

Stress of Conscience and Job Satisfaction Among Registered Nurses Working in China's Hospital

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Abstract: Recently, a novel concept of “stress of conscience” has been proposed due to the troubled conscience as a source of stress in health care work. However, little attention has been paid to stress of conscience among nurses in China. The aim of this project was to examine the degree of stress of conscience and investigate the relationships between sociomo-demographic variables, stress of conscience, and job satisfaction among Chinese registered nurses working in a hospital setting. A descriptive-correlational, cross-sectional research design was used. Registered nurses (n = 220) were recruited by online in four public hospitals from November 2017 and January 2018. Data were collected using a Chinese version of the Stress of Conscience (SCQ) and Minnesota Satisfaction Questionnaire (MSQ). The result indicated that the level of stress of conscience was 38.11 ± 30.91 . There were significant differences between the two groups in terms of department, marital status, employment status and job satisfaction. Stress of conscience was positively and statistically significantly correlated with job satisfaction ($P < 0.01$). Professional title, employment status and stress of conscience were significant predictors of job satisfaction. These findings have important implications for administrators taking innovative and adaptable managerial interventions for clinical nurses to improve the quality of care.

Keywords: Stress, Conscience, Nurse

1. Introduction

Nurses in all countries are at high risk for low job satisfaction, and intention to leave [1]. Findings revealed that job stress is one of the most important health risks for employees in the workplace, and job satisfaction is considered to be a key factor in providing high quality services and outstanding performance in hospitals [2]. In China, studies reported that clinical nurses were under great pressure. With the rapidly growing economy and the changing medical environment, job stress level among nurses working in China became higher than before [3]. As a nurse, especially for those working in the clinical environment, they consistently have believed the current work environment with highly stressful and professionally unfulfilled. Finally, these changes resulted in a series of negative impacts of heavy workload, low job satisfaction, and high turnover rate [4].

In recent years, a large number of research studies have referred to another concept that is closely linked with stress and strain - the newly developed concept of “stress of conscience” which refers to stress that is caused by a troubled conscience and is related to when nurses do not act in accordance with their own conscience [5]. Research has suggested that healthcare employees seem to experience stress of conscience in their everyday practice, and it was associated with burnout [6], job satisfaction, job strain [7], psychosocial work environment, ward atmosphere, and individual factors such as perceived stress, moral burden [8] etc. However, most of these studies were conducted in western culture countries (mainly in Sweden), and we know little about stress of conscience among nurses in China. The only piece of study conducted in China that focus on factors related to stress of conscience among emergency medical technicians in China, which investigated one hundred and seventy-five doctors and

nurses from emergency departments, and found that the participants' stress of conscience was highly associated with colleagues' stress of conscience; and both responsibility and a logical orientation were negatively associated with stress of conscience [9]. Indeed, conscience (Liang' Xian) is a common parlance in the Chinese culture. Sayings such like 'you should act according to your conscience' are familiar to every Chinese. It was reported that most medical technicians at least sometimes experienced a troubled conscience after dealing with ethical dilemmas [9].

Thus, the specific aim of this study was to investigate the relationship between some socio-demographic variables, stress of conscience and job satisfaction among registered nurses in a hospital setting in China. This study will have important implicating for Chinese health administrators, educators, and government officials to provide an effective work environment for clinical nurses.

2. Literature Review

Conceptually, work stress includes stress experienced in the work environment related to patient care, job demands, staff issues, lack of support and overload.

In recent years, new healthcare technologies, budget cuts and changing health care environments continue to increase personal and work stress among nurses [10]. In the literature, studies have mostly focused on the effects of work stress in the nursing environment, and show that work stress contributes to higher burnout levels among nurses and is associated with lower job satisfaction [11, 12].

