



Correlation between nurses' self-compassion, mental state and job burnout

Han Lingyu¹, Ronnell D. Dela Rosa²

¹*The First Affiliated Hospital of Henan University, China*

^{1,2}*Philippine Women's University, Philippines*

Corresponding email: 2020t0857@pwu.edu.ph

ABSTRACT

With the development of society, the demands of patients for various nursing services are increasing, and the shortage of nurses does not match, which leads to negative emotions such as anxiety, depression, and job burnout among nurses. This study sought to investigate the status quo of job burnout of clinical first-line nurses and analyzes the relationship between self-compassion, mental state, and job burnout. The study is descriptive and the survey site is in a Chinese hospital. Using the convenience sampling method, 222 clinical nurses in the third-level general hospital of Henan Province were selected as the subjects of this study. The survey was conducted using a general data survey form, Nurse Burnout Scale, Self-Compassion Scale, and Symptom Self-Rating Scale (SCL-90), Data were analyzed using frequency counts, percentages, mean, and Pearson Product Moment Correlation statistics. Based on the findings, The influence model of self-help on SCL-90 and the relationship between emotional exhaustion and personal achievement is the indirect mediation model, while the influence model of self-help on SCL-90 and the relationship of individuation is the complete mediation model. The survey results are intended to provide a theoretical basis for nursing managers to take preventive measures in advance to reduce nurses' job burnout.

ARTICLE INFO

Received : August 3, 2021

Revised : August 17, 2021

Accepted : October 22, 2021

KEYWORDS

*Job burnout, Mental state,
Nurses, Self-compassion,*

Suggested Citation (APA Style 7th Edition):

Lingyu, H. & Dela Rosa, R.D. (2021). Correlation between nurses' self-compassion, mental state and job burnout. *International Research Journal of Science, Technology, Education, and Management*, 1(2), 162-169. <https://doi.org/10.5281/zenodo.5726582>

INTRODUCTION

With the continuous improvement of economic and social development, the medical care model has also undergone corresponding changes. Modern nursing has gradually changed from a patient-centered and responsible care model to a person-centered holistic care model, namely physical, psychological, and social. As well as the four-in-one complete nursing care model of spirituality; at the same time, the in-depth development of high-quality nursing services across the country has improved the quality of nursing care and the level of nursing technology, comprehensively promoted the development of hospital nursing work, and put forward higher requirements for clinical nursing work. In addition to completing the therapeutic work of patients, clinical nurses also need to embody humanistic care in their daily clinical work, improve the level of high-quality nursing services, and increase the satisfaction of patients and their families and the whole society. This is one of the core contents of clinical nursing management.

Although the medical care model is becoming more and more perfect, human health concepts have also improved, people's requirements for work have gradually changed from satisfying material needs to obtaining happiness, satisfaction, and self-realization (Irina, 2020). When there is a significant gap between their ideals and their jobs, it is easy to cause psychological imbalance or even leave (Sallie, 2004). Nurses are an important part of the medical system. However, factors such as poor treatment of Chinese nurses, strained doctor-patient relationship, and long-term work pressure can lead to emotional exhaustion, reduced job accomplishment, job burnout, and strong willingness to quit (Jen, 2019) (Chen, 2019).

Job burnout refers to physical and mental fatigue caused by excessive work pressure in the medical and service industries (Miller, 1989). Nursing work is a high-risk work related to the life and safety of patients. Responses to emergencies during the work process and repeated checks to ensure safety incidents can easily put nurses in a state of high mental stress. Faced with the pain, negativity, and helplessness of patients every day, coupled with the reversed shift system, long hours of work, less value-added space and relatively low wages, nurses are prone to empathy fatigue and psychological burnout feel. Faced with the status quo of nurses' job burnout and mental health problems that need to be solved urgently, it is more difficult to only start with external factors such as changing their own working environment, calling on the society and management personnel to provide social support to reduce nurses' occupational pressure, and it is also difficult for nurses to learn how to follow them. Starting with internal factors, using positive psychological resources to make yourself more actively face work pressure, effectively improve job burnout, and maintain physical and mental health. Some scholars have found that the incidence of job burnout among nursing staff is higher, which is related to the environment and the personal attitude of nurses (Ridley, 2009).

When faced with failure or pain, nurses can actively adjust their personal emotions and express sympathy for themselves. Or empathy, also known as self-compassion (Miller, 2020). Self-compassion refers to the ability of an individual to express sympathy or sympathy for oneself in the face of failure, deficiency or pain (Jones, 2017). Some studies have found that self-compassion can help individuals cope with negative life events and buffer their negative effects (Bluth, 2017). Self-compassion is a psychological concept proposed by the famous American psychologist Neff on the basis of absorbing the essence of Eastern Buddhist culture. Self-compassion contains three components, namely, self-kindness and the universal sexy sense of common humanity), mindfulness. People with high self-compassion rarely adopt negative coping styles when facing their own experiences, such as self-criticism, contemplation, suppressed thinking, and avoidance (Kirkus Reviews, 2020). At the same time, improving personal self-compassion can effectively reduce job burnout. However, there are few studies on the correlation between self-compassion and job burnout (Vaillancourt, 2020). This study aims to understand the problem of job burnout from three dimensions, explore the relationship between job burnout and mental state, and the role of self-compassion as an intermediary, and provide some ideas and effective interventions for regulating nurses' emotions.

