

Self-esteem enhancement as a strategy for promoting the mental health and averting the occupational problems of nurses



Review

Ling He^a, Yu-Feng Ma^a, Ke-Sen Zhang^{b,*}, Ya-Xing Wang^a

^aSchool of Nursing, Tianjin University of Traditional Chinese Medicine, Tianjin 300193, China

^bTianjin Nursing Association, Tianjin 300040, China

Received: 02 March 2018; Accepted: 10 June 2018; Published: 20 March 2019

Abstract: In recent years, shortage of nurses, high turnover rate, low self-worth, and team instability have become increasingly serious. With the development of positive psychology, more and more nursing managers have begun to attach great importance to the mental health of nurses. Self-esteem, as one of the core indicators of individual mental health, has received extensive attention from researchers in different fields since its inception. This paper reviews and summarizes the research status and development trends of nurses' self-esteem considering the aspects of self-esteem as a concept, assessment tools, significance, and intervention methods. At the same time, it also puts forward problems that need to be solved by undertaking research into nurses' self-esteem, in order to provide a reference for further studies on nurses' self-esteem.

Keywords: nurses • self-esteem • mental health • occupational problems • review

© Shanxi Medical Periodical Press.

1. Introduction

A large number of studies have shown that self-esteem is a core predictor of subjective well-being and life satisfaction,¹ and it is closely related to turnover intention, job burnout, and mental health.^{2,3} Self-esteem can not only predict individual differences in cognitive, emotional, and behavioral aspects, but also can serve as a mediator to regulate individuals' physical and psychological responses to success or failure.⁴ Individuals with high self-esteem can feel a greater sense of self-worth and have a stable personality tendency, while individuals with low self-esteem cannot easily accept personal deficiency and have lower levels of mental health.⁵ Self-esteem, as

one of the core factors of nurses' self-consciousness, is of great significance to the physical and mental health and professional development of nurses. Due to the special nature of the medical industry, high turnover rate, low job satisfaction, and insufficient sense of self-worth have become common problems both nationally and internationally.^{6,7} Raising the self-esteem of nurses is of great relevance to stabilizing the nursing team and improving the quality of clinical services.

This article uses "nurse" (or "nursing personnel") and "self-esteem" as the key words to search the following databases for the period ranging from 2000 to 2018: PubMed, Web of Science, Embase, Chinese National

How to cite this article: He L, Ma YF, Zhang KS, Wang YX. Self-esteem enhancement as a strategy for promoting the mental health and averting the occupational problems of nurses. *Front Nurs*. 2019; 1: xx-xx.

* Corresponding author.

E-mail: kesen0228@163.com (K. -S. Zhang).

Open Access. © 2019 He et al., published by Sciendo. This work is licensed under the Creative Commons Attribution NonCommercial-NoDerivatives 4.0 License.

Knowledge Infrastructure (CNKI), Chinese Science and Technology Periodicals Database (VIP), Wanfang, Chinese Biomedical Literature (CBM), and others. Through careful analysis of the current research status of nurses' self-esteem and further induction reasoning, the article finally provides practical and reliable theoretical support for hospital nurse managers to undertake intervention measures at the organizational level to reduce the rate of nurses' resignation and improve nurses' mental health.

2. Definition of self-esteem

Self-esteem is one of the core concepts of self. Because of its important theoretical value and practical significance, it has always been a research hot spot in the field of psychology. At present, scholars have no uniform definition of the concept of self-esteem, but they all focus on the core of "self-worth" and "self-ability". James,⁸ the earliest proposer, thought that self-esteem is the individual's feelings of self-worth, and he put forward the famous self-esteem formula: self-esteem = achievement/ambition. That is, the individual's level of self-esteem is dependent upon the ratio between the achievement and the potential ambition. Coopersmith⁹ believes that self-esteem is an assessment that individuals often make and hold. Rosenberg,¹⁰ from the perspective of attitude, believes that self-esteem is a positive or negative attitude toward a particular thing called self. Brown¹¹ believes that self-esteem is a cognition and feeling of self, and that an individual with high self-esteem shows more affection for himself or herself. Zhang¹² proposes that self-esteem refers to the self-emotional experience gained by individuals in the process of social practice. It consists of self-efficacy and self-acceptance. In short, self-esteem reflects the individual's overall assessment of self-worth and is an emotional experience.¹³ In addition, it is necessary to note that there is a difference between the concept of self-esteem in academia and the commonly used meaning of self-esteem in Chinese.

3. Methods for measuring nurses' self-esteem

Although there are various kinds of methods for measuring self-esteem, there is no specific method to measure the self-esteem of nurses both at home and abroad. Previous studies on nurses generally adopted universal scales and commonly used the following categories:

3.1. Self-Esteem Scale (SES)

The SES, developed by Rosenberg¹⁰ in 1965, was originally used to assess teenagers' overall feelings of

self-worth and self-acceptance. It is now widely used to measure the self-esteem of medical staff. SES is the most commonly used scale of self-esteem at home and abroad. It mainly measures the overall self-esteem and has the advantages of simplicity and easy grading. The scale consists of 10 items, using the Likert four-grade scoring method, from "very inconsistent" to "very consistent" and rated at 1–4 points respectively. Items 1, 2, 4, 6, and 7 in the scale are scored in the positive direction, and items 3, 5, 8, 9, and 10 are scored in reverse. The higher the score, the higher is the level of self-esteem. Scores of 10–25 are classified as indicating low level of self-esteem, 26–32 comprise the middle range, and 33–40 are classified as showing high self-esteem. A large number of empirical studies have demonstrated that the scale has high reliability and validity.

3.2. The Self-Liking/Self-Competence Scale (SLCS)

The SLCS was developed by Tafarodi and Swann^{14,15} based on a two-dimensional model of self-esteem. It was revised in 2001 to form the SLCS-Revised version (SLCS-R). The scale consists of 16 items, two dimensions, and eight items for each dimension. The two dimensions are self-liking (SL) and self-competence (SC). The self-liking dimension measures the sense of inner self-worth that a person has as a social and moral individual. The self-competence dimension measures the generalized self-efficacy of individuals. The scale adopts the Likert five-grade scoring method, with one point indicating "very inconsistent" and five points indicating "very good". The higher the score, the higher is the level of self-esteem. Studies have shown that this scale has good reliability and validity.

3.3. The Coopersmith Self-Esteem Inventory (SEI)

The SEI, developed by Coopersmith⁹ in 1967, is used to assess an individual's general attitude toward themselves and their self-esteem levels in specific areas. The scale was originally used to measure children's self-esteem and was later revised into three versions, namely, the school version, the school simplified version, and the adult version. They were found to be reliable and effective.

4. Significance of self-esteem for nurses

With the development of medical and health services, research on the mental health of nurses has attracted extensive attention of scholars.¹⁶ Self-esteem is a

protective factor for mental health, and the current study has confirmed the interaction among nurses' self-esteem, subjective well-being, workplace bullying, professional values, critical thinking, and other factors. However, the research scope is relatively limited, and there are few intervention-based studies. In the future, the field of nurses' self-esteem will also require further research studies.

4.1. Self-esteem is positively correlated with subjective well-being

Subjective well-being is the overall evaluation of people's quality of life, characterized by subjectivity, stability, and integrity. It is a key indicator that measures the quality of an individual's life and mental health.¹⁷ Related research has shown that nurses' self-esteem has a significant, positive predictive effect on subjective well-being. The higher the self-esteem score, the higher is the subjective well-being score.^{18,19} Xue et al.²⁰ also noted that nurses' self-esteem has a significant predictive effect on marital satisfaction. The higher the level of individual self-esteem, the higher is the degree of marital satisfaction. Good self-esteem is closely linked to positive psychological behaviors. Nurses with high self-esteem are more confident, optimistic, and hopeful about their lives and work, so they can inspire and sustain a high level of happiness. Nursing managers should pay attention to the influence of nurses' self-esteem on their subjective well-being, strengthen the emotional support to nurses, affirm their progress and contributions at work to make them feel a greater sense of self-worth and create positive emotional experience. The nurses themselves should also strengthen their own psychological constitution, as well as stimulate individual positive emotions through the development of hobbies and other ways to enhance self-esteem and subjective well-being.