The term Stress of Conscience denotes a type of stress that is generated by a troubled conscience, caused by institutional obstacles as well as self-selected actions or neglect, which are important aspects of ethical decision making [8]. Studies have found that insufficient time for the care, not being able to live up to others' expectations and moral sensitivity, deficient social support from superiors, low levels of resilience and demographic variables such as working in internal medicine wards were factors associated with Stress of Conscience, leading to decreased job satisfaction, and emotional exhaustion among healthcare personnel [13, 14]. Lately, healthcare institutions in China have been changing constantly in order to improve the efficiency of the system. Health administration institutions have published many regulations and have launched many movements to ensure quality control. Under the circumstances, nurses might encounter ethical dilemmas such as incompatible work demands, completing necessary patient tasks and ensuring quality care delivery, conflicting views on optimal treatments and nursing, financial constraints on treatment choice and having too many patients but not enough time [15]. As an example, a stress of conscience might occur when a nurse believes an organizational constraint prevents the ability to provide good patient care. The constraint causes a conflict of conscience within the nurse due to a perceived compromise in the nurse's values and integrity by not meeting the patient's needs. This results in a stress of conscience, that is, inability to follow

what's referred to as an inner voice [5].

Job satisfaction, defined as the degree to which an employee enjoys his/her job, is important because it has a strong inverse relationship with the employee's turnover intention - that is, the higher the level of job satisfaction, the more likely an employee is to remain on the job [16]. Studies investigating job satisfaction have found dissatisfaction among nurses is a major factor contributing to the nursing shortage [17], job satisfaction linked to the quality of nursing care to patients [18] and workforce participation and retention [19]. Job satisfaction is considered to be a crucial individual outcome which drives performance. In the Health Care sector, which is characterized by high levels of emotional labor, nurses' job satisfaction becomes even more vital, particularly because the quality of the services offered cannot be easily standardized and their outcomes are directly affected by first-line nursing staff [10].

In addition, a number of studies have identified that relationships exist between some socio-demographic variables such as age, gender, years of experience, years in current job, specialty area, marital status, education qualifications, geographic location and job satisfaction [20]. For example, Zangaro & Soeken, (2007) found nurses working in specialty areas tended to have clearer role expectations and sought "more challenging jobs", and thus higher job satisfaction [21]. Studies have also revealed that relationships exist between socio-demographic variables (educational levels, years of experience regional differences, and so on) and job satisfaction in Chinese registered nurses [9].

In light of reviewed above, this empirical study aspires to shed light into the relationship among socio-demographic variables, stress of conscience, and job satisfaction of Chinese registered nurses in a hospital setting.

3. Subjects and Methods

3.1. Research Question

What is the level of stress of conscience experienced by Chinese registered nurses?

What are the relationships between socio-demographic variables, stress of conscience, and job satisfaction as perceived by Chinese registered nurses who work in a hospital setting?

3.2. Research Design

A descriptive correlation, cross-sectional research design was used in the current study.

3.3. Research Setting

The study was conducted by online survey in four public hospitals in China.

3.4. Study Sample

Registered nurses (n = 220) were recruited by online survey in four public hospitals in China (between November 2017

and January 2018). Nursing directors of these hospitals were informed about the study and agree to participate. A link to the online questionnaire was distributed by the clinical nurse We Chat group. We explain the procedure of the study and the voluntary principle. Informed consent was obtained from all participants. All nurses were recruited if they met the following inclusion criteria: working more than six months. The exclusion criteria were enrolled nurses, but not registered nurses. The sample was recruited using a convenience sampling method.

3.5. Ethical Considerations and Data Collection

Ethical approval was acquired from the Research Ethics Committee of Wuhan University (No. 2017jk010 date 9th October, 2017). All participants received electronic information about the study. The Chair of each nursing organization indicated that participation or non-participation in the research would not affect their interests. The researchers explained the purpose, method, and process of the study to participants, and clearly stated that they had the right to withdraw at any time. Submission of the questionnaire means participant consent to join the study. The completed questionnaires were kept secret with no identifying marks and used only by the researcher.

3.6. Instruments

This study used a structured questionnaire that was composed of the following three sections: demographic data, Stress of Conscience Questionnaire (SCQ) and Minnesota Satisfaction Questionnaire (MSQ).

The demographic characteristics of the participants obtained age, gender, marital status, years of experience in nursing, technical title, monthly income, employment status.

Job satisfaction was measured using a shorter Chinese version of the Minnesota Satisfaction Questionnaire (MSQ) which was developed in 1967 [22]. It is composed of a total of 20-item short form with each item on a 5-PointLikert-type scale with responses ranging from 1 (very dissatisfied) to 5 (very satisfied). It included three dimensions: intrinsic satisfaction, extrinsic satisfaction, and general satisfaction. Intrinsic job satisfaction includes 12 items which concerned business degree, social status, achievement and so on. Six items belonged to the extrinsic satisfaction that referred to supportive supervisor, decision making, payment and so forth. Higher scores reflect a higher level of job satisfaction. Adding the score of all 20 items gives a total score of job satisfaction, which ranges from 20 to 100. A score of 60, which is at the middle point, indicated a neutral score. A validation of the Chinese version of Minnesota Satisfaction of questionnaire (short form) was performed by Shang Guan and co-workers' study [23]. The Cronbach's alpha coefficients for the overall job satisfaction, intrinsic job satisfaction and extrinsic job satisfaction subscales were 0.929, 0.863 and 0.882, respectively. The result indicated that the questionnaire has high overall internal consistency and validity. Minnesota

Satisfaction Questionnaire had widely used in the Chinese medical staff [24] and other country [25] because of good psychometric.

The Stress of Conscience Questionnaire (SCQ), developed by Glasberg and colleagues [5], aimed to measure the degree of stress of conscience. The questionnaire consists of nine items, each of which was divided into two parts A and B. In part A, the nurses were asked how often a stressful situation was perceived to occur in the workplace, using a six-point scale ranging from Never (0) to every day (5). In part B, the extent to which it caused a troubled conscience rated on a six-point scale ranging from "No, not at all" (0) to "Yes, it gives me a very troubled conscience" (5). A question is multiplied by the B question for an item. Scores could be calculated for the total scale by summing the index score for each item. The total score of SCQ ranged from 0 to 225. For example, when question A or question B equaled 0. The total score was 0. The SCQ comprised two dimensions: "internal demands (desires, inclinations)" including five items and "external demands and restrictions (society's or the profession's values)" also including five items. Item 1 was not only contained in internal demands but also in external demands. Higher scores indicated a high amount of stress of conscience. The previous study reported an alpha coefficient of 0.83 for the nine-item total [5]. The Cronbach's alpha coefficients for the two dimensions were 0.74 and 0.78 [13, 26]. This study adopted the Chinese version of the SCQ. It was translated and modified according to the Chinese context. The Chinese version was tested the reliability and validity by [27]. The Cronbach's alpha coefficient of for the total scale, internal demand, external demand and restrict subscales were estimated at 0.828, 0.722 and 0.773, respectively.

4. Statistical Analysis

The data was analyzed by SPSS version 21.0. Quantitative data were described by mean (X) and standard deviation (SD). It was analyzed by t-test. To verify the association between nurses' stress of conscience and job satisfaction and influencing the factor of the job satisfaction, we used Pearson's correlation and hierarchical stepwise multiple regression. The statistical-significance level was set as $P < 0.05$ for all statistical tests. Taking the median score of SCQ ($M = 32$) as the cut-off point: $SCQ > 32$ is regarded as a high score group, and $SCQ \leq 32$ is regarded as a low score group.

5. Result

5.1. Demographic Characteristics of the Study Sample

A total of 220 care-providers were recruited in the study. A majority of the participants were female (88.2%). Most of the nurses were single (54.1%). In China, Nurse has a standardized professional title system, including: Nurse who

has worked one year or just graduated, Senior Nurse who has worked for three to five years, Nurse In Charge who has worked for more than ten years, Associate Chief Nurse who has worked for ten to fifteen years. The sample was made of mostly Senior Nurse (50.9%). The participants in this sample have worked less than five years (60%). The participants were approximately evenly divided into formal employed nurse and contract-employed nurses [28]. In China, formal and contract nurse position was inequality in many aspects such as money and benefit they earned, job promotion and receiving pay for public holidays and so on [29]. The largest single portion of respondents in this sample was reported from medical departments (46.82%). Of note, 70% of nurses earned more than 3000RMB. a month and only 3% had less than 2000

RMB. a month.

5.2. The Effect of Stress of Conscience on Personal Characteristics and Stisfaction

Chi-squared Test or T-test was conducted to analyze personal characteristics and dimensions of job satisfaction between the two groups and the results are given in Table 1. There are significant differences between the two groups in terms of department, marital status, and employment status ($P < 0.05$). Compared with the low score group, internal satisfaction ($t = 3.95$, $P = 0.00$), external satisfaction ($t = 5.02$, $P = 0.00$) and general satisfaction ($t = 4.82$, $P = 0.00$) was lower in the high score group. The difference was statistically significant.