METHODS

Research Design

This study used a cross-sectional survey method to investigate the current status of job burnout among clinical first-line nurses, and analyze the relationship between self-compassion, mental state and job burnout.

Respondents

The subjects of this study were 222 nurses in two tertiary general hospitals in Henan Province, China In March 2020, Inclusion criteria: ① Agree to participate in this study; ② Registered nurses who have obtained a nurse's practice certificate; Exclusion criteria: ① Training nurses; ② Nurses who have worked for less than one year; ③ Have a continuous leave for more than one month in the first half of the year. All enrolled patients signed an informed consent form. Male: the age of the patient was 28.47 ± 5.96 , gender: 20 (9.0%) males, 202 (91.0%) females; first degree: technical secondary school 35 (15.8%) There are 146 (65.8%) undergraduates, 41 (18.5%) undergraduates; the highest degree: 3 (1.4%) technical secondary school, 96 (43.2%) junior colleges, 121 (54.5%) undergraduates, and 2 graduate students (0.9%) people; nursing age: <3 years 45 (20.3%) people, 3-5 years 28 (12.6) people, 6-10 years 73 (32.9%) people, > 10 years 76 (34.2%) people; marriage Status: 103 (46.4%) without a spouse, 119 (53.6%) with a spouse; Number of children: 109 (49.1%) without children, 57 (25.7%) with 1 child, 56 (25.2%) with 2 or more people.

Instrument

General information questionnaire, including general information of nurses: gender, age, education level and religious beliefs, etc. Nurse Burnout Scale (Ye Zhihong, 2008): This scale is a self-rating scale, including 3 dimensions (emotional exhaustion, depersonalization, and personal accomplishment), 22 items, of which the lowest score 0 points = means it has never happened. The highest is 6 points = occurs or occurs every day, the higher the frequency, the higher the score. Among them, emotional exhaustion (with a score of 0-54) includes a total of 9 items. ≤ 18 is considered low, 19-26 is considered moderate, and >26 is considered high. The higher the score, the more serious the emotional exhaustion; depersonalization (Refers to the cold attitude of nurses towards patients and lack of emotional fatigue) (0-30 points) including 5 items, ≤ 5 is low, 6-9 is moderate, >9 is high, the score is more The higher the level, the more serious the lack of work fatigue; personal achievement (0-48 points) includes 8 items, <34 is high, 34-38 is moderate, >38 is low, this item is a reverse score , The lower the score, the lower the sense of personal accomplishment. The internal consistency of the scale Cronbach's α coefficient is 0.823: Self-Compassion Scale (Chen Jian, 2011). This scale was translated into Chinese version by Chen Jian et al. in 2011 and tested for reliability and validity. A total of 6 dimensions and 26 items are included, of which there are three dimensions: self-judgment, isolation and excessive addiction are scored in reverse, and the remaining dimensions are scored in a positive direction. Using the 5-point Likert scoring method (1=very inconsistent, 2=-non-conforming, 3=average, 4=conforming, 5=very conforming), the higher the score, the higher the degree of self-compassion. The α coefficient of the scale is 0.84, and the reliability of each dimension is between 0.51 and 0.70.

Symptom Self-Rating Scale (SCL-90): This scale is currently a method commonly used in mental health measurement in my country (Jin Hua, 1986). A total of 10 factors (ie somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, horror, paranoia, psychosis, other-eating and sleeping, etc.), 90 items are included. Using the 5-point Likert scoring method, the higher the score, the lower the level of mental health. In clinical practice, a single factor score ≥ 2 is often classified as a positive result, which reflects that the teste has moderate or more psychological problems.

Data Gathering Procedures

The survey was conducted by the researcher himself. Before the survey, the purpose and significance of the research should be introduced, and the requirements for filling in the questionnaire should be explained, so that the respondent should fill it out carefully. Suggestive language. A total of 222 questionnaires were issued in this survey, and 222 were recovered, with a recovery rate of 100%.

Data Analysis

Use SPSS 22.0 software and process program to carry on statistical analysis to the data. The measurement data were statistically described by mean \pm standard deviation, and the count data were statistically described by frequency and percentage. $P < 0.05$ was considered statistically significant.