4.2. Self-esteem is positively correlated with job satisfaction

Job satisfaction is a professional attitude and an important variable influencing the provision of high-quality clinical nursing. At present, nurses' job satisfaction is generally low because of their heavy workload, low social status, and low welfare.²¹ Dabirian et al.²² showed that there is a significant positive correlation between nurses' self-esteem and job satisfaction. Self-esteem can significantly predict individual job satisfaction. Individuals with high levels of self-esteem are more likely to have higher job satisfaction. A study by Zhang et al.²³ also found that self-esteem, as an intermediary variable of the emotional path, has a partial mediating effect between work–family gain and job satisfaction. Work–family gain improves

job satisfaction by awakening positive emotions such as self-esteem and self-confidence. Positive psychology suggests that self-esteem can increase self-efficacy.²⁴ Research shows that self-efficacy can reduce nurse fatigue and job burnout as well as increase job satisfaction.²⁵ Therefore, nursing managers should pay attention to the problem of nurses' self-esteem and improve the self-esteem level of nurses by systematically conducting psychological training courses and providing learning opportunities, so as to promote higher job satisfaction and reduce the turnover rate.

4.3. Self-esteem is positively related to professional values

The occupational values of nurses are the beliefs and behavioral norms accepted by nursing groups, which influence the professional behaviors and professional satisfaction of nurses.²⁶ After conducting research involving 412 nurses, McNeese-Smith and Crook²⁷ found that nurses who have established professional values have better job performance and more understanding with team members. It shows that active professional values form the cornerstone of nurses' practice and quality of care. Studies have shown that different levels of self-esteem have different influences on the recognition of professional values. Self-esteem can predict individual professional values. Nurses with good self-esteem have higher professional values.²⁸ Self-esteem is also one of the important variables affecting the professional development and success of nurses.^{29,30} Nursing managers should attach great importance to the positive effect of nurses' self-esteem on their careers. According to the factors affecting self-esteem, they can work to promote nurses' self-esteem level and stimulate their subjective initiative, making them establish positive professional values, be better devoted to nursing work, and ultimately get success.

4.4. Self-esteem is positively correlated with critical thinking

Critical thinking refers to the flexible use of existing knowledge and experience, based on problem analysis and induction reasoning and, ultimately, arriving at a reasonable judgment and a correct choice.³¹ Critical thinking, as a basis for clinical decision-making, is directly related to the quality of clinical care services. Studies have shown that nurses' self-esteem is significantly and positively related to critical thinking.³² Improving nurses' self-esteem is helpful in improving their critical thinking.³³ When nursing managers pay attention to improving the level of self-esteem of nurses, they should also focus on cultivating nurses' critical thinking skills to improve the level of clinical decision-making.

4.5. Self-esteem is negatively correlated with job burnout

Job burnout refers to an individual's syndrome of severe physical and mental fatigue, as well as emotional exhaustion, resulting from long-term work stress.³⁴ Under the backdrop of increasing tension between doctors and patients, as well as the increasing pressure of clinical nursing, nurses constitute a high-incidence group of job burnout.³⁵ Job burnout not only affects the physical and mental health of nurses but also reduces the efficiency and quality of their work.³⁶ Research shows that self-esteem is closely related to job burnout, which is significantly negatively related to emotional exhaustion and depersonalization, but it has a significant positive correlation with personal accomplishment. In other words, the stronger the self-esteem, the lower is the degree of emotional exhaustion and depersonalization, and the stronger is the personal sense of accomplishment.³⁷ A similar study also shows that self-esteem plays an intermediary role in the relationship between burnout, health, and turnover intentions, and low self-esteem is one of the typical consequences of job burnout.³ At present, the medical system is undergoing deep reforms in an all-round way to create high-quality medical services. As a result, the demands for nursing service capabilities have been increasing, which has led to extreme mental stress on nurses. Nursing managers can decrease occupational burnout by actively improving nurses' self-esteem. It is also possible to increase the level of self-esteem of nurses by intervening in the factors that affect burnout so as to maintain the mental health of nurses and improve the stability of the clinical nursing team.

4.6. Self-esteem is negatively correlated with anxiety and depression

Bao et al.³⁸ found that nurses scored higher than other people in terms of anxiety, depression, and other aspects. Compared with the average woman, the level of nurses' psychological health was lower. Michael et al.³⁹ found that self-esteem had a significant effect on nurses' anxiety levels. The lower the level of self-esteem, the higher was the anxiety level. Chen et al.⁴⁰ also found that nurses' self-esteem was negatively correlated with Symptom Checklist 90 (SCL-90) factors. Thus, the higher the nurses' self-esteem, the lower are depression and anxiety levels, and the better is the mental health of nurses. Self-esteem fear management theory also believes that self-esteem can help individuals alleviate anxiety.⁴¹ The reason maybe that nurses with high self-esteem are more flexible in coping with the challenges at work than those with low self-esteem; moreover, the former have greater working ability⁴² and can gain more

professional satisfaction and sense of achievement at work. Nurses with low self-esteem tend to choose negative coping styles in the face of setbacks, resulting in emotional distress. Therefore, helping nurses establish true self-esteem can make them effectively (1) face the pressure from work; (2) be relieved of anxiety, depression, and other negative emotions; and thus (3) have a positive and healthy psychological state.

4.7. Self-esteem is negatively related to workplace bullying

Research shows that long-term bullying in the workplace will seriously damage the physical and mental health of individuals, affect their job satisfaction and quality, and eventually lead to their resignation.⁴³ Compared with other occupational groups, nurses who are highly engaged are more likely to suffer workplace bullying.⁴⁴ Nurses with low self-esteem are at greater risk of bullying in the workplace, and their degree of depression is significantly higher.⁴⁵ Nie et al.⁴⁶ found that workplace bullying was significantly and negatively correlated with nurses' self-esteem. Workplace bullying has a significant predictive effect on self-esteem. The more bullying the nurse experiences, the lower is the level of self-esteem. In addition, self-esteem plays a part intermediary role in the relationship between bullying and health on the one hand and a complete mediating role between bullying and job performance on the other. Considering the mutual antagonism between bullying and self-esteem, hospital administrators should respect the nurses and pay attention to the bullying problem, as well as create a harmonious working atmosphere. At the same time, the managers should also improve the level of nurses' self-esteem in all aspects, which in turn helps to improve the nurses' health and job performance.

5. Attempts to increase nurses' self-esteem

At present, there are only a few interventional studies on nurses' self-esteem. Abed et al.⁴⁷ conducted an 8-week experiment on 30 psychiatric nurses with the Assertiveness Training Program. The subjects were divided into six groups. Each group consisted of five nurses, and the authors conducted two assertiveness training interventions each week. The interventions were mainly conducted through lectures, group discussions, brainstorming, case studies, and role-playing, which effectively helped the participants improve their self-confidence and self-esteem. The results showed that the score of self-confidence and self-esteem of psychiatric nurses was significantly improved after intervention,

and there was a significant positive correlation between self-confidence and self-esteem. The above result is consistent with the findings of Lin et al.⁴⁸ and Shimizu et al.⁴⁹ Thus, implementation of the Assertiveness Training Program can promote the level of self-esteem of nurses. Nursing managers can effectively conduct special lectures, group discussions, psychological training, and other programs so that nurses can rationally improve self-esteem, obtain more positive emotional experience, and achieve enhanced job satisfaction. In addition, the research results show that psychological intervention methods, such as mindfulness training,⁵⁰ Satir model,⁵¹ and group psychological training,⁵² can effectively enhance individual self-esteem. Researchers can conduct further empirical research on the above intervention methods to enrich the literature regarding research on interventions that influence nurses' self-esteem.

6. Conclusions: suggestions and outlook

6.1. Expand the scope of research

Since the 1980s, self-esteem has been a hot topic of research. However, the field of research and practice are mainly focused on students. The purpose of previous research has been to explore the status of and factors influencing students' self-esteem. There are few research papers on nurses' self-esteem. The research topics are also limited to the correlation between nurses' self-esteem and subjective well-being, job satisfaction, depression, job burnout, and workplace bullying. Moreover, many studies often use self-esteem as an intermediary variable. There are few studies on the factors influencing self-esteem, and studies on intervention strategies are even rarer. The correlation between self-esteem and professional benefit, psychological flexibility, self-efficacy, social support, and work environment can be investigated in future studies. At the same time, it is necessary to expand the scope of longitudinal studies and systematically explore the influence of different intervention methods on the level of self-esteem of nurses and its mechanism of action in order to provide theoretical and practical support for the deepening research on self-esteem. In addition, studies in recent

years have shown that contingencies of self-esteem are more effective than self-esteem in predicting individual psychology and behavior. In the field of contingency, success increases self-esteem and failure reduces self-esteem.⁵³⁻⁵⁵ However, there is no relevant research on nurses' self-esteem in this field. How to combine the self-esteem theory with interventions to help nursing managers stabilize nurses' team is a direction that many nursing researchers must work on.

6.2. Improve research methods

Most of the previous studies on nurses' self-esteem used quantitative research methods, and people can rarely see the results of qualitative research. Self-esteem, as a core indicator in the field of mental health, has significant individual characteristics. Researchers need to use qualitative research methods to further reveal the connotation of self-esteem for nurses and their role as mediators. In addition, many existing scales or questionnaires measuring self-esteem are homogeneous. A single research method may affect the scientific nature of the research results. In the future, questionnaires, interviews, interventions, and other methods of investigations can be used together to make the research more scientific and practical.

6.3. Develop dedicated nurse measurement tool

Cultural patterns have a great influence on self-esteem. At present, the universal scale is used to measure nurses' self-esteem, which is not suitable for the psychological characteristics of the occupational group of nurses. Whether the scales can accurately reflect nurses' self-esteem level or not still needs further verification. Researchers should combine the historical and cultural backgrounds of various countries to develop self-esteem assessment tools having higher levels of reliability and validity, which apply to the actual conditions of nursing groups in order to improve research into nurses' self-esteem.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References

1. Civitci N, Civitci A. Self-esteem as mediator and moderator of the relationship between loneliness and life satisfaction in adolescents. *Pers Individ Differ*. 2009;47:954-958.
2. Gao S, Zhang XK, Xu XL. A meta-analysis of the relationship between self-esteem and mental health: the sample of Chinese college students. *Adv Psychol Sci*. 2015;23:1499-1507 (in Chinese).

3. Li YX, Li YM. Relationship among job burnout, self-esteem, health and intention to quit of nurses. *Chin J Nurs*. 2007;42:392-396 (in Chinese).
4. Ma L, Li HP, Hu Y, Zhang T, Wang DB. Subjective well-being and its influencing factors among nurses. *Chin J Public Health*. 2014;30:215-217 (in Chinese).
5. Du JZ, Zhang X, Zhao Y. Core self-evaluations: a new approach of dispositional research. *Adv Psychol Sci*. 2007;15:116-121 (in Chinese).
6. Wu D, Zhang M, Yan L, et al. Current status and influence factors of turnover intention of nurses in a third-level first-class hospital in Anhui province. *J Nurs*. 2015;22:37-41 (in Chinese).
7. Qian Y. *Study on the Strategy of Retention of Nurses in Tertiary Hospitals*. Zhejiang: Zhejiang University. 2017 (in Chinese).
8. James BW. *The Principles of Psychology*. Vol 1. Cambridge, MA: Harvard University Press. 1890.
9. Coopersmith S. The antecedent of self-esteem. *Am Social Rev*. 1967;34:003-1224.
10. Rosenberg M. Society and the adolescent self-image. *Soc Forces*. 1965;3:1780-1790.
11. Brown JD. Self-esteem and self-evaluation: Feeling is believing. In: Suls JM, ed. *Psychological Perspectives on the Self, Vol. 4. The Self in Social Perspective*. Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc. 1993:27-58.
12. Zhang J. A survey of studies on self-esteem. *JNUAA*. 2002;4:82-86 (in Chinese).
13. Wang Y, Ollendick TH. A cross-cultural and developmental analysis of self-esteem in Chinese and western children. *Clin Child Fam Psychol Rev*. 2001;4:253-271.
14. Tafarodi RW, Swann WB Jr. Self-liking and self-competence as dimensions of global self-esteem: initial validation of a measure. *J Pers Assess*. 1995;65:322.
15. Tafarodi RW, Swann WB Jr. Two-dimensional self-esteem: theory and measurement. *Pers Individ Differ*. 2001;31:653-673.
16. Hu R, Xu JY, Gui WW. The application of positive psychology in clinical nursing. *Chin J Pract Nurs*. 2017;33:95-97 (in Chinese).
17. Diener E, Chan MY. Happy people live longer: subjective well-being contributes to health and longevity. *Appl Psychol Health Well-Being*. 2011;3:1-43.
18. Gao Y, Wang XR, Zeng J, Zan Q, Zhang YA. Influence of nurses sense of control on subjective well-being and mediating role of self-esteem. *Chin Nurs Res*. 2017;31:2601-2604 (in Chinese).
19. Liu HH, Zhang XH, Chang R, Wang W. A research regarding the relationship among intensive care nurses self-esteem, job satisfaction and subjective well-being. *Int J Nurs Sci*. 2017;4:291-295.
20. Xue Y, Zhang X, Xu NQ, Zhou YH, Chen JW. Effect of self-efficacy mediating with self-esteem on marital quality of nurses. *J Mod Nurs*. 2013;19:1034-1036 (in Chinese).
21. Zhou Q, Shi J. Discussion on the relationship among work pressure, satisfaction, organizational commitment and tendency of youth nurses. *Chin J Pract Nurs*. 2014;5:173-174 (in Chinese).
22. Dabirian A, Malekipour S, Kakhki AD. The correlation between nurses self-esteem and job satisfaction in educational hospitals of Khorramabad in 2014. *Off Sci Tech Inf Tech Rep*. 2015;4:2161-2180.
23. Zhang LG, Ma HL, Wang ZJ, Jing TT, Jiang HB. Self-esteem, affective commitment as mediators between work-family enrichment and life satisfaction, job satisfaction among the nursing staff. *Chin J Nurs*. 2016;51:454-458 (in Chinese).
24. Kang KS, Roh SS. A study on self-esteem, self-efficacy, and subjective well-being of university freshmen. *Int Workshop Educ*. 2014;13:579-593.
25. Kim JH, Kang GS. The effects of self-efficacy and collective efficacy on job satisfaction and organizational commitment of nurses. *Korean J Occup Health Nurs*. 2014;23:123-133.
26. Nursing AAOC, Washington. The essentials of baccalaureate education for professional nursing practice. *J Adv Nurs*. 1998;34:724-725.
27. McNeese-Smith DK, Crook M. Nursing values and a changing nurse workforce: values, age, and job stages. *J Nurs Admin*. 2003;33:260-270.
28. Lu LJ, Gao LJ, Hu L. The level of professional values and associated factors among newly employed nurses. *J Nurs Sci*. 2015;30:64-67 (in Chinese).
29. Adeniran RK, Bhattacharya A, Adeniran AA. Professional excellence and career advancement in nursing: a conceptual framework for clinical leadership development. *Nurs Adm Q*. 2012;36:41-51.
30. Huang SS, Liu YS, Zhang XT, Zhang S, Liu YH. Effects of self-esteem and perceived organizational support for male nurses' career success. *Chin J Nurs*. 2016;51:599-603 (in Chinese).
31. Hayes MM, Chatterjee S, Schwartzstein RM. Critical thinking in critical care: five strategies to improve teaching and learning in the intensive care unit. *Ann Am Thorac Soc*. 2017;14:569-575.
32. Gang M. Critical thinking disposition and self-esteem of psychiatric mental health nurses. *J Korean Acad Psychiatr Ment Health Nurs*. 2011;20:404-413.
33. Choi E, Hwang J, Jang I. Effects of nursing practice environment and self-esteem on critical thinking disposition among clinical nurses. *J Korean Acad Nurs Admin*. 2017;23:161-169.
34. Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Annu Rev Psychol*. 2001;52:397-422.

35. Claudia H, Willibald R. The relationships of character strengths with coping, work-related stress, and job satisfaction. *Front Psychol*. 2015;6:1-12.
36. Dong XF, Liu YJ, Wang AX, Lyu PH, Peng ZM. Discussion on the relationship between nurses' job burnout and health-related work inefficiencies. *Chin J Pract Nurs*. 2013;29:1-3 (in Chinese).
37. Jun YJ, Mi HS. Effects of traumatic events, compassion fatigue, self-esteem and compassion satisfaction on burnout of nurses in emergency department. *Korean J Occup Health Nurs*. 2014;23:80-88.
38. Bao MZ, Wu D, Liu Y, et al. A survey of the relationship among mental health, stressors and coping styles of 488 nurses. *Chin Gen Nurs*. 2014;12:843-845 (in Chinese).
39. Michael OE, Nnaemeka CA, Evelyn OO. Influence of self-esteem and demographic variables on anxiety among female nurses. *Res Health Sci*. 2016;1:2470-6205.
40. Chen SX, Ma HX, Zhang L, Chen JQ, Zhang LY. Self-esteem, competitive attitude and psychological health of position competition nurses. *Chin J Health Psychol*. 2014;22:862-864 (in Chinese).
41. Zhang YY, Zuo B. A review of researches on fear management theory of self-esteem. *Adv Psychol Sci*. 2006;14:273-280 (in Chinese).
42. Ou MY. Correlation between work ability and mental factors of nurses in one Grade A hospital of Foshan City, Guangdong Province. *J Mod Nurs*. 2013;19:295-298 (in Chinese).
43. Nie GH, Li YX, Tang ZH. A study on the relationship among workplace bullying, affective commitment and intention to leave. *Chin J Clin Psychol*. 2011;19:113-115 (in Chinese).
44. Rutherford A, Rissel C. A survey of workplace bullying in a health sector organisation. *Aust Health Rev Public Aust Hosp Assoc*. 2004;28:65-72.
45. Meng P, Ting A, Rahman M. Workplace bullying and its association with depression and self-esteem amongst health care workers in selected hospitals in Sarawak. *Med J Malaysia*. 2017;72:46.
46. Nie GH, Wu JD, Wei B. Relationship between workplace bullying, self-esteem, health and job performance among nurses. *Chin J Public Health*. 2013;29:1806-1808 (in Chinese).
47. Abed GA, El-Amrosy SH, Atia MM. The effect of assertiveness training program on improving self-esteem of psychiatric nurses. *J Nurs Sci*. 2015;1:1-8.
48. Lin YR, Shiah IS, Chang YC, Lai TJ, Wang KY, Chou KR. Evaluation of an assertiveness training program on nursing and medical students' assertiveness, self-esteem, and interpersonal communication satisfaction. *Nurs Educ Today*. 2004;24:656-665.
49. Shimizu T, Kubota S, Mishima N, Nagata S. Relationship between self-esteem and assertiveness training among Japanese hospital nurses. *J Occup Health*. 2004;46:296-298.
50. Heppner WL, Kernis MH. "Quiet ego" functioning: the complementary roles of mindfulness, authenticity, and secure high self-esteem. *Psychol Inq*. 2007;18:248-251.
51. Wu YX, Wang Q. The Satir model group psychological intervention's effect on self-esteem of college students. *Chin J Health Psychol*. 2014;22:77-78 (in Chinese).
52. Cao D, Peng WW, Gao F, Li XY, Xu D, Wang DH. Study on influence of group psychological counseling on self-esteem level and psychological pressure of male nursing students. *Chin Nurs Res*. 2015;29:2863-2865 (in Chinese).
53. Crocker J, Luhtanen RK, Cooper ML, Bouvrette A. Contingencies of self-worth in college students: theory and measurement. *J Pers Soc Psychol*. 2003;85:894-908.
54. Crocker J, Park LE. The costly pursuit of self-esteem. *Psychol Bull*. 2004;130:392-414.
55. Zhang RK. The new hot spot in the field of self-esteem – the change of self-worth. *J Hubei U Educ*. 2013;30:101-106 (in Chinese).