Table 1. The effect of stress of conscience on personal characteristics and nurses' job satisfaction

Demographic variables	High group (N = 109)	Low group (N = 111)	t/χ^2	P
Gender (male/female)	9/100	17/94	2.62 ^b	0.11
Marital status (married/others)	56/53	36/64	5.00 ^b	0.03
Department			41.43 ^b	0.00
medical (n = 103)	45	58		
surgical (n = 62)	34	28		
obstetrics-gynecology (n = 6)	5	1		
pediatric (n = 8)	6	2		
acute critical (n = 41)	19	22		
Work experience			1.25 ^b	0.74
1-5 year (n = 132)	64	68		
6-10 year (n = 58)	31	27		
11-15 year (n = 19)	10	9		
More than 15 year (n = 11)	4	7		
Professional title			3.47 ^b	0.33
nurse (n = 74)	35	39		
senior nurse (n = 112)	56	56		
nurse in charge (n = 32)	18	14		
associate professor nurse or above (n = 2)	1	2		
Monthly income (RMB)			1.67 ^b	0.8
less than2000 (n = 7)	4	3		
2000-2999 (n = 26)	13	13		
3000-3999 (n = 32)	14	18		
4000-4999 (n = 44)	25	19		
More than 5000 (n = 111)	53	58		
Employment status			4.13 ^b	0.04
formal (n = 104)	44	60		
contract (n = 116)	65	51		
Internal satisfaction	41.73±6.15	45.05±6.19	4.05 ^a	0.00
External satisfaction	18.17±4.26	21.16±5.58	4.62 ^a	0.00
General satisfaction	66.38±10.78	73.58±11.38	4.66 ^a	0.00

Note: a = t, b = χ^2 .

5.3. The Stress Scores of the Items

The calculated index value for each item of the SCQ was shown in Table 2. The overall mean stress of conscience scores was 38.11±30.91. The highest mean of the index scores was calculated for the item 'Is your work in health care ever so demanding that you don't have the energy to devote yourself to your family as you would like?' (SCQ7) followed by 'How often do you lack the time to provide the care the patient needs?' (SCQ1). The following items are presented in

descending order of the mean scores: 'Do you ever have to deal with incompatible demands in your work?' (SCQ3) and 'Do you ever feel that you cannot live up to others' expectations of your work?' (SCQ8). The items 'Is your private life ever so demanding that you don't have the energy to devote yourself to your work as you would like?' (SCQ6) had the lowest calculated SCQ index score. Also 'Do you ever see patients being insulted and/or injured?' (SCQ 4) had low calculated SCQ index scores.

Table 2. Descriptive statistics, the mean (M), standard deviation (SD) of part A, part B and total score for Stress of conscience (n = 220).

Stress of Conscience	A-part	B-part	Total*
Item	M (SD)	M (SD)	M (SD)
1. How often do you lack the time to provide the care the patient needs?	2.30 (1.73)	2.65 (1.57)	7.10 (6.67)
2. Are you ever forced to provide care that feels wrong?	0.97 (1.33)	2.19 (1.89)	2.91 (4.81)
3. Do you ever have to deal with incompatible demands in your work?	2.18 (1.59)	2.36 (1.61)	5.91 (6.12)
4. Do you ever see patients being insulted and/or injured?	0.80 (1.01)	2.38 (1.96)	2.50 (3.76)
5. Do you ever find yourself avoiding patients or family members who need help or support?	0.92 (1.15)	2.17 (1.79)	2.52 (3.61)
6. Is your private life ever so demanding that you don't have the energy to devote yourself to your work as you would like?	0.72 (1.42)	1.76 (1.78)	1.89 (3.42)
7. Is your work in health care ever so demanding that you don't have the energy to devote yourself to your family as you would like?	2.06 (1.71)	2.72 (1.84)	7.35 (7.67)
8. Do you ever feel that you cannot live up to others' expectations of your work?	1.71 (1.36)	2.44 (1.68)	5.24 (6.02)
9. Do you ever lower your aspirations to provide good care?	1.05 (1.21)	2.11 (1.74)	2.72 (3.70)
Total score	12.76 (8.15)	20.77 (12.57)	45.22 (36.29)

Note: * = A-part x B-part.

5.4. Relationship Between Stress of Conscience and Job of Satisfaction

Table 3 shows that stress of conscience of Chinese nurses is significantly and negatively related to job satisfaction ($P < 0.01$). Pearson's correlations ranged from 0.274 to 0.954. Internal demand was negatively and significantly correlated with internal job satisfaction ($r = -0.316$, $p < 0.01$), external

satisfaction ($r = -0.332$, $p < 0.01$), and general satisfaction ($r = -0.342$, $p < 0.01$). When the correlation between external demand and job satisfaction was examined, it could be found that there were comparatively higher correlation coefficients between external demand and external satisfaction ($r = -0.315$) and general satisfaction ($r = -0.312$) than internal satisfaction ($r = -0.274$).

Table 3. Correlations between stress of conscience and job satisfaction in participants (N = 220).

Dimension	Item		1	2	3	4	5
	Mean	SD					
Internal demand	17.75	15.95	1				
External demand and restriction	27.47	22.47	0.778**	1			
Stress of conscience	45.22	36.29	0.921**	0.961**	1		
Internal job satisfaction	43.38	6.34	-0.316**	-0.274**	-0.329**	1	
External job satisfaction	19.67	4.66	-0.332**	-0.315**	-0.341**	0.783**	1
General job satisfaction	70	11.64	-0.342**	-0.312**	-0.344**	0.954**	0.924**

Note: ** $P < 0.01$.

5.5. Predictors of Job Satisfaction

The results of the multiple linear regression were significant, $F(3, 260) = 13.34$, $p < 0.001$, $\Delta R^2 = .145$, initially suggesting that professional title, employment status and stress of conscience significantly predicted job satisfaction. The result suggested that approximately 11.4% of the variance in job satisfaction could be explained by stress of conscience. The significant predictor variables were further examined. Table 4 presents the results of the multiple linear regressions.

Table 4. Stepwise multiple regression analysis of job satisfaction according to MSQ scores.

Source	B	SE	t	P-value
Professional title	-2.63	1.06	-2.49	0.01
Employment status	-3.00	1.48	-2.03	0.04
Stress of conscience	-0.12	0.02	-5.18	0.00

6. Discussion

The current study revealed that there were statistical differences between the two groups in the demographic variables, including employment status, marital status and departments. The results of Chi-square analysis found

department was significantly related to stress of conscience in this study. This finding was in the same line with the study made by Glasberg and colleague [13]. They found that the care provider working in internal medicine had statistically significantly higher mean scores in SCQ factor 'internal demands' than others. The reason might be that these wards had patients with complex diagnoses, of which were most of elderly patients with various and chronic diseases that needed to stay in hospital for a long time.

Furthermore, married nurses were significantly more likely to experience stress conscience. This result was consistent with Cheng, Wang, Fang, and Li (2013), they found that work related stress among married nurse significantly was higher than unmarried nurse in China hospital [30]. The opinion that marital status was an important predictor of job stress [31]. The result is also supported in the previous study [9], which also have found childless married individuals experienced a significantly higher level of stress of conscience than married individuals with children. There might be explanations for this phenomenon. As the role changes, many aspects in life may change, including time allocation between work and family, thoughts about conscience and resilience, all of which are related to stress of conscience. Therefore, a nurse whether

married or had a child will experience varying degrees stress of conscience.

The present finding indicated that employment status significantly differed between two groups. It was explained that cultural differences between Western and Chinese might influence the level of stress of conscience. In Chinese hospital, the staff was employed as formal nurse or contract nurse. Compared with formal nurse, a contract nurse got less social support [28]. Therefore, contract nurse was more likely to experience the stress of conscience.

The current study revealed that the items 'Is your work in health care ever so demanding that you don't have the energy to devote yourself to your family as you would like?' (item7) had the highest calculated SCQ index scores. This result is inconsistent with previous studies. They indicated that 'How often do you lack the time to provide the care the patient needs?' (item1) had the highest score [5, 15]. This is explored by the follow. Previous findings suggested that family-work conflict leading to role ambiguity seems to be critical factor in creating job stress as well as stress of conscience. In the Chinese culture, people generally paid more attention to family life leading to increase the contradictory demand. So it was not surprising that in this study, the registered nurses experienced a higher level of stress of conscience when working so demanding that it influences family life.

Overall, the result indicated that the Chinese nurses experienced a lower level of stress of conscience than Swedish nurse, Finnish nurse and American nurse. This can be explained in a few ways. First, the influence of culture in the idea of conscience and dealing with a troubled conscience was considered [32]. For example, in the Chinese culture, most people were reluctant to talk about the troubled conscience. They considered having a troubled conscience to be very negative. Having a troubled conscience means being a bad person. Hence, people rarely talked about and described own conscience, especially in healthcare professionals, where a higher morality was needed. Second, the external factors including the feature of healthcare system, the shortage of nurse, the burden of caring for older people were key points to decide the level of stress of conscience. For instance, caring for older persons in Finland has been shown to be more burdensome than in the other Nordic countries, it found out stress of conscience was higher in the Finnish staff than Swedish [15].

Stress of conscience played an important role in job satisfaction. Our result indicated that stress of conscience was inversely associated with job satisfaction. This finding was also in agreement with previous studies [2, 33], job stress related to conflict and heavy work was demonstrated significantly and negatively associated with all job satisfaction dimensions. As stress increased, job satisfaction decreased [1]. Additionally, Wallin (2013) point that job satisfaction was determined by the individuals' values and dissatisfaction occurs when those values were violated [34]. However, personal values were violated, troubled conscience also generated [5]. So it is not so surprising that the stress of

conscience (stress related to troubled conscience) was correlated with job satisfaction.

The current study emphasized the impact of the stress of conscience on the job satisfaction. Among all the study's variables, the stress of conscience was found to be the best negative predictor of job satisfaction in the registered nurses. Other contributors were professional title, employment status. Consistent with the other studies, a study conducted among nursing staff in the Pomeranian Province (Poland) and the Vilnius Region (Lithuania) found that the greater stress were significantly associated with lower the job satisfaction [35]. Flanagan and Flanagan (2002) pointed out that the nurse stress index score was much more important in explaining job satisfaction than correctional nursing experience, age, shift work, gender [33]. As perceived stress increased, reported job satisfaction declined. However, the regression model explained only 14.5% of the variance. Therefore, there might be other variables, such as burnout or strain, which have not been considered sufficiently in this study. Hardly have any researches investigated the consequences of going against one's conscience among nurses in China. Finally, more future studies would be further to explore how individual and environmental factors caused stress of conscience and how to deal with the consequences of stress of conscience in China.

7. Limitations

There are three limitations to this study. First, the sample was only a small group of nurses in three Chinese cities and a non-random sample was performed, which might not represent the whole Chinese nurses. Therefore, the results should not be generalized beyond the study sample. Second, the instruments used in the study were translated by researchers. Even though the instruments were adapted and had good reliability for this study, someone still wonders whether the measurements were suitable for Chinese participants. Finally, the variable used in the study is relatively single, only stress of conscience. However, it is also possible that a reciprocal relationship between job satisfaction and other variables.

8. Conclusions

In our research, it suggests that nurses in Chinese hospitals perceived moderate levels of stress of conscience. Significant negative correlations were found between stress of conscience and job satisfaction. The level of job satisfaction had clearly influenced on improving the health outcome of the patient. The results may provide evidence based policies aiming at creating a better work environment and increasing support of nurse staff from senior managers to reduce stress of conscience. Thus, it is very important to study the reaction of nurses in moral situations, not only to help them provide better care to their patients, but also to increase the nurses' ability to deal with such situations.

Areas for Future Research

Future research is needed to assess the relationships between stress of conscience on a larger scale that will include a multi-center sample and conducted a random sampling in China. In addition, future studies should improve the assessment instrument of stress of conscience to more suitable for Chinese participant, so that the influence of cultural differences will be adequately made minimized. The objective measure will try to use. Finally, in the future, researchers can be considered to use the qualitative research and mixed research.

Declaration of Interest

All the authors do not have any possible conflicts of interest.

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