RESULTS

Table 1. The job burnout scores of nurses in our hospital (n=222)

Channels	Score	Emotional exhaustion	Depersonalization	Personal accomplishment	Self-esteem	SCL90
Emotional exhaustion	20.81 \pm 14.47	1				
Depersonalization	13.30 \pm 7.74	0.186**	1			
Personal accomplishment	29.93 \pm 12.13	-0.235**	-0.184**	1		
Self-esteem	108.34 \pm 23.89	-0.349**	-0.151*	0.139*	1	
SCL90	124.20 \pm 53.36	0.236**	0.160**	-0.160*	-0.225**	1

Note: * $P < 0.05$, ** $P < 0.01$.

Table 1 shows that clinical first-line nurses have moderate emotional exhaustion, mild depersonalization, and a high degree of personal accomplishment. Among them, emotional exhaustion is negatively correlated with self-compassion, SCL90 is positively correlated, depersonalization is negatively correlated with self-compassion, and SCL90 is positively correlated, Personal achievement and self-compassion are positively correlated, and SCL90 is negatively correlated.

Table 2. The moderating effect of self-compassion on workplace violence and emotional exhaustion, depersonalization, and personal accomplishment

Dependent variable	Predictor variable	B	SE	F	R2	95%CL
Emotional exhaustion	SCL90	0.06	0.02	12.98***	0.056	0.03, 0.10
	Self-esteem	-0.10	0.03	11.68***	0.050	-0.16, -0.04
	Self-esteem \times SCL90	-0.19	0.04	19.01***	0.148	-0.27, -0.11
Depersonalization	SCL90	0.02	0.01	5.76	0.026	0.00, 0.04
	Self-esteem	-0.10	0.03	11.68***	0.050	-0.16, -0.04
	Self-esteem \times SCL90	-0.04	0.02	4.51*	0.040	-0.09, 0.00
Personal accomplishment	SCL90	-0.04	0.02	5.78*	0.026	-0.07, -0.01
	Self-esteem	-0.10	0.03	11.68***	0.050	-0.16, -0.04

Self- esteem×SCL90	0.06	0.03	4.19*	0.037	-0.01, 0.12
-----------------------	------	------	-------	-------	-------------

Table 2 shows that taking gender, age, education level and religious belief as control variables, SCL-90 is divided into independent variables, self-compassion is divided into moderating variables, and the three dimensions of the job burnout scale are used as dependent variables to conduct the moderating effect test in turn. The results found that after controlling for demographic variables, the total effect of SCL-90 total score on emotional exhaustion was 0.06, 95% CI: 0.03-0.10, direct effect was 0.05 ($P < 0.05$), and indirect effect was 0.02; the total effect of SCL-90 total score on depersonalization is 0.02, 95%CI: 0.00-0.04, the direct effect is 0.02 ($P > 0.05$), the indirect effect is 0.01; the total score of SCL-90 is on the sense of personal achievement The total effect is -0.04, 95%CI: -0.07-0.01, the direct effect is -0.03 ($P < 0.05$), and the indirect effect is -0.01. Therefore, the model of the influence of self-compassion on the relationship between SCL-90 and emotional exhaustion and personal accomplishment is an indirect mediation model, and the model of the influence of self-compassion on SCL-90 and depersonalization relationship is a complete mediation model. See.

DISCUSSIONS

The Relationship between Job Burnout and Self-Compassion

This study found that clinical first-line nurses have moderate emotional exhaustion, mild depersonalization and a high sense of personal accomplishment. The emotional exhaustion dimension score is 20.81 ± 14.47 , the depersonalization dimension score is 13.30 ± 7.74 , and the personal accomplishment score is 29.93 ± 12.13 . Emotional exhaustion and depersonalization are negatively correlated with patients' self-compassion, and personal accomplishment is positively correlated with self-compassion. This is consistent with previous studies. People with a higher level of self-compassion have lower levels of job burnout (Ruiz-Fernández, 2021). The results of this study have been investigated and applied in other populations (Maxwell-Jones, 2021) (Fiery, 2016). Therefore, nursing managers can take measures to improve the self-compassion ability of nursing staff, such as regularly holding seminars, training, organizing nursing staff to go out and play, etc., so as to reduce job burnout.

The Relationship between SCL-90 and Self-Compassion

This study found that nurses' self-compassion is at the upper-middle level. Self-compassion can effectively improve the individual's mental and physical health, protect the individual from negative events such as anxiety, depression, failure and frustration, improve psychological quality, and inspire individuals Potential. People with a high level of self-compassion have less negative coping style of thinking when they experience negative emotions from the outside world (María D, 2021), and can adjust their emotions in time to adapt to changes in the outside world (Finlay-Jones, 2017). It is suggested that nursing managers should take measures to improve the level of self-compassion of nurses, so that nurses can quickly adjust to the negative emotions in daily life and work.

The Relationship between SCL-90 and Job Burnout

Occupational burnout is currently a public health problem and an important factor in measuring the mental health of nurses in employment (Al Sabei, 2020). This study found that the job burnout of nursing staff is at a moderate level. These bad mental emotions will affect the nurse's clinical work status, affect the safety of patients, reduce work efficiency, and easily cause adverse events (Van Bogaert, 2014). Therefore, nursing managers should discover the nurse's bad emotions in time. Deal with it early.

The Mediating Role Self-Compassion

This study found that the degree of self-compassion of nurses was negatively correlated with job burnout and SCL-90. That is to say, the higher the level of self-compassion of nurses, the lower their job burnout score and

the healthier their mental health. The model of the influence of self-compassion on the relationship between SCL-90 and emotional exhaustion and personal accomplishment is an indirect mediation model, and the model of the influence of self-compassion on SCL-90 and the depersonalization relationship is a complete mediation model. Self-compassion is a positive attitude towards self, which can quickly change emotions, face difficulties and pains, and face them with a tolerant attitude (Zak Gur, 2021). The current medical environment is tight, and people's requirements for nursing services are getting higher and higher (Abid Hussain, 2020). However, in the actual clinical process of nursing staff, in addition to completing their own jobs, they also have to face pressure from family, scientific research, promotion and other aspects, which are prone to job burnout (Pearce Lynne, 2021). Then it produces negative emotions, showing bad emotions such as indifference and indifference, loss of enthusiasm for work, loss of patience with patients, emotional exhaustion and a sense of isolation. People with high self-compassion have more adaptive emotion regulation strategies and coping styles (Kirkus Reviews, 2020), have a positive evaluation and understanding of themselves, and can connect their own setbacks and encounters with others, thereby reducing loneliness.

Strengthening nurses' self-compassion ability plays an important role in dealing with their own emotional problems, and the level of nurses' self-compassion ability directly affects the nurse-patient relationship (Walker, 2009). Therefore, it is necessary to increase the training of nurses' self-compassion ability, raise the level of self-compassion of nursing staff, give full play to their ability to deal with frustrations and difficulties encountered in life and work, and to deal with negative emotions, reduce negative emotions, and improve work enthusiasm. Nursing managers should pay attention to the psychological problems of front-line clinical nurses and give corresponding help. Help nurses learn to manage stress, regulate bad emotions, and improve physical and mental health. You should face your emotions correctly. You should not blindly avoid negative emotions. You should find suitable ways to release your stress and bad emotions. If you can't deal with it, you should seek help in time. As a nursing manager, one should not only care about the health of the patient, but also the physical and mental health of the nurse.

CONCLUSION AND RECOMMENDATION

The level of self-compassion and mental health of clinical nurses needs to be improved. Self-compassion stems from the development of positive psychology. The proposal of self-compassion provides new ideas for the development of nurses' mental health in our country. Nursing managers can improve nursing staff. Level of self-compassion to improve the mental health of nurses. Nursing managers in hospitals should carry out regular psychological training to detect job burnout of nursing staff in advance, and pay more attention to nursing staff in high-risk departments, and take measures in advance to provide psychological care to improve the mental health of nursing staff and promote the quality and safety of hospital care and patient safety.

LIMITATIONS

This study investigated two hospitals in Kaifeng City, Henan Province, China. The surveyed hospitals were too few, and the survey was conducted in only one area, and the results were limited. The next step will be to expand the sample size to verify the survey results.

ACKNOWLEDGEMENT

The authors would like to express our gratitude to our colleagues who agreed to participate in the study. Thank you also to the Health Commission of Henan Province, China for the overwhelming support this research project numbered Wjlx2020449.

REFERENCES

- Abid, H. (2020). Patient Satisfaction with Healthcare Services of Public Hospitals in Outpatient Departments (OPDs) and Policy Implications.
- Al, S., Dawood, S. Leodoro, Ross, L.J., Miner, A., Suja, K., Alaa, A., Masroori, A., Fatma & Al Hashmi, N. (2020). Nursing Work Environment, Turnover Intention, Job Burnout, and Quality of Care: The Moderating Role of Job Satisfaction. *Journal of Nursing Scholarship*, 52(1), 95-104.
<http://dx.doi.org/10.1111/jnu.12528>
- Bluth, K. & Eisenlohr-Moul, T. (2017). Response to a mindful self-compassion intervention in teens: A within-person association of mindfulness, self-compassion, and emotional well-being outcomes. *Journal of Adolescence*, 57, 108. Out of Love: Finding Your Way Back To Self-Compassion. (2020). Kirkus Reviews, <https://www.proquest.com/trade-journals/out-love/docview/2353425282/se-2?accountid=38643>
- Chen, Y., Yue-Liang, L., Wei-Shan, C., Nai-Yun Cheng, Ho, J. & Judith Shu-Chu Shiao. (2019). