



Research Article

A Web-based Survey of Marital Quality and Job Satisfaction among Chinese Nurses

Yan-Qiong Ouyang,¹ Wen-Bin Zhou,^{2,*} Zhen-Fang Xiong,³ Rong Wang,⁴ Sharon R. Redding¹¹ School of Health Sciences, Wuhan University, Wuhan, China² Department of Psychology, Hubei Provincial Corps Hospital, Chinese People Armed Police Forces, Wuhan, China³ School of Nursing, Hubei University of Traditional Chinese Medicine, Wuhan, China⁴ Renmin Hospital, Wuhan University, Wuhan, China

ARTICLE INFO

Article history:

Received 18 May 2018

Received in revised form

5 June 2019

Accepted 3 July 2019

Keywords:

China

job satisfaction

marital status

nurses

work-life balance

ABSTRACT

Purpose: This study aimed to use a web-based survey to investigate the correlation between job satisfaction and marital quality and to identify the association of demographics with job satisfaction and marital quality.

Methods: Married nurses (N = 2,296) completed the questionnaires. Correlations and linear regression analyses were carried out.

Results: Both marital quality and job satisfaction were relatively low. Additionally, marital quality was positively correlated with job satisfaction. Age, marital status (in years) and average daily hours spent with spouse had positive impact on job satisfaction. Multiple linear regression analyses showed that age, monthly income, average daily hours spent with spouse and marital quality were positively associated with job satisfaction.

Conclusion: Because of the shifts nurses working, there is little time for nurses to spend with their spouses and family. It is recommended that hospital leaders could provide more flexibility with nurses' shift choices so nurses can arrange their work-life balance better. Other considerations like reducing workload and reducing working hours should be promoted as options. Nurse managers could offer counseling services including strategies to cope with the balance between work and life. This effort could improve job satisfaction and reduce the rate of turnover of nurses.

© 2019 Korean Society of Nursing Science, Published by Elsevier Korea LLC. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Introduction

Current nursing shortages and high turnover rates of nurses are of major concern in many countries because of their negative impact on the efficiency and effectiveness of health-care systems [1–4] and patient outcomes. Feelings of job dissatisfaction and job stress are problems shared by nurses, and job dissatisfaction is a major cause of nurses' turnover [5–7]. Nurses' intent to leave is also a serious issue in China [8]. A few studies have examined the

relationship between marital status and job satisfaction and reported that unmarried nurses showed trends of more dissatisfaction with job than married nurses and that marriage was significantly and positively correlated with job satisfaction [9]. These studies highlighted the importance of understanding the impact of marriage on nurses' job satisfaction, but to date, no studies have explored the impact of marital quality on the job satisfaction of married nurses.

Marital quality is often used in reference to marital adjustment as well as happiness and satisfaction. Marital satisfaction has been previously associated with job satisfaction [10,11]. The only study to date exploring the relationship between marital and job satisfaction among physicians showed that there was no significant relationship between marital satisfaction and job satisfaction [9]. Woman nurses are the mainstream of professional nursing worldwide. Marriage and career are equally important aspects of a woman's life [12]. Previous studies have also revealed a negative

Yan-Qiong Ouyang: <https://orcid.org/0000-0002-5302-5944>; Wen-Bin Zhou: <https://orcid.org/0000-0002-5679-9486>; Zhen-Fang Xiong: <https://orcid.org/0000-0002-9036-7767>; Rong Wang: <https://orcid.org/0000-0001-8350-1086>; Sharon R. Redding: <https://orcid.org/0000-0002-3430-4243>

* Correspondence to: Wen-Bin Zhou, Department of Psychology, Hubei Provincial Corps Hospital, Chinese People Armed Police Forces, Wuhan, 430061, China.

E-mail address: doctor-zhouwenbin@163.com

<https://doi.org/10.1016/j.anr.2019.07.001>

p1976-1317 e2093-7482/© 2019 Korean Society of Nursing Science, Published by Elsevier Korea LLC. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

relationship between work–family conflict and job satisfaction [13]. Work–family conflict has been consistently reported to be associated with job dissatisfaction and marital dissatisfaction [14]. The conflicts between career and family life roles could have a negative impact on the family life of women and also on their level of job satisfaction [15]. Those women who experienced role conflicts while endeavoring to be a spouse and a professional woman at the same time were less satisfied with their life and career [16,17]. One study reported that tension between work and marriage was not inevitable [18]. In Japan, nurses were quite satisfied with their work and were most satisfied in their relationships with peers, patients/families, and supervisors [19]. However, whether Japanese nurses' higher job satisfaction is correlated with their relationship with a spouse has not been studied.

Over the last three decades, the Chinese divorce rate has been steadily increasing from 0.4/1000 persons in 1985 to 2.8/1000 in 2015 [20]. The divorce rate among nurses is seven times the national average [21]. One of the fundamental issues in China (as in many other countries) is that hospitals take little account of the needs of woman nurses regarding family responsibilities. Evidence has suggested that Chinese nurses' marital quality was lower than that of the general population [22]; Chinese nurses' job satisfaction has also been reported to be low and the reasons have been explored [23]. However, few studies targeting the impact of marital quality on job satisfaction have revealed that the relationship of job satisfaction with marital quality was positive and significant [9].

Whether there is any relationship between them has not yet been studied. It is hypothesized that there is a correlation between marital quality and job satisfaction and that lower marital quality might be associated with lower job satisfaction or the reverse. The purpose of this study is to explore the relationship between marital quality and job satisfaction via a Web-based survey of married woman nurses in China and to identify the association of demographic factors with job satisfaction and marital quality.

Methods

Study design

This study was a descriptive correlational study using convenience sampling.

Setting and sample

Participants were recruited from five distinct geographic regions of China (north, south, east, west, and central China) as being representative of the country. The sample consisted of 2,296 woman nurses employed at 10 tertiary hospitals in five provinces, that is, Shandong, Guangdong, Zhejiang, Shanxi, and Hubei.

Participants were surveyed from June to October 2016. Inclusion criteria were as follows: (1) married woman registered nurses, (2) first marriage, and (3) worked full-time for at least one year. Man nurses, probationer nurses, and divorced/single nurses were excluded.

Data collection

The online questionnaire was imported to Questionnaire Star Platform and distributed through Web-based social media applications including WeChat and Tencent QQ (Tencent Holdings Limited, Shenzhen, China). A brief statement about the purpose of the research and the principal investigator was included to introduce the survey. Participants were limited to completing the survey one time by using their mobile phone or computer.

Ethical considerations

This study was approved by the research ethics committee of the principal investigator's institution and hospitals. All eligible nurses were informed that participation was voluntary and reassured that responses would remain confidential.

Measurements

The three-part questionnaire included the following items: (1) demographic information such as age, number of children, monthly income, educational status, and average daily hours spent with spouse; (2) marital quality; and (3) job satisfaction.

Marital quality refers to an individual's perception and attitude toward their marital relationship and spouse. Marital quality was measured using the Chinese Marital Quality Inventory [24], which consists of 90 items grouped into 10 dimensions: personality, communication, conflict resolution, financial management, leisure activities, emotion and sex, children and marriage, relatives and friends, family roles, and life perception. Each item is measured using a 5-point Likert scale. For positive items, strong agreement scores 5 points, whereas strong disagreement scores 1 point. An example of an item is "I am satisfied with sexual life with my spouse". For negative items, strong agreement scores 1 point, whereas strong disagreement scores 5 points. An example of an item is "I often quarrel with my spouse because of family income". A total score is achieved by summing the value of each response. The total score of all items ranges from 90 to 450. A higher score indicates greater marital quality [24]. In the present study, the inventory showed good internal consistency with a Cronbach's alpha of .87, and the content validity index was .76.

Job satisfaction is defined as an individual's reaction to the job experience [25]. There are various components considered as vital to job satisfaction. Job satisfaction was measured using the Chinese Nurses Job Satisfaction Scale [26], a questionnaire consisting of 38 items grouped into 8 dimensions, including administration,

Table 1 Association of Demographics with Job Satisfaction and Marital Quality (N = 2,296).

Variable	Number (%)	Mean job satisfaction score (SD)	p	Mean marital quality score (SD)	p
Age (yrs)			.045		.264
<30	928 (40.4)	110.23 (16.14)		302.69 (32.54)	
30–40	946 (41.2)	121.81 (18.95)		281.12 (37.93)	
>40	422 (18.4)	137.50 (24.93)		328.37 (43.59)	
Number of children			.856		.178
1	2,188 (95.3)	119.81 (21.42)		299.00 (42.01)	
≥2	108 (4.7)	121.83 (15.42)		280.15 (39.32)	
Monthly income (RMB)			.029		.207
<5,000	216 (9.4)	112.49 (19.05)		301.09 (37.56)	
5,000–8,000	1,414 (61.6)	111.19 (20.66)		287.01 (37.54)	
>8,000	666 (29.0)	143.18 (16.24)		321.82 (42.69)	
Educational status			.264		.114
Diploma	918 (40.0)	124.44 (25.26)		290.89 (30.17)	
Bachelor's	1,279 (55.7)	117.88 (19.57)		298.29 (33.10)	
Master's and higher	99 (4.3)	105.89 (22.24)		300.66 (42.43)	
Employment status			.095		.099
Permanent nurse	496 (21.6)	132.69 (21.89)		320.19 (41.13)	
Contract nurse	1,800 (78.4)	116.12 (21.79)		292.78 (36.49)	

Note. RMB = Renminbi; SD = standard deviation; yrs = years.

workload, coworkers, job, pay and welfare, professional opportunity, praise/recognition, and family–work balance. An example of an item is the statement that “You can't balance family and work due to your workload”. Each item is measured using a 5-point Likert scale, ranging from 1 (agree very much) to 5 (disagree very much). The total score is achieved by summing the value of each response, yielding a score ranging from 38 to 190. A higher score indicates greater job satisfaction [26]. In the present study, this scale showed excellent internal consistency with a Cronbach's alpha of .90, and the content validity index was .88.

Data Analysis

Analyses were performed using SPSS, version 21.0, (IBM Corp., Armonk, NY, USA). Data were analyzed by using descriptive statistics, *t* tests, analysis of variance, Pearson correlation, and linear regression techniques. An alpha level of $p < .05$ was used for tests of statistical significance.

Results

A total of 3,207 individuals viewed the survey, and 2,296 valid questionnaires were returned, yielding a response rate of 71.6%.

Demographic information

Participants' mean age was 33.00 years [standard deviation (SD) = 9.32 years, range = 23–43 years]; 2,188 (95.3%) had one child; 1,279 (55.7%) had a bachelor's degree; and 666 (29.0%) had a monthly income of > 8,000 RMB (1 RMB = 0.16 US \$). Of the 2,296 participants, 496 (21.6%) were permanent nurses who had a guaranteed position until retirement, whereas 1,800 (78.4%) were contract nurses (those holding a position for an identified period of time) (Table 1). The marital duration in years was 8.72 (SD = 3.84), and the average daily hours spent with a spouse was 9.60 (SD = 3.30) (Table 2).

Correlation between marital quality and job satisfaction

Participants' overall mean marital quality score was 298.61 (SD = 41.74), and the mean job satisfaction score was 119.92 (SD = 21.33). Correlations between job satisfaction subscales and marital quality scores are shown in Table 3. Bivariate correlation between job satisfaction score and marital quality score was .63 ($p < .05$).

Association of demographic factors with job satisfaction and marital quality

Mean job satisfaction scores were compared with the socio-demographic variables of education level, income, and

Table 2 Bivariate Correlation Coefficients of Job Satisfaction and Marital Quality with Age, Marital Duration, Average Daily Hours Spent with Spouse, and Marital Quality (N = 2,296).

Variable	Job satisfaction	<i>p</i>	Marital quality	<i>p</i>
Age (mean = 33.00, SD = 9.32)	0.12	.029	0.04	.469
Marital quality score (mean = 298.61, SD = 41.74)	0.63	<.001		
Marriage duration (in years) (mean = 8.72, SD = 3.84)	0.01	.806	0.03	.545
Average daily hours spent with spouse (mean = 9.60, SD = 3.30)	0.24	<.001	−0.02	.756

Note. SD = standard deviation.

Table 3 Correlation between Dimensions of Job Satisfaction and Marital Quality (N = 2,296).

Variable	M (SD)	Marital quality (r)	<i>p</i>
Job satisfaction	119.92 (21.33)	.63	.017
Administration	3.23 (0.83)	−.27	<.001
Workload	2.95 (0.53)	−.34	<.001
Co-workers	4.04 (0.60)	.21	<.001
Job	2.52 (0.65)	.25	<.001
Pay and welfare	1.89 (0.78)	.77	<.001
Professional opportunity	2.27 (0.79)	.61	<.001
Praise/recognition	3.46 (0.62)	.26	<.001
Family/work balance	3.43 (0.98)	.56	<.001

Note. SD = Standard deviation.

Table 4 Association of Job Satisfaction with Marital Quality, Age, Number of Children, Monthly Income, and Average Daily Hours Spent with Spouse (N = 2,296).

Variable	Beta-coefficient	<i>p</i>	Lower 95% CI	Upper 95% CI
Age	.11	.033	0.02	0.59
Number of children	.01	.848	−1.94	2.36
Monthly income	.12	.018	0.52	5.51
Average daily hours spent with spouse	.26	.001	0.27	0.61
Marital quality score	.27	.001	0.48	1.05

Note. CI = confidence interval.

employment status. Of these, the mean job satisfaction scores were significantly higher among respondents who had a monthly income >8000 RMB (Table 1). Job satisfaction scores were compared with age, marriage duration in years, and average daily hours spent with spouse, using bivariate correlations, and the correlation coefficients were .12, .01, and .24, respectively. All correlations were weak but statistically significant for age ($p < .05$) and average daily hours spent with spouse ($p < .001$) (Table 2).

A comparison of the mean marital quality scores with educational level, income, and employment status exhibited no statistically significant differences. A comparison of marital quality scores with age, marital status (in years), and average daily hours spent with spouse by bivariate correlations yielded correlation coefficients of .04, .03, and −.02, respectively, suggesting that there was no correlation and no statistical significance ($p > .05$) (Table 2).

Multiple linear regression analysis indicated that age ($\beta = .11$, $p = .033$), monthly income ($\beta = .12$, $p = .018$), average daily hours spent with spouse ($\beta = .26$, $p = .001$), and marital quality score ($\beta = .27$, $p = .001$) were positively associated with job satisfaction scores after adjusting for the effect of sociodemographic variables (Table 4).

Discussion

To the authors' knowledge, this is the first study to explore the impact of marital quality on job satisfaction. Until now, only a few studies have focused on the marital quality of nurses [12,18,23], but no study has focused on the correlation between marital quality and job satisfaction.

Low level of marital quality and job satisfaction among Chinese nurses

In agreement with previous studies [12], findings in this study noted a lower level of Chinese nurses' marital quality than Chinese people in general [27]. This has also been confirmed among nurses [18,23] who exhibited a low level of marital quality. Marital quality is a complex phenomenon, and the work-related stress of nurses

may have undue effects on their marriage. For example, nursing is a highly precise profession where patients' lives are constantly under consideration; nurses often feel mental pressure, experience negative emotions, and find it hard to maintain a balance between family and work because of work-related stress [15]. What is more, because of the variations in shift work hours, there is little time for nurses to spend with their spouses and family. It is recommended that hospital leaders should provide more choices in shift work hours, so nurses can better arrange their work–life balance.

In the present study, the mean overall job satisfaction score was 119.92 ± 21.33 (ranging from 52 to 155), implying relatively low job satisfaction among this group of woman married nurses. This finding is in line with previous studies [9,28]. Almost half of the respondents in the present study indicated dissatisfaction with their monthly income, welfare, and career development, which is consistent with another study [2]. Considerations such as reducing workload and working hours, offering opportunities to advanced study, and training should be promoted as means to improve job satisfaction.

Correlation between job satisfaction and marital quality

It is speculated that marital quality can affect job satisfaction, or conversely, job dissatisfaction can affect marital quality. This study found positive relationship between marital quality and job satisfaction. There are no other studies with which to compare this finding. The personal nature of the survey items limited the researchers' ability to recruit married nurses as participants and resulted in the use of convenience sampling. In contrast to the current findings, a previous study of physicians that explored the relationship between marital satisfaction and job satisfaction indicated there was no significant relationship [3]. The result might be due to the fact that the participants were men and the percentage reported to be "satisfied" or "very satisfied" with their job was as high as 88.7%.

Although variables including autonomy, job stress, and nurse–physician collaboration have been correlated with nurses' job satisfaction [19], the effect of job satisfaction on family and marriage has not been studied in depth. Overworked nurses are more tired and find it harder to cope with pressures when there are extra efforts to be made [14,29]. A survey in the United States found that nurses faced serious work–family conflict [17]. It was also reported that work–family conflict had significant negative influence on job satisfaction, that is to say, the higher the work–family conflict, the lower the individual job satisfaction.

The multidimensional nature of low job satisfaction in China

Nurses' work is bound to influence family life and may lead to strained family relationships or altered career paths. In China, the care provider–patient relationship, burgeoning workloads, and alternating shift work may result in serious work–family conflicts for woman married nurses. Poor marital quality may impact work from a psychological, social, and environmental perspective. Role adaptation and effective communication with a spouse are fundamental sources for nurses to obtain social support and produce job motivation. Nurse managers have strong roles in promoting nurses' job satisfaction [30,31]. The multidimensional nature of low job satisfaction and its effect on marital quality should also be a focus of nurse managers and administrators in offering relationship counseling or training to married nurses. This embodies the concept of humanized management in which a good foundation is also laid for improving nurses' well-being and happiness.

Implications for practice

In light of humanized management, Chinese nurse managers should have concern for nurses' family life especially if the nurses and their families are experiencing difficulty. Managers might consider scheduling married nurses for the night shift, with limited but reasonable frequency. In addition, nurse managers could organize hospital activities to invite nurses' spouses to visit the work site to improve their understanding of the significance and nature of the nurses' activities. Moreover, nurse managers should strengthen their effort in related psychological adjustment and training for nurses about communication skills. Health service agencies and administrators can assist married nurses to transition from their roles in the work setting to the home environment and vice versa and address the need to be adaptable in this constantly changing dynamic. Nurse managers could discuss role adaptation with nursing staff to help nurses coordinate the relationship between the work environment and their family. Nurses could then reasonably distribute their time and balance their lives more effectively so as to prevent conflict between their marriage and career. This effort could improve job satisfaction and reduce the rate of turnover of nurses.

Limitations

The present study was designed specifically for Chinese nurses, and the findings are believed to be in line with the current situation in China. Generalization of the findings is limited because a convenience sample was used to recruit woman married nurses. Another limitation was the inability to verify the validity of participants who completed questionnaires as this was a Web-based survey. In addition, the characteristics of those who chose to answer the survey may be different from those of the non-responding population, resulting in response bias. Notably, a number of respondents completed the job satisfaction questionnaire, but fewer respondents completed the marital quality scales. An attempt was made to discover the possible reasons for the lower response rate by asking the participants and conferring with supervisors of nursing departments, and the following reasons were given: not interested in responding, questions were too personal, and nurses lacked time to complete the questionnaire. As with all self-reports or questionnaires, responses may reflect social desirability bias. Thus, it might be reasonable to assume that a nurse having poor marital quality would be unwilling to participate in the study. Further research is needed to clarify this assumption. Finally, although woman nurses dominate the nursing workforce, the number of man nurses has been increasing in recent years. The selective bias should not be ignored.

Conclusion

The association found between marital quality and job satisfaction highlights the need for Chinese nurse managers to consider marital quality as an important factor in improving nurses' job satisfaction. Findings suggest that efforts to balance work and married life could have a positive impact on nurses' job satisfaction.

Funding statement

This research received no specific grant from any funding agency.

Conflicts of interest

There is no conflict of interest.

Acknowledgments

The authors are especially grateful to nurse managers of 10 hospitals for their cooperation and coordination in data collection and all the nurses who participated in this study and thank Professor Shu Zhang for her kind and professional statistical analysis.

References

- Çelik S, Hisar F. The influence of the professionalism behavior of nurses working in health institutions on job satisfaction. *Int J Nurs Pract*. 2012;18(2):180–7. <https://doi.org/10.1111/j.1440-172X.2012.02019.x>
- Gurková E, Sošová MS, Haroková S, Žiaková K, Šerfelová R, Zamboriová M. Job satisfaction and leaving intentions of Slovak and Czech nurses. *Int Nurs Rev*. 2013;60(1):112–21. <https://doi.org/10.1111/j.1466-7657.2012.01030.x>
- Hwang JJ, Lou F, Han SS, Cao F, Kim WO, Li P. Professionalism: the major factor influencing job satisfaction among Korean and Chinese nurses. *Int Nurs Rev*. 2009;56(3):313–8. <https://doi.org/10.1111/j.1466-7657.2009.00710.x>
- Ouyang YQ, Zhou WB, Qu H. The impact of psychological empowerment and organisational commitment on Chinese nurses' job satisfaction. *Contemp Nurse*. 2015;50(1):80–91. <https://doi.org/10.1080/10376178.2015.1010253>
- Hayes LJ, O'Brien-Pallas L, Duffield C, Shamian J, Buchan J, Hughes F, et al. Nurse turnover: a literature review—an update. *Int J Nurs Stud*. 2012;49(7):887–905. <https://doi.org/10.1016/j.ijnurstu.2011.10.001>
- Lim J, Bogossian F, Ahern K. Stress and coping in Australian nurses: a systematic review. *Int Nurs Rev*. 2010;57(1):22–31. <https://doi.org/10.1111/j.1466-7657.2009.00765.x>
- Liu K, You LM, Chen SX, Hao YT, Zhu XW, Zhang LF, et al. The relationship between hospital work environment and nurse outcomes in Guangdong, China: a nurse questionnaire survey. *J Clin Nurs*. 2012;21(9–10):1476–85. <https://doi.org/10.1111/j.1365-2702.2011.03991.x>
- Kalisch BJ, Lee H, Rochman M. Nursing staff teamwork and job satisfaction. *J Nurs Manag*. 2010;18(8):938–47. <https://doi.org/10.1111/j.1365-2834.2010.01153.x>
- Al-Enezi N, Chowdhury RI, Shah MA, Al-Otobi M. Job satisfaction of nurses with multicultural backgrounds: a questionnaire survey in Kuwait. *Appl Nurs Res*. 2009;22(2):94–100. <https://doi.org/10.1016/j.apnr.2007.05.005>
- Colón-de Martí LN, Acevedo LF, Céspedes-Gómez WR. Marital and job satisfaction among non-resident physicians at a Hispanic academic medical center, 2006–2007. *Bol Asoc Med P R*. 2009;101(1):36–41.
- Lee HH, Lung FW, Lee PR, Kao WT, Lee YL. The relationship between sex life satisfaction and job stress of married nurses. *BMC Res Notes*. 2012;5:445. <https://doi.org/10.1186/1756-0500-5-445>
- Redmond J, Harford J. "One man one job": the marriage ban and the employment of women teachers in Irish primary schools. *Paedagog Hist*. 2010;46(5):639–54. <https://doi.org/10.1080/00309231003594271>
- Chang YH, Li HH, Wu CM, Wang PC. The influence of personality traits on nurses' job satisfaction in Taiwan. *Int Nurs Rev*. 2010;57(4):478–84. <https://doi.org/10.1111/j.1466-7657.2010.00825.x>
- Yildirim D, Aycan Z. Nurses' work demands and work-family conflict: a questionnaire survey. *Int J Nurs Stud*. 2008;45(9):1366–78. <https://doi.org/10.1016/j.ijnurstu.2007.10.010>
- Wang ML, Tsai LJ. Work-family conflict and job performance in nurses: the moderating effects of social support. *J Nurs Res*. 2014;22(3):200–7. <https://doi.org/10.1097/jnr.0000000000000040>
- Feith HJ. Female roles and conflicts in health care professions. *Orv Hetil*. 2009;150(23):1089–95. <https://doi.org/10.1556/OH.2009.28436>. Hungarian.
- Lembrechts L, Dekocker V, Zanoni P, Pulignano V. A study of the determinants of work-to-family conflict among hospital nurses in Belgium. *J Nurs Manag*. 2015;23(7):898–909. <https://doi.org/10.1111/jonm.12233>
- van Steenberghe EF, Kluwer ES, Karney BR. Workload and the trajectory of marital satisfaction in newlyweds: job satisfaction, gender, and parental status as moderators. *J Fam Psychol*. 2011;25(3):345–55. <https://doi.org/10.1037/a0023653>
- Yamashita M, Takase M, Wakabayashi C, Kuroda K, Owatari N. Work satisfaction of Japanese public health nurses: assessing validity and reliability of a scale. *Nurs Health Sci*. 2009;11(4):417–21. <https://doi.org/10.1111/j.1442-2018.2009.00464.x>
- Ministry of Chinese Civil Affairs. Ministry of civil affairs 2015 statistical bulletin [Internet]. Beijing, China: Ministry of Chinese Civil Affairs; 2015 [cited 2017 Dec 25]. Available from: http://www.chinadaily.com.cn/hqgj/jryw/2013-06-20/content_9370845.html
- Sohu News. Worries of the development of nurses in China [Internet]. Beijing, China: Sohu; 2017 [cited 2017 Dec 1]. Available from: http://www.sohu.com/a/140617806_6396307f=v2-index-feeds
- Jin BX, Ji KY, Liu LX. Survey on the satisfaction degree of nurses' marriage and its influencing factors. *Chin J Health Educ*. 2010;26:227–8. Chinese.
- Wang L, Tao H, Ellenbecker CH, Liu XH. Predictors of hospital nurses' intent to stay: a cross-sectional questionnaire survey in Shanghai, China. *Int Nurs Rev*. 2012;59(4):547–54. <https://doi.org/10.1111/j.1466-7657.2012.01009.x>
- Berry LM. *Psychology at work: an introduction to industrial and organizational psychology*. 2nd ed. San Francisco, CA: McGraw Hill Companies Inc; 1997, 592 p.
- Cheng ZH, Tan LX, Yang Y, Lin XH, Zou D, Jiang XJ, et al. The Chinese marital quality inventory: development, reliability and validity. *Chin J Clin Psychol*. 2004;12:226–30. Chinese.
- Tao H, Hu JC, Wang L, Liu XH. Development of a scale for job satisfaction assessment in nurses. *Acad J Second Mil Med Univ*. 2009;30:1292–6. Chinese.
- Ji KY, Jin BX. Investigation and correlative analysis on status quo of marital quality of nurses on the job. *Chin Nurs Res*. 2008;22(5A):1162–3. Chinese.
- Mrayyan MT. Jordanian nurses' job satisfaction, patients' satisfaction and quality of nursing care. *Int Nurs Rev*. 2006;53(3):224–30. <https://doi.org/10.1111/j.1466-7657.2006.00439.x>
- Chang HE, Cho SH. Workplace violence and job outcomes of newly licensed nurses. *Asian Nurs Res*. 2016;10(4):271–6. <https://doi.org/10.1016/j.anr.2016.09.001>
- Zangaro GA, Soeken KL. A meta-analysis of studies of nurses' job satisfaction. *Res Nurs Health*. 2007;30(4):445–58. <https://doi.org/10.1002/nur.20202>
- Utriainen K, Kyngäs H. Hospital nurses' job satisfaction: a literature review. *J Nurs Manag*. 2009;17(8):1002–10. <https://doi.org/10.1111/j.1365-2834.2009.01028.x>