SCIREA Journal of Clinical Medicine
ISSN: 2706-8870
http://www.scirea.org/journal/CM
December 20, 2019
Volume 4, Issue 6, December 2019

An Analysis of the Current Situation of Research on Nurses' Compassion Fatigue in China

Zhong Weiwei[1], Li Chunyu[1,*], Zhang Hailian[1]

[1]College of Nursing, Yanbian University, Yanji City, China.

E-mail：852384242@qq.com(Zhong Weiwei)　chyli@ybu.edu.cn(Li Chunyu)

*Corresponding author

Address reprint requests to : Zhong Weiwei　ORCID:0000-0002-9193-2318

College of Nursing, Yanbian University, Yanji City, China.Tel: 15694330910

E-mail: 852384242 @qq.com

Abstract:

With the transformation of China's medical system reform in recent years, it has changed from the patient-centered nursing model to the human health-centered nursing model. The scope of work extends to the prevention of disease, the promotion of health, the freedom from physical and mental pain throughout the life process, at the same time, people pay more and more attention to high-quality nursing and psychological care. However, the complexity of

occupational risk, job competition and nurse-patient relationship in nursing work has brought great pressure on nurses' psychosomatic health. Nurses not only shoulder heavy and intense clinical nursing work, they require continuous updating of their knowledge system and operational skills, but also deal with complex interpersonal relationships with patients and their families. Nursing staff are prone to suffer from Compassion fatigue due to long-term secondary exposure to extreme work-related stress situations. Showing physical, emotional, cognitive and behavioral overloading. It is characterized by sleep disorder, irritability, exhaustion of energy, decline of work efficiency, numbness and apathy, which seriously threaten the physical and mental health of nurses and result in a large loss of nursing talents. Therefore, it is of great practical significance to understand the causes of compassion fatigue, the definition and performance of related concepts, evaluation tools and intervention strategies to improve and improve the health level and nursing quality of nursing staff.

Keywords: Compassion Fatigue；Nurses；Review Literature

With the development of medical and health care, people paid more attention to high quality nursing and humanistic nursing care. Also, more emphasis was placed on psychological care of patients, which required nurses to give their love and compassion as well as their excellent professional qualities. However, there would be negative impacts of mental health on nursing staff for such daily emotional investment, such as energy exhaustion, numbness, insomnia, and gradually increasing Compassion fatigue(Shen, &Jiang, 2011; Harris, Marry, &Griffin, 2015)[1-2]. One study from abroad(Sherman, 2004)[3] has shown that nursing staff, when caring for patients with serious diseases or progressive deterioration and caring for those family members who lost their relatives,increased in compassion fatigue, fear of death and anxiety. Several studies [4-6] have shown that it is easier for nursing staff to appear Compassion fatigue and occupational burnout(Huang, & Qu, 2014; Jiang, Chen, & Zhao, 2013; Zhou, Zhao, &

Wang, 2016). If there were no effective ways to find out and cope with Compassion fatigue, it would not only harm the health of nursing staff, but also affect nursing quality, resulting in a decline in body function, work efficiency, and a more tense relationship between nurses and patients(Priferling, & Gilley, 2000)[7]. There would be an exodus of excellent nursing talents if this phenomenon was not contained, which seriously influences the healthy development of nursing in the country. Therefore, understanding the causes of Compassion fatigue, the definition and performance of related concepts, evaluation tools and intervention strategies is of great importance for improving the health level of nursing staff and nursing quality. This paper summarizes the related researches both at home and abroad in recent years.

