, hospitals need to practically reduce work intensity and hours and to increase earnings in return for nurses' efforts.

Forms of resistance by workers against the management include withdrawing from work efforts, playing dumb, increasing absenteeism, and refusal to cooperate (Hodson, 1995). On the more assertive side, they may choose to quit the profession or take offers from other hospitals. In addition to individual resistance and turnover, poor work conditions produce more collective voice against the hospitals, which affects the social image of the hospitals. How to raise nurses' loyalty is a serious issue for the three hospitals that we studied in the paper, especially for Metro.

The results showed differences in organizational commitment between nurses employed by hospitals in the city and rural areas. We would be able to show regional differences if we also surveyed nurses in the southern or eastern part of the island. As the degree of economic and social development varies among geographic regions in Taiwan, nurses' loyalty may also vary between rural and urban areas as well as between the western and the eastern parts of the island. Also because of a limit to the number of questions that could be included in the questionnaire, we were not able to directly ask respondents about their attitudes toward detailed working conditions, such as work hours, labor intensity, work relations, or the necessity of doing overtime. Future studies may improve upon this by focusing on detailed information about nurses' resistance to working conditions.

The study project, questionnaire, and the letter of informed consent were reviewed and approved by the institutional review board of each of the three surveyed hospitals. The nurses fully understood that the participation in the survey was on a voluntary basis, and that they could withdraw from the survey at any time in the process. Anonymity was guaranteed, and no individual information would be revealed to the public. They were aware that only collective results would be presented in publications. None of the coauthors of the paper except the first author ever read the results of each individual questionnaire or had access to questionnaires and data.<sup>2</sup>

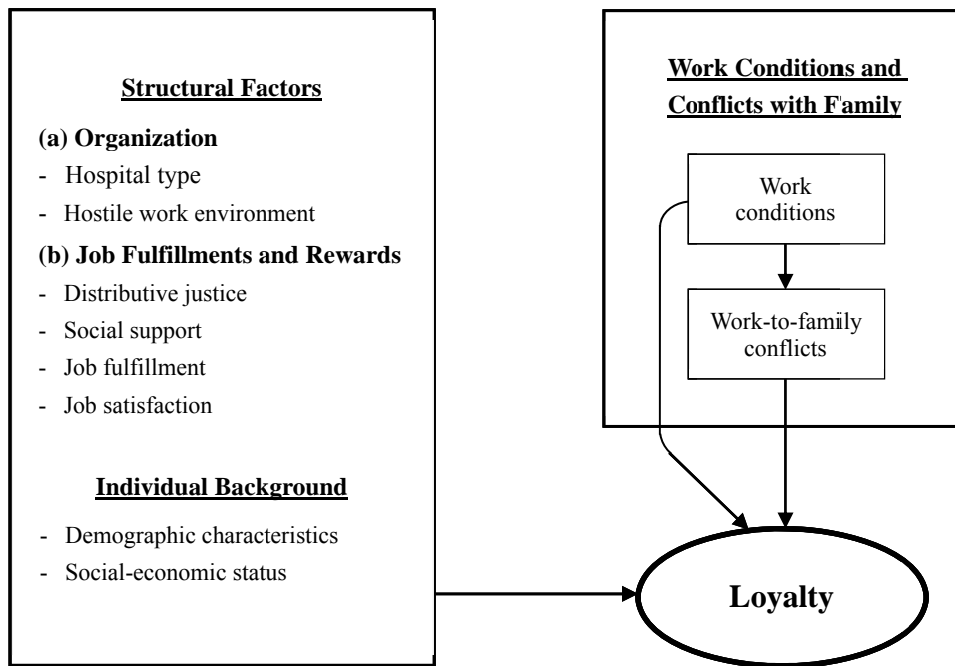
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<sup>2</sup> The authors declare no conflicts of interest. Ethical approval number: VGHIRB 2014-06-001A, TMU-JIRB 201312040, NYMUHIRB 2014A007.

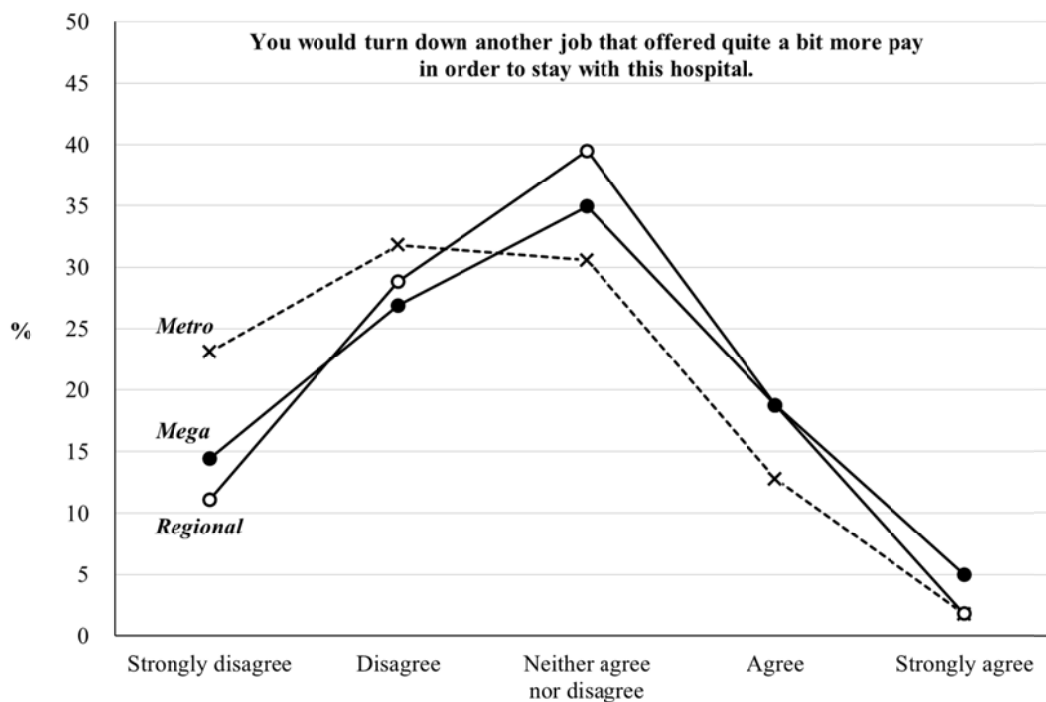
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**Figure 1. Conceptual Framework of Determinants of Nurses' Loyalty**



**Figure 2. Distribution of Nurses' Loyalty Scores among Three Hospitals**

**Table 1. Descriptive Statistics of Variables**

Unite: % (person)

Variables	Total	Mega	Metro	Regional	F-test/ $\chi^2$ -test
<b>Individual Background</b>					
Age					
Mean	34.1	34.9	32.4	31.8	36.9 ***
S.D.	8.8	9.2	8.3	6.3	
Marital status and parenthood					
Never married	(3,666)	(2,610)	(563)	(493)	22.2 ***
Married (or ever married) and having children	57.8	58.1	63.4	49.5	
Married (or ever married) but childless	34.7	34.4	29.3	42.2	
	7.5	7.4	7.3	8.3	
Education					
Senior high level or lower	(3,698)	(2,636)	(565)	(497)	617.8 ***
Vocational college	20.7	13.1	42.1	37.2	
University	20.5	15.8	29.0	36.0	
Graduate school	51.3	62.2	23.5	24.9	
	7.5	9.0	5.3	1.8	
Tenure (years)					
Mean	9.9	11.4	6.4	5.8	156.2 ***
S.D.	8.4	9.0	5.6	4.5	
Earnings (per month; TWD)					
39,999 or less	(3,669)	(2,615)	(562)	(492)	855.6 ***
40,000 to 49,999	17.3	9.6	40.2	32.5	
50,000 to 59,999	25.4	19.0	37.0	46.3	
60,000 to 69,999	23.6	26.7	14.9	16.7	
70,000 or more	18.2	23.7	5.5	3.3	
	15.5	21.0	2.3	1.2	
<b>Structural Factors: Organization, and Job Fulfillments and Rewards</b>					
Hospital type					
Mega	(3,719)	-	-	-	
Metro	71.4	-	-	-	
Regional	15.2	-	-	-	
	13.4	-	-	-	
Aware sexual harassment at work					
No	(3,669)	(2,610)	(561)	(498)	8.4
Not sure	70.7	70.2	69.9	74.5	
Yes	13.0	12.8	15.5	11.0	
	16.3	17.0	14.6	14.5	
Experience language or physical bullies at work					
Never	(3,479)	(2,454)	(553)	(472)	8.6
Seldom	29.1	28.0	30.9	32.4	
Sometimes	33.3	34.3	31.1	31.1	
Often	29.1	29.6	27.8	27.8	
	8.5	8.1	10.1	8.7	
Match between effort and pay					
Very fair	(3,689)	(2,631)	(563)	(495)	203.5 ***
Fair	1.5	1.9	.5	.6	
Unfair	54.0	59.6	32.1	48.9	
Very unfair	37.5	33.0	51.5	45.7	
	7.0	5.5	15.8	4.8	
Good relationships with administration					
Strongly agree	(3,712)	(2,651)	(565)	(496)	22.1 **
Agree	8.9	9.7	8.5	5.6	
Neither agree nor disagree	53.2	51.7	55.4	59.1	
Disagree	29.8	30.1	29.4	28.8	
Strongly disagree	6.2	6.9	4.6	4.2	
	1.8	1.6	2.1	2.2	
Learn new things					
Strongly agree	(3,695)	(2,639)	(562)	(494)	77.7 ***
Agree	22.3	25.4	14.1	15.6	
Disagree	67.8	66.2	69.4	74.5	
Strongly disagree	9.2	7.9	14.9	9.7	
	.6	.5	1.6	.2	

Table 1. (continued)

Unite: % (person)

Variables	Total	Mega	Metro	Regional	F-test/ $\chi^2$ -test
Work meaningful	(3,696)	(2,634)	(565)	(497)	51.4 ***
Strongly agree	20.9	23.5	15.9	12.5	
Agree	63.1	61.8	64.2	68.6	
Neither agree nor disagree	13.5	12.3	16.5	16.9	
Disagree	2.0	1.9	2.5	2.0	
Strongly disagree	.5	.6	.9	.0	
See work outcomes	(3,697)	(2,634)	(566)	(497)	42.5 ***
Strongly agree	11.4	12.8	9.9	6.0	
Agree	60.3	60.4	56.4	64.2	
Neither agree nor disagree	23.4	21.9	26.9	27.4	
Disagree	4.0	4.0	5.3	2.4	
Strongly disagree	.9	.9	1.6	.0	
Job satisfaction	(3,692)	(2,634)	(564)	(494)	66.6 ***
Very unsatisfied	2.8	2.3	5.5	2.0	
Unsatisfied	17.8	16.7	23.8	16.6	
Fairly satisfied	53.1	52.4	54.6	54.7	
Satisfied	24.3	26.2	13.8	25.9	
Vary satisfied	2.1	2.3	2.3	.8	
<b>Work Conditions and Conflicts with Family</b>					
Work hours					
Mean	42.9	42.9	43.9	41.5	13.6 ***
S.D.	7.3	7.4	8.3	5.4	
Job shift	(3,688)	(2,631)	(564)	(493)	2.9
Fixed work schedule	25.8	25.0	27.5	28.0	
Others	74.2	75.0	72.5	72.0	
Involuntary overtime (per month)	(3,618)	(2,584)	(547)	(487)	136.2 ***
Never	12.1	10.8	14.1	16.4	
1 to 2 times	22.3	19.1	25.0	36.1	
3 to 4 times	17.1	17.1	17.0	17.2	
5 to 6 times	10.2	9.8	13.3	8.8	
7 times or more	38.3	43.2	30.5	21.4	
Too tired to do housework	(3,702)	(2,643)	(563)	(496)	45.2 ***
Strongly agree	31.3	33.9	25.2	24.2	
Agree	51.1	50.6	53.3	51.6	
Disagree	16.7	14.7	20.4	23.0	
Strongly disagree	.9	.8	1.1	1.2	
No time for family	(3,701)	(2,642)	(563)	(496)	21.2 **
Strongly agree	26.2	28.0	22.0	21.4	
Agree	50.2	49.4	54.5	49.8	
Disagree	22.3	21.3	22.4	27.2	
Strongly disagree	1.2	1.2	1.1	1.6	

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



**Table 2. Results of Structural Equation Modeling of Nurses' Loyalty**

You would turn down another job that offered quite a bit more pay in order to stay with this hospital. (Strongly disagree=1, ~ strongly agree=5)

Variables	Coefficients (S.E.)	
	Work Conditions on WFC	Structural Model: Loyalty
<b>Structural Factors: Organization, and Job Fulfillments and Rewards</b>		
Hospital type (Mega=0)		
Metro		-.17 (.05)**
Regional		.04 (.06)
Aware sexual harassment at work		-.07 (.04)
Experience language or physical bullies at work		-.05 (.02)*
Match between effort and pay		.19 (.03)***
Good relationships with administration		.22 (.02)***
Learn new things		.12 (.03)***
Job fulfillment		.12 (.04)**
Job satisfaction		.24 (.03)***
<b>Work Conditions and Conflicts with Family</b>		
<b>Work Conditions:</b>		
Work hours	.01 (.2e-2)***	-.2e-2 (.2e-2)
Fixed work schedule	-.15 (.03)***	.10 (.04)*
Involuntary overtime	.10 (.01)***	-.03 (.01)*
<b>Work and Family Conflicts (WFC):</b>		
Work-to-family conflicts		-.14 (.03)***
<b>Individual Background</b>		
Age		-.04 (.02)**
Square of age (divided by 100)		.08 (.02)***
Marital status and parenthood (Never married=0)		
Married (or ever married) and having children		-.08 (.04)
Married (or ever married) but childless		-.08 (.06)
Education (Graduate school=0)		
Senior high level or lower		-.05 (.08)
Vocational college		-.06 (.07)
University		-.08 (.07)
Tenure		.3e-2 (.5e-2)
Earnings		-.01 (.01)
Constant term		1.19 (.36)**
<b>Measurement Models</b>		
(C) WFC → Too tired to do housework	1.00 ( -- )***	
(D) WFC → No time for family	1.08 (.05)***	
(E) JF → Work meaningful	1.00 ( -- )***	
(F) JF → See work outcomes	1.23 (.05)***	
Sample size		2,996
R <sup>2</sup> (%) of overall analysis		86.63
Log likelihood		-95,352.46

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .