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Original Article

A research regarding the relationship among intensive care nurses' self-esteem, job satisfaction and subjective well-being

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ABSTRACT

Objective: The paper aims to explore the status of intensive care unit (ICU) nurses' self-esteem, job satisfaction, and subjective well-being and to investigate the relationship among the three elements.
Methods: A cross-sectional survey of 224 nurses from five teaching hospitals in Tianjin, China, was conducted. Self-esteem scale, job satisfaction scale, and subjective well-being scale were used to explore the status of ICU nurses' self-esteem, job satisfaction, and subjective well-being. Correlation among the three elements was calculated by SPSS 17.0.
Results: The scores of three scales (i.e., ICU nurses' self-esteem, job satisfaction, and subjective well-being) were 27.67 ± 3.41, 43.57 ± 9.04, and 69.73 ± 11.60, respectively. The subjective well-being was significantly positively correlated with self-esteem and job satisfaction ($r = 0.454$, $P < 0.01$; $r = 0.584$, $P < 0.01$, respectively).
Conclusion: The study shows that the prevalence of subjective well-being and self-esteem with ICU nurses are at a low level, and job satisfaction is at the median level. Associations among self-esteem, job satisfaction, and subjective well-being in ICUs have been confirmed. Self-esteem and job satisfaction positively correlated with nurse subjective well-being. The higher the self-esteem and job satisfaction levels are, the stronger the subjective well-being is. The working pressure in ICUs cannot be alleviated temporarily; hence, to promote a high subjective well-being, managers and ICU nurses increase their self-esteem and job satisfaction through taking strategies that strengthen psychological construction.
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1. Background

Subjective well-being (SWB) is a comprehensive psychological evaluation of the satisfaction and happiness about people's own overall life [1]. Self-esteem was defined as a positive self-consideration obtained by people when they can consistently meet or exceed the important goals of their lives [2]. Job satisfaction is a pleasurable emotional state, which results from the evaluation that one has of his work and the realization of what this evaluation allows concerning the satisfaction of important values [3]. Evidence suggests that high level of well-being will be more favorable to work-related results, and experiences of positive emotions and pleasant moods make people feel more active to pursue their goals, effectively confront challenges, and make assertive decisions [4]; all these results will not only be beneficial to physical and mental health but also to colleagues and the organization because people who feel good of their well-being will be creative, work more efficiently, and have improved relationships [5]. Low SWB affects nurses' turnover intention and nursing service quality [6].

However, health care professionals, such as nurses, are at high risk for burnout, role conflict, and low well-being, especially intensive care unit (ICU) nurses [7]. A number of studies have shown that self-esteem, which is a positive personal trait, will improve self-confidence. The ability to handle pressure and fatigue [8] mitigates the adverse effects of work stress [9] and creates good interpersonal relationships [10], greater work-related engagement, and better job satisfaction [11]; all these important factors influence SWB [12]. Research also suggests that job satisfaction and SWB have a significant positive correlation [13]. Knowing the contribution of these characteristics will help support ICU nurses

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and improve their SWB and consequently improve the quality of the service they provide.

Compared with other nurses, ICU nurses are more likely confronted with low well-being at work [14]. Sources of stress include high-intensity and high-risk coefficient work, fewer chance to communicate with the outside world, care for critically ill patients, gaps between technology advances and nursing skills, and frequency of death [15,16]. Taken together, these factors make ICU nurses vulnerable to low well-being. However, currently, few studies are available regarding SWB in these nurses.

A number of studies detail about factors related to nurses' SWB but only few studies are about ICU nurses. These factors can be categorized into professional traits and social organization traits [16,17]. Although well-being among ICU nurses is documented, few studies have investigated the relationship between personal traits (e.g., self-esteem) and well-being. In addition, a limited number of national studies investigate the relationship among ICU nurses' self-esteem, job satisfaction, and their SWB. Most studies about the relationship between self-esteem and SWB focused on nursing students. In this study, based on theory of positive psychology, we explore SWB from the individual traits (self-esteem) and professional traits (job satisfaction) and the correlation among these three elements, which will provide a reference for nursing managers and intensive care nurses themselves to improve the health of ICU nurses.

2. Method

2.1. Design and sample

This is a cross-sectional study, which used a convenience sample consisting of 240 ICU staff nurses working in the ICUs of five tertiary public hospitals, which included four comprehensive hospitals and one specialized hospital, in Tianjin City, located in the central area of China. The inclusion criteria include registered nurses who have a continuous active work for more than 1 year. Exclusion criteria include rotary nurses and nurses who were employed after retirement. The questionnaires were given to nurses responsible for intensive care, and then the study data were collected in the participants' own environment. After information about the study has been given, the participants were asked to answer the questionnaires seriously. Participation is entirely voluntary, and confidentiality of all personal information is strictly protected. The nurses handed in the forms to the researchers through the responsible nurse upon filling out the forms. A total of 230 questionnaires were returned. The average recovery rate was 95.8%. Finally, 224 effective questionnaires were obtained, and effective recovery rate was 97.3%.

2.2. Instruments

The data were obtained with four different forms: sociodemographic data and the Self-Esteem Scale (SES), Nurse's Working Satisfaction Scale, and SWB scale.

2.2.1. Demographic information of ICU nurses

A sociodemographic questionnaire was used included items, such as age, employment status, marital status, working years, positional titles, education, monthly income, interests, and hobbies. These demographic data are potential variables influencing a nurse's SWB.

2.2.2. SES

Self-esteem was measured using Chinese version of the Rosenberg Self-Esteem Scale [18]. This scale has 10 items arranged in a Likert-type response format, ranging from 1 = strongly disagree to 4 = strongly agree, with five of the items being positively orientated and the other five being negatively orientated. Domestic norm score is (28.75 ± 4.86). The value for the Cronbach's α was 0.82. Indicating an excellent reliability of the measure, we used the reference values according to psychology research [19]; 27% was used as the cut-off point. These values suggest that 27% (32–40) indicate high self-esteem, below 27% (≤27) indicate low self-esteem, and scores in 28–31 indicate middle self-esteem.

2.2.3. Nurse's working satisfaction scale

This questionnaire was used to determine job satisfaction level of nurses. MMSS was developed by Warr et al., and its reliability and validity of the Chinese version were established by Lu hong [20], including two dimensions, i.e., working condition and interpersonal relationship among work; Cronbach's α was 0.92. Individuals were asked to rate their level of satisfaction with each of the 15 work-related needs on a point scale ranging from “extremely dissatisfied” (1) to “extremely satisfied” (5). The responses to all 15 items can be summed to produce a general satisfaction score. The scale's scores range between 15 and 75. Job satisfaction increases as the score increases. Grading standard of the nurses' job satisfaction is as follows: $1 \leq \text{mean} \leq 2.33$ indicate low-level job satisfaction, $2.34 \leq \text{mean} \leq 3.66$ indicate middle job satisfaction, and $3.67 \leq \text{mean} \leq 5$ indicate high job satisfaction.

2.2.4. SWB

This scale was used to determine the nurses' SWB levels. The validity and reliability of the scale of the Chinese version were accomplished by Jian-Hua Duan [21] in 1996. SWB is composed of 6 sub-scales and 18 items. The six sub-scales measure health worry (two items), energy level (four items), satisfying interesting life (two items), depressed–cheerful mood (three items), emotional–behavioral control (three items), and relaxed versus tense–anxious (four items). The first 14 items are 6 response option items; the next 4 items are 0–10 rating bars. These ratings, as well as the overall total scale score, can be obtained. The total score is 120. SWB is scored in a positive direction, in that a high score reflects a self-representation of well-being. Correlation between domains and the total scale is 0.56–0.88. Internal consistency coefficient in female is 0.95 and that of men is 0.91. The test–retest internal consistency is 0.85; all these results show that the scale has good validity. National norm score in men is 75 and that of women is 71.

2.3. Statistical analysis

Pearson correlation analysis was used to determine the relationship among the total scores of SES, Nurse's Working Satisfaction Scale, and SBW. The significance of the difference between two-means test was used to determine the difference between the mean scores of SBW and demographic characteristics, such as marital status and employment status. One-way analysis of variance test was used to determine the difference between the mean scores of SBW and demographic characteristics, such as age, education, working years, job title, monthly income, and number of interests and hobbies. All statistical tests were carried out using a significance level of 0.05.

3. Results

3.1. The demographic characteristics of ICU nurses

Among the 224 nurses, 65.6% were in the age group between 20 and 30 years. A total of 51.3% were temporary employee and 50.5%

were unmarried. Of the nurses, 37.1% have been working≤2 years; 50.9% have a nurse title, 73.2% hold a bachelor's degree. With regard to income, 28.6% of the respondents earned <3500 yuan monthly. About 53.1% had two to three hobbies; 45.5% have middle self-esteem, and 75.9% have medium job satisfaction (Table 1).

3.2. Score of self-esteem, job satisfaction, and subjective well-being among ICU nurses

The ICU nurses' mean score for self-esteem was 27.67 ± 3.41. The ICU nurses' mean score for job satisfaction was 43.57 ± 9.04. SWB scores were 79.13 ± 9.10. The lowest score of self-esteem was the item "I want to win more respect for myself" (1.83 ± 0.54). The scores of the two dimensions were "working condition" (2.70 ± 0.65) and "interpersonal relationship among work" (3.32 ± 0.64). The lowest two-dimension score for SWB were "satisfying interesting life" (3.34 ± 0.77) and "health worry" (3.47 ± 1.39) (Table 2).

3.3. Relation between self-esteem scale, job satisfaction, and subjective well-being

The results show that the total SWB is strongly correlated with self-esteem and moderately correlated with the working condition and interpersonal relationship among work dimensions of job satisfaction. A significant correlation was found between self-esteem and in all dimensions of SWB except in the health worry dimension (Table 3). For the interpretation of these results, we used the reference values proposed by Cohen. These values suggest that scores between 0.10 and 0.23 indicate weak correlation, scores between 0.24 and 0.36 indicate moderate correlation, and 0.37 and above are indicative of strong correlation [22].

4. Discussion

4.1. Situations of ICU nurses' self-esteem, job satisfaction, and subjective well-being

ICU nurses' self-esteem was lower than the domestic norm. This result is similar to the previous report of Kou et al. [23], who showed that the ICU nurses often face dying and critically ill patients, frequently suffer futility, and are desperate after they go all out to rescue patients; all these factors lead to low self-worth. This negative simulation of death is associated with decreased self-esteem. The level of self-esteem was lower relative to the study made by Hu [24] on general nurses. The reason for that may be 73.2% of ICU nurses who have a bachelor's degree or even higher diplomas want to be well recognized in our study. The lowest score item was "I want to win more respect for myself." However, ICU nurses, besides providing nursing technology for patients with severe illness, also take daily routine, such as feeding and handle urine and stool; these may not be consistent with their expectations to realize their value. Hence, they are prone to consider themselves useless and dispirited, which is unexplored in other studies. This observation is however supported by Arthur, who showed that self-esteem improves with university education [25]. Kreutzer's study suggests that nurses are traditionally assigned as physicians' subordinates, and despite a strong academic background, their authority and expertise is not well recognized within the dominant social environment [26].

Job satisfaction of ICU nurses was at a moderate level. ICU nurses were more satisfied with interpersonal relationship than with working condition. A total of 15.2% nurses in our study have a high monthly income, which may decrease job satisfaction. A similar report by He [27] suggested that salary is an important factor to job satisfaction. By comparison, Zeng's [28] study found that the job satisfaction level of general nurses was higher than that of our findings. Working in the ICU, in comparison with working in a general department, gives more challenging experiences, such as adverse working conditions, unmanageable workload, staying at one closed environment, and frequent training to cope with rapid technology progress. These generate unique stress, which is associated with low job satisfaction.

The study suggests that SWB was lower than that of norm. The

Table 2
Total and item score of ICU nurses in Self-esteem, Job satisfaction and SWB.

Variables	Total mean score	Item mean score
Self-esteem	27.67 ± 3.41	2.77 ± 0.34
working condition	26.99 ± 6.48	2.70 ± 0.65
interpersonal relationship among work	16.58 ± 3.19	3.32 ± 0.64
Job satisfaction	43.57 ± 9.04	2.90 ± 0.60
health worry	6.93 ± 2.78	3.47 ± 1.39
energy level	15.77 ± 4.18	3.94 ± 1.05
Satisfying interesting life	6.67 ± 1.53	3.34 ± 0.77
depressed-cheerful mood	13.88 ± 3.44	4.63 ± 1.15
emotional-behavioral control	12.34 ± 2.01	4.11 ± 0.67
Relaxed versus tense-anxious	14.13 ± 3.49	3.53 ± 0.87

Table 1
Demographic and work characteristics of the nurses ($n = 224$).

Variables		n	%
Age (years)	20–30	147	65.6
	31–40	71	31.7
	>41	6	2.7
Marital status	married	111	49.6
	unmarried	113	50.5
Working years	≤5	143	63.9
	6–10	50	22.3
	≥11	31	13.8
Positional titles	nurse	114	50.9
	senior nurse	76	33.9
	supervisor nurse	34	15.2
Education	junior college degree	53	23.7
	Bachelor degree	164	73.2
	Master degree	7	3.1
Monthly income (yuan)	<3500	64	28.6
	3501–4500	60	26.8
	4501–6000	66	29.5
	≥6000	34	15.2

Table 3
Results for correlation analyses self-esteem scale, Job satisfaction, and SWB.

variable	1	2	3	4	5	6	7	8	9
1.Self-esteem	1								
2.working condition	0.24*	1							
3. Interpersonal relationship among work	0.284*	0.713*	1						
4.health worry	−0.047	0.115	0.073	1					
5.energy level	0.422*	0.423*	0.348*	0.027	1				
6.satisfying interesting life	0.408*	0.293*	0.243*	−0.026	0.503*	1			
7.depressed-cheerful mood	0.494*	0.404*	0.370*	−0.015	0.659*	0.448*	1		
8.emotional-behavioral control	0.372*	0.215*	0.179*	0.051	0.311*	0.320*	0.334*	1	
9.relaxed versus tense -anxious	0.471*	0.266*	0.262*	0.133	0.446*	0.426*	0.498*	0.293*	1
10.SWB	0.584*	0.438*	0.395*	0.291*	0.817*	0.624*	0.797*	0.527*	0.749*

*$p < 0.01$.

lowest two-dimension scores for SWB were “satisfying interesting life” and “health worry.” This result demonstrates that ICU nurse often experience negative emotion in life and worry about the job, which damage their physical and mental health. These findings are consistent with the report by Zeng [28], who showed that nurses work irregularly, frequently shift class, and fail to take care of the family; all these factors lead to dissatisfaction in life and long-term contact with patients make them worry about their health. In our study, 65.6% nurses were between 20 and 30 years, 63.9% nurses work ≤5 years, and 50.9% nurses' positional titles were nurse. Nurses who are new graduates or have low seniority experience more frequent shift class and have much responsibility or requirements to undertake the job. In addition, 49.6% of nurses were married and may suffer conflict between work and family. These findings will lead to low satisfaction with life. Long-term contact of the ICU nurse with critically ill patients, frequent traumatic experiences such as dealing with death and the dying, and facing patients who suffer pain or traumatic treatment make the ICU nurse worry spontaneously about their own health.

4.2. Correlation analysis among ICU nurses' self-esteem, job satisfaction, and subjective well-being

Self-esteem and satisfying interesting life, energy level, depressed−cheerful mood, emotional−behavioral control, and relaxed versus tense−anxious were all positively correlated except health worry. These findings are similar to those of Li who found that nurses' self-esteem plays an important role in SWB level [12]. In previous studies on this topic, people with high self-esteem tend to show better psychological adjustment and stimulate higher energy than the general people to mitigate the adverse effects of work stress [28,29]. Nurses who have healthy self-esteem will excite more positive emotion; this result is associated with higher well-being among ICU nurses. No correlation was observed in the “health worry” dimension with self-esteem. This may be because, in our study, nurses between 20 and 30 years accounted for 65.6% and their health status is better.

A significant correlation was found between the two dimensions of job satisfaction and SWB; this result suggested that ICU nurses who were satisfied with working condition and interpersonal relationship will plan their career actively and have favorable interpersonal relationship. This optimistic attitude inspires nurses to have more pleasurable psychological emotions; this result increases nurses' SWB, which is similar to the results from a study in China on general nurses [28]. In a study conducted by Satuf et al., job satisfaction had protective effect in health and well-being [30]. We found that job satisfaction and dimensions of well-being were positively correlated except “health worry.” Job satisfaction provides staff with additional protection from anxiety, depression, and a loss of emotional and behavioral control that will increase well-being.

Several limitations exist in our study. The participants were only chosen from teaching hospitals in Tianjin. In addition, we were unable to analyze the factors that influence SWB, a question that will be addressed in future studies.

5. Conclusion

Our findings suggest that the nurses experienced low levels of SWB and self-esteem and moderate levels of job satisfaction. This study revealed that SWB is strongly correlated with self-esteem and job satisfaction. Nurses who have high self-esteem and job satisfaction perform more positive emotion and less negative affect, which produces high SWB. Thus, this study would contribute to literature since it can raise awareness among health professionals. This study can also give ICU nurses and literature an important dimension because self-esteem, job satisfaction, and SWB were discussed. Therefore, we recommend that the self-esteem, job satisfaction, and SWB of ICU nurses should be further studied.

6. Implications and recommendations

The study can also be used as an implication for nursing managers to improve the working quality of ICU nurses to stabilize the ICU team, such as improving ICU nurses' work conditions and developing harmonious relationship with subordinates to increase ICU nurses' job satisfaction. Additionally, nursing managers should also pay attention to the ICU nurses' psychological construction through establishing psychological counseling platform, setting up “peer support team,” and creating a good organization atmosphere, which thus inspire positive emotions and make ICU nurses better realize their self-worth and improve their well-being.

Author contributions

LIU searched literature, conceived the study, compiled the questionnaires, ZHANG issue and collect questionnaires, conduct data collection.CHANG provided statistical advice on study design and analyzed the data; LIU drafted the manuscript, and all authors contributed substantially to its revision.WANG and LIU takes responsibility for the paper as a whole.

Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.ijnss.2017.06.008.

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