1 Related definitions of Compassion fatigue

1.1 Compassion fatigue

The term Compassion fatigue was first put forward by an American scholar named Joinson(Joinson, 1992)[8] in 1992 on *Nursing* ,which was used to describe and investigate the stress that emergency nurses experienced when they saw patients who were suffering from illness, and ultimately led to apathy . There was no strict definition at that time, only the phenomenon was described mainly on people with helpful professions, including pastors, counsellors, etc. In 1995, Figley(Figley, 1995)[9], a psychological professor at Florida State University in the United States, defined it initially as a natural result of emotional stress after being informed that someone with an important relationship has experienced traumatic events. He equated compassion fatigue to secondary traumatic stress or post-traumatic stress disorder, and believed that one could experience similar traumas when listening to patients' painful experiences and emotions. Figley(Figley, 2002)[10] proposed Compassion fatigue as a two-factor model, which consisted of secondary trauma and psychosomatic exhaustion. Later on, Figley redefined Compassion fatigue as a situation of stress and excessive attention towards an individual or the accumulated trauma of patients in one or more harmful ways like

repeatedly experiencing and memories evolving from these traumatic events. Figley showed a state of stress and excessive attention to the. When studying the Compassion Fatigue Self-Test (CFST), Figley found there was an obvious negative tendency of the scale. Therefore, he added another positive factor, that was, Compassion satisfied, where medical workers could do their jobs well, and get happiness and positive emotions to resist negative emotions generated by Compassion fatigue(Zhao, & Hu, 2012)[11] A three-factor model of Compassion fatigue was formed during this period that contained Compassion satisfaction, secondary trauma and psychosomatic exhaustion. Stamm et al(Tamm,1999)[12]. described compassion fatigue as a natural, predictable, treatable, preventable, but not desirable result of caring for people suffering from illness and pain. Maholm (Mcholm, 2006)[13] argued that Compassion fatigue resulted from apathy after a prolonged period of compassion and energy for patients, but seeing no improvement of their condition.

1.2 Relevant concepts defined

Terms associated with Compassion fatigue were secondary traumatic stress disorder（STSD), vicarious traumatization(VT) and burnout syndrome(BS). All of these were psychological disturbances caused by empathy and emotional involvement when helping people. Therefore, the related concepts and essential differences needed to be strictly distinguished in order to better understand and identify Compassion fatigue. STSD was happened during the process when medical staff contacted with the person who was experiencing trauma, and their own psychological distress would be generated, also anxiety, insomnia and other problems(Li, Early, & Mahrer,et al.2014)[14]. Researchers(Cornille, & Meyers, 1995) [15] believed that STSD symptoms could be diagnosed in those helping traumatized people. The difference between STSD and Compassion fatigue was that STSD more likely to occur to health care workers as long as they contacted with traumatized patients, and the process of paying compassion would not be emphasized. It mainly objectively focused on the passive acceptance of traumatic people with painful experiences, thus causing psychological distress to the helper. VT happened to therapists after showing empathy to trauma patients, and was easily impacted by trauma patients. This kind of impact was permanent, cumulative and could

affect the health and life behavior of therapists(Chen, & Wang, 2012) [16]. Pearlman et al(Pearlman, & Saakvitne, 1995)[17]. believed that VT did help to convert the internal experience, cognitive style, world views and values of the helper, and its negative effects were far-reaching. The difference between VT and Compassion fatigue was that Compassion fatigue emphasized the change of "emotion", while VT emphasized the change of "cognition". BS, also known as job burnout and professional burnout, was a kind of syndrome caused by excessive loss of mental energy in the long-term process of dedication to others, and would lead to extreme psychosomatic exhaustion and emotional exhaustion(Hao, 2012) [18]. The difference between BS and Compassion fatigue was that BS not only brought out apathy, but also emphasized the "low sense of individual achievement" whose formation took a long and gradual process. Once it appeared, it was difficult to relieve and cure. While Compassion fatigue occurred suddenly, with appropriate treatment, it could be relieved and cured quickly.

2 The manifestation and mechanism of Compassion fatigue

2.1 Manifestation of Compassion fatigue

The manifestation of Compassion fatigue was usually associated with STSD and BS(Shen, & Jiang, 2011)[1]. Figley pointed out that Compassion fatigue included the manifestations of STSD like repeated experience of traumatic events by helpers, intrusive thoughts, avoidance of related things that cause traumatic events, and sleep disorders. It also showed signs of boredom, depression, anxiety, lack of compassion and so on. Another scholar(Zhao, & Hu, 2012)[11] has suggested that the main symptoms of Compassion fatigue could be divided into three types: job-related symptoms, physical symptoms and emotional symptoms. Job-related symptoms included lack of happiness in work, repression, and decline of empathy to patients. Physical symptoms appeared such as insomnia, muscle soreness, headache, constipation and stomach discomfort. Emotional symptoms included irritability, anxiety and depression, memory loss, being too sensitive etc; any of these symptoms indicated a risk of Compassion fatigue(Collins, & Long, 2003; Gentry, Baggerly, & Baranowsky, 2004) [19-20].

2.2 Mechanism of Compassion fatigue

Figley(1995; 2002)[9-10] analyzed the influencing factors of Compassion fatigue and proposed the mechanism of it. The first step was composed of three parts: the empathy ability of the helper, the empathy concern and the contact with the injured person. The interaction of the three components made the helper empathize to the injured person. The second step was the remaining emotional energy after empathy; Figley(2002)[10] defined it as empathy, the more the remaining empathic pressure, the greater negative impact on the helper. It was beneficial to reduce or heal Compassion fatigue to generate Compassion satisfaction and keep distance from the injured during this period. Thirdly, long-term contact with the victim, accumulated empathy stress and traumatic memory and other negative life factors would contribute to the occurrence of compassion fatigue. When Coetzee et al(Coetzee, & Klopper, 2010)[21]analyzed the concept of Compassion fatigue, the process of Compassion fatigue was summarized and it was believed that Compassion fatigue would go through three processes, that is, Compassion discomfort, Compassion stress and Compassion fatigue. First of all, helpers could be exposed to risk factors, such as continuous contact with the injured and a sense of stress, which led to sympathetic discomfort, a slight decline in job enthusiasm and in empathy, but the discomfort during this period was temporary and could be removed through rest. Secondly, when discomfort could not be effectively alleviated and risk factors continued to act, Compassion pressure on the helper were generated, which would lead to a decrease in tolerance, irritability and lack of clarity and agility of the helper during this period. Finally, the sustained effect of the stress source made the expense of emotional energy much larger than the recovery of emotional energy, and finally led to the occurrence of Compassion fatigue.

3 Assessment tool for compassion fatigue

3.1 Compassion Fatigue Self- Test, CFST（Figley, 1995）[9]

CFST was a two-factor model of Compassion fatigue developed by Figley and was the earliest tool to be applied and popularized. The scale was based on clinical experience and 2 subscales and 40 items were considered. The subjects included Compassion fatigue (23 items) and burnout (17 items),Likert five-point scoring method was used in the scale (1= almost no, 2= occasionally, 3= uncertain, 4= often, 5= always). The Cronbach's α coefficient of the scale ranged from 0.86~0.94. A score of 75 indicated a high risk of Compassion fatigue, and the higher the score was, the higher the risk of Compassion fatigue would happen.The scale has an obvious negative tendency and can't accurately express the positive effect of helping work on nurses. Therefore, in recent years, there are few applications in the research.

3.2 Compassion Satisfaction and Fatigue scale, CSF(Figley, 2010) [22]

In 1996, Stamm and Figley found that although some helpers were at high risk of Compassion fatigue, their work remained in a good condition. Based on this phenomenon, a positive factor, Compassion satisfaction, was added to the original scale. The expanded scale consisted of 3 subscales and 66 items.①23 items were about Compassion fatigue. ②26 items questioned Compassion satisfaction. ③17 items were about burnout. Likert 6-point scoring method was used in the scale and according to their own experience, multiple choice items could be chosen by participants, 0= never, 1= very few, 2= several times, 3= a little frequent, 4= frequent, 5= very frequent. The reliability of CSF scale was with high reliability and the Cronbach's α coefficient of Compassion fatigue dimension was 0.87, dimension of Compassion satisfaction was 0.87, and burnout dimension was 0.90.

3.3 Professional Quality of Life Scale, ProQOL(Hudnall, 2005) [23]

This scale was devised by an American scholar Stamm in 2005 and is most commonly used to measure Compassion fatigue and job burnout for nurses. The scale consisted of 3 dimensions, namely, secondary traumatic stress, physical and mental exhaustion and Compassion satisfaction, with 30 items. 10 items were for each dimension and Likert 5 point scoring method was used, 1= never before, 2= rarely, 3= sometimes, 4 = often so, 5= always. The score of each dimension was independent, and the Cronbach's α coefficient of the scale

ranged from 0.86 to 0.94. Pro QOL was able to test the Compassion fatigue that a helper had developed during the past 30 days in providing help to others.The scale was been revised in the fifth edition, translated into 17 languages and widely used in clinical practice.

4 Current situation of research on nurses' Compassion fatigue at home and abroad

4.1 Current situation of foreign research

There was a great deal of research on Compassion fatigue abroad. Researchers such as Figley and Stamm began their research on compassion fatigue by targeting the health care community. Jennifer et al(Maytum, Heiman, & Garwick, 2004)[24]. in-depth interviewed 20 senior pediatric nurses and the results showed that there was a general feeling of compassion fatigue among pediatric nurses. Hooper(Hooper, Craig, & Janvrin,, et al. 2010)[25] found about 82% of the emergency nurses had moderate to high job burnout, and about 80% of the emergency nurses suffered from Compassion fatigue in an article. Laschinger's study(Laschinger, 2012)[26] showed that nurses were more likely to develop Compassion fatigue when exposed to heavy work for a long time. The results of Mangoulia(Mangoulia, Fildissis, & Koukia, et al. 2011) [27] et al showed that in the departments like ICU, emergency wards, and so on, they were likely to develop Compassion fatigue at a high risk level, 57.9%, which was similar to the results that Sacco had found(Sacco, Ciurzynski, Harvey, & Ingersoll, 2015)[28]. Potter's(Potter, Deshields, & Divanbeigi, et al. 2010) [29Study] also showed that nurses in ICU were at a high level of Compassion fatigue, physical and mental exhaustion, and low level of Compassion satisfaction, which was similar to the results of previous studies. Adams et al(Adams, Figley, & Boscarino, 2008) [30]. also found that the working hours and workload could predict the occurrence of Compassion fatigue, working accident rate and health condition of nurses. These were all related to Compassion fatigue.

4.2 Current situation of domestic research

In recent years, domestic scholars have done a lot of research on job burnout and Compassion fatigue of nurses. Xiao Baojuan and others(Xiao, Liu, & You, et al.2012) [31] used MBI to investigate 179 second and third class hospitals in China, with a total of 9415 subjects. The results showed that the nurses' emotional failure was at the middle level and lacking of personal accomplishment was at a high level. Also, nurses with higher seniority and longer working hours , nurses were easier to decline in work enthusiasm and increase in fatigue sense.This leads nurses to not being motivated to work in the tertiary hospitals and hospitals in the eastern region. Shen Yan(Shen, 2016) [32] showed that the moral dilemma of nurses had a positive correlation with job burnout and secondary trauma in Compassion fatigue. When moral dilemmas increased, there was a risk of Compassion fatigue, and the result was similar to Wu's study(Wu, & Lin, et al. 2018)[33]. Zhao Yunlan et al,(Hu, Zhao, & Min, 2013)[34] who used the Pro-QOL scale to measure the Compassion fatigue status of nurses, found that Compassion satisfaction was negatively correlated with physical and mental exhaustion, accounting for 82% in middle to high level psychosomatic exhaustion. Compared with foreign studies, Chinese nurses were more likely to show Compassion fatigue, consistent with the results of Li Xiaoqin(Li, 2011) [35] . To sum up, there are some current researches on Compassion fatigue in China. The existing studies have mainly focused on some external factors related to job burnout, such as working departments, daily working hours, working years, age, marital status, professional title and position etc(Wu, & Lin, et al. 2018; Hu, Zhao, & Min, 2013; Li, 2011; Zheng, Zhou, & Bo, 2018)[33-36] Few studies have focused on the Compassion fatigue caused by secondary traumatic stress when nurses show empathy to patients and their families.

5 Prevention and treatment of nurses' Compassion fatigue

5.1 Self regulation

Knobloch(Hudnall, 2005)[23] argued that Compassion fatigue was caused by the constant accumulation and transformation of Compassion discomfort. When nurses felt uncomfortable,

stress could be relieved by rest and staying away from stressors, which could effectively avoid Compassion fatigue.A young nurse can also ask an older nurse or head nurse to arrange for the two to work together to improve the skills of new nurses in coping with Compassion fatigue(Zhang, Liu, & Xu, et al. 2016)[37]. Njiar(Najjar, Davis, & Beck-Coon, et al. 2009) [38] suggested that professional trauma training could increase nurses' self-efficacy and protect them from Compassion fatigue. Yoder(Yoder, 2010)[39] believed that compassion fatigue could be effectively reduced through adequate sleep, communication with family and friends, a healthy diet, regular work, proper exercise, and learning to reject unreasonable work and demands. Laschinger(Laschinger, 2012)[26] proposed personal coping strategies and job handling strategies, which included paying more attention to their own attitudes and responses, doing exercise properly, learning to strengthen sense of humor, cultivating a good attitude towards life, learning how to manage stress and how to deal with it, etc. Job processing strategies included applying for holidays to travel, learning to refuse at work, flexible scheduling, developing good co-worker relationships, strengthening nurse education and training, developing the ability to resist negative emotions and enhancing nurses' coping skills. In addition, when consumption of the emotional energy was greater than recovery, and beyond the ability of self-regulation, a psychiatrist could be turned to as soon as possible to solve the Compassion fatigue.

5.2 Education intervention and system support

Foreign studies(Moon, Kim, & Kim, et al. 2014)[40] have shown the higher education one got, the deeper love one would have for the profession. Drury(Drury, Craigie, & Francis, et al. 2014) [41] suggested that increasing social support, strengthening infrastructure support, and giving positive recognition and praise to nurses' work could effectively alleviate Compassion fatigue. Xiao Baojuan(Xiao, Liu, & You,et al. 2012) [31] and Hu Xiaoying (Hu, Zhao, & Min, 2013)[34] showed that the level of Compassion fatigue of nurses who have accepted standardized training was much lower than those of common nurses. Studies have shown that (Flarity, Gentry, & Mesnikoff, 2013; Wei, 2017; Wang, 2017)[42-44], based on the core theory " Compassion Fatigue Resiliency" (CFR) proposed by an American psychologist Eric Gentry,

interventions for nurses through introducing the mechanism, influencing factors and coping skills of Compassion fatigue could effectively alleviate the phenomenon of Compassion fatigue. The scores of Compassion fatigue in the experimental group were significantly lower than in the control group, and the score of psychological elasticity was higher than that in the control group. The specific intervention method was to first let the trial group learn the contents of the intervention strategy of Compassion fatigue and elasticity of emergency nurses every week. In the second part, the authors set up a WeChat group for the subjects of the experimental group, using WeChat group to provide multimedia resources, including related theoretical materials of compassion fatigue,a meditation relaxation course and its audio.The results show that this strategy can effectively alleviate the phenomenon of Compassion fatigue.Therefore, in clinical work, regular standardized training should be carried out to make nurses understand the causes, symptoms and effective coping strategies of Compassion fatigue, then establish early stress relief mechanisms, and try to avoid Compassion fatigue to a greatest extent. At the same time, due to the specificity of nursing jobs, the health management department should allocate manpower reasonably to ensure the number of clinical nurses, strictly make the contents of nurses' work clear, and arrange for a reasonable number of nurses. Hospital managers should adopt a flexible scheduling system, reasonably arrange shifts, shorten the working time of each shift as far as possible, avoid excessive fatigue, increase the proportion of nurses when conditions permit, lighten the burden of nurses' work,allocate nurses’work and rest time reasonably,properly improve the salary treatment and humanistic care of nurses,and ensure the quality of nursing in order to minimize the phenomenon of compassion fatigue .

6 Conclusion

In recent years, the relationship between nurses and patients has become increasingly tense and injury incidents have come up frequently. Nursing staff were not only faced with great pressure at work, but also a great deal of emotional pressure from the nurse-patient aspect. As

a result, the phenomenon of Compassion fatigue of nurses in China has been aggravated in recent years, which has seriously affected the development of nursing in the country. At present, with the development of nursing science and further research on nurses' Compassion fatigue, foreign scholars have gradually developed the corresponding evaluation tools and analyzed the influencing factors from the research theory. They have studied Compassion fatigue intervention strategies and preventive measures, However, due to the late start of the field in China, it is mainly aimed at the investigation of nurses' job burnout and Compassion fatigue. Although some scholars have translated and revised the evaluation tools and the corresponding intervention methods abroad, they are only aimed at a certain department and lack representativeness and authority. Therefore, there is still a lack of authoritative Compassion fatigue evaluation tools, policy-oriented, authoritative prevention and targeted coping strategies.Therefore, China should consider the true state of the nursing staff in the country, actively develop suitable evaluation tools, and describe the present situation of Compassion fatigue of nurses in our country and strengthen longitudinal studies and case studies especially for departments with severe Compassion fatigue, such as ICU, emergency, pediatrics, and so on. Besides, factors and effective counter measures need to be found to form more systematic intervention models and intervention content. Also, some provinces can be taken as pilot projects, and then spread to the whole country, thus helping to solve the phenomenon of nurses' Compassion fatigue and maintaining the healthy and stable development of nursing talent in China.

References

[1] Shen J, & Jiang Al. Current status of research on Compassion fatigue of health care workers. Chinese Journal of Nursing. 2011;46(9):939.941. DOI:10.3761/j.issn.0254-1769.2011.09.043

[2] Harris C, Marry T, Griffin Q. Nursing on empty:compassion fatigue signs,symptoms and system interventions. Journal of Christian Nursing. 2015;32(2):80.87．DOI：

10.1097/CNJ.0000000000000155

[3] Sherman D,Ferrell BR,Coyle N. Nurses' stress and burnout. American Journal of Nursing. 2004;104(10): 48.56. DOI：10.1089/lap.2006.16.418

[4] Huang XJ, Qu Y. Analysis of the degree of Compassion fatigue of nurses in ICU.Journal of Qilu Nursing. 2014;20(8): 55.57. DOI: 10.3969 /j. issn.1006 － 7256.2014.08.025

[5] Jiang N, Chen XZ, Zhao Y. The present status and influencing factors of compassion fatigue among nurses in oncology department. Chinese Journal of Nursing. 2013;48(5): 439.441. DOI：10.3761/j.issn.0254-1769.2013.05.018

[6] Zhou Y.J, Zhao LF, Wang AH. A study on the Compassion fatigue of Nurses in Infectious Diseases Hospital and its related factors. Journal of Clinical Medicine in Practice. 2016;20(22): 221.224. DOI：10.7619/jcmp.201622082

[7] Priferling JH, Gilley K. Overcoming compassion fatigue. Faro prat Manage. 2000;7(4): 39.46. DOI：http://dx.doi.org/

[8] Joinson C. Coping with compassion fatigue. Nursing. 1992;22(4):118.119. DOI：EP1086768A1

[9] Figley CR. Compassion fatigue: coping with secondary traumatic stress disorder in those who treat the traumatized. New York: Bnrnneg Msael. 1995;178-208. DOI：10.3928/0279-3695-19961101-26

[10] Figley CR. Treating compassion fatigue. Great Britain: Brun-ner-Routledge.2002:157.

[11] Zhao YL, Hu XY. Advances in the study of Nurses' Compassion fatigue.Chinese Nursing Management. 2012;12(12): 49.52.

[12] Tamm BH. Secondary traumatic stress: self-care issues for clinicians, researchers, and educators. 2nd ed. Baltimore, MD: Sidran press. 1999:10.

[13] Mcholm F. (2006). Rx for Compassion fatigue. Journal of Christian Nursing. 2006;23(4):12.19.DOI：10.1097/00005217-200611000-000

[14] Li A, BA,Early SF, Mahrer NE, MA, Klaristenfeld JL, et al. Group cohesion and organizational commitment：protective factors for nurse residents' job satisfaction, compassion fatigue, compassion satisfaction, and burnout. Journal of Professional Nursing. 2014:30(1):89.99.

[15] Cornille TA, Meyers TW. Secondary traumatic stress among child protective service workers: prevalence, severity and predictive factors. Trauma tology. 1995;5(1): 15.31.DOI：10.1177/153476569900500105

[16] Chen HY, Wang WH. Present situation of research on sympathetic fatigue of nurses. Nursing Journal of Chinese People′s Liberation Army. 2012;29(7A): 39.43.

[17] Pearlman L, Saakvitne K. Treating therapists with vicarious traumatization and Secondary traumatic stress disorders. New York: Brunner Mazel. 1995:51-64.

[18] Hao JM. A study on the occurrence and prevention of psychosomatic exhaustion syndrome in nurses .The Medical Forum. 2012;16(36): 4896.4897.

[19] Collins S, Long A. Working with the psychological effects of trauma: consequences for mental health-care workers: a literature review. Journal of Psychiatric and Mental Health Nursing. 2003;10(4):417.424.

[20] Gentry JE, Baggerly J, Baranowsky A. Training as treatment: Effectiveness of the certified compassion fatigue specialist training. International Journal of Emergency Mental Health. 2004;6(3):147.155.

[21] Coetzee SK, Klopper HC. Compassion fatigue within nursing practice: a concept analysis. Nurs Health Sci, 2010;12(2):235.243.DOI：10.1111/j.1442-2018.2010.00526.x

[22] Figley. Compassion satisfaction and fatigue test [EB/OL]. [2010-07-20]. from http://www.i-su.edu/~bst amm/tests. htm.

[23] Hudnall SB, The ProQOL manual：the Professional Quality of Life Scale：Compassion satisfaction, burnout & compassion fatigue/secondary trauma scales. Baltimore: Sidran Press. 2005:4.17.

[24] Maytum JC, Heiman M, Garwick AW. Compassion fatigue and burnout in nurses who work with children with chronic conditions and their families. Journal of Pediatric Health Care, 2004;18(4):171.179.DOI：10.1016/j.pedhc.2003.12.005

[25] Hooper C, Craig J, Janvrin DR, Wetsel MA, Reimels E. Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected in patient specialties.Journal of Emergency Nursing. 2010; 36(5): 420.427.DOI：10.1016/j.jen.2009.11.027

[26] Laschinger HK, Job and career satisfaction and turnover intentions of newly graduated nurses.Journal of Nursing Management. 2012;20(4): 472.484.DOI：10.1111/j.1365-2834.2011.01293.

[27] Mangoulia P, Fildissis G, Koukia E, Alerizopoulos G, Katostaras T. Factors associated with compassion fatigue among ICU nurses in Greece . Critical Care. 2011;15(1):489.DOI：10.1186/cc9909

[28] Sacco TL, Ciurzynski SM, Harvey ME, Ingersoll GL. Compassion satisfaction and compassion fatigue among critical care Nurses. Critic Care Nurses. 2015;35(4): 32.43.DOI：10.4037/ccn2015392

[29] Potter P, Deshields T, Divanbeigi J, Berger J, Cipriano D, Norrist L, et al. Compassion fatigue and burnout: prevalence among oncology nurses. Clinical Journal of Oncology

Nursing. 2010;14(5): 56.62.DOI：10.1188/10.CJON.E56-E62

[30] Adams RE, Figley CR, Boscarino JA. The compassion fatigue scale：Its use with social wokers following urban disaster. Res Soc Work Pract. 2008;18(3): 238.250. DOI：10.1177/1049731507310190

[31] Xiao BJ, Liu K, You LM, Zhang LF, Ma L, Wang L, et al. Investigation and Analysis on the work burnout of Nurses in the second and third Class Hospitals of China . Journal of Nursing Science. 2012;27(24): 64.67.DOI:10.3870/hlxzz.2012.24.064

[32] Shen Y. A study on the correlation between the moral Dilemma of Nurses and Compassion fatigue . Journal of Nursing Administration.2016 ;16(6): 398.434.

[33] Wu Y.D, Lin Q, Cai YY, He SY, Xu N, Wang DH. Analysis of influencing factors of sympathetic fatigue in Neurosurgical Nurses. Journal of Nursing(China). 2018;25(1): 65.69.[DOI] 10.16460/j.issn1008-9969.2018.01.065

[34] Hu XY, Zhao YL, Min G. Investigation on the related factors of sympathetic fatigue in Clinical Nurses. Journal of Shanghai Jiaotong University(Medical Science). 2013;33(6): 857.862.DOI：10.3969 /j.issn.1674-8115.2013. 06.032

[35] Li XQ. A study on the relationship between Compassion fatigue and Job satisfaction of Medical staff . Chongqing: southwest University, 2011.

[36] Zheng MW, Zhou JP, Bo HY. Investigation on the related factors of sympathetic fatigue in the nursing staff of emergency department . Shanghai Nursing. 2018;25(1): 55.57.

[37] Zhang QQ, Liu XD, XuLY., Liu X, Li L, Advances in the study of nurses' sympathetic load .Modern Clinical Nursing. 2016;15(4): 76.79.DOI:10．3969 ／ j．issn．1671－8283．2016．04．019

[38] Najjar N, Davis LW, Beck-Coon K, Carney Doebbeling C. Compassion fatigue: a

review of the research to date and relevance to cancer-care providers. Journal of Health Psychology. 2009;14(2):267.277.DOI：10.1177/1359105308100211

[39] Yoder EA, Compassion fatigue in nurses. Applied Nursing Research Anr. 2010;23(4): 191.197.DOI：10.1016/j.apnr.2008.09.003

[40] Moon S, Kim DH , Kim EJ, Kim YJ, Lee S. Evaluation of the validity and reliability of the Korean version of the Nursing Professional Values Scale—Revised. Nurse Education Today.2014; 34(3): 325.330.DOI：10.1016/j.nedt.2013.06.014

[41] Drury V, Craigie M, Francis K, Aoun S, Hegney DG. Compassion satisfaction, compassion fatigue, anxiety, depression and stress in registered nurses in Australia: phase 2 results. Journal of Nursing Management. 2014; 22(4):519.531.DOI：10.1111/jonm.12168

[42] Flarity K, Gentry JE, Mesnikoff N. The effectiveness of an educational program on preventing and treating compassion fatigue in emergency nurses. Advanced Emergency Nursing Journal. 2013;35(3): 247.258．DOI：10.1097/TME.0b013e31829b726f

[43] Wei XH, Application of Compassion fatigue Elastic Program in relieving sympathetic fatigue of Emergency Nurses . Journal of Nursing Administration. 2017 ;17(2): 150.152.

[44] Wang J. Observation on the effect of Compassion fatigue training on relieving sympathetic fatigue of Emergency Nurses. World Latest Medicine Information.2017;17(56):161.163.DOI：10.3969/j.issn.1671-3141.2017.56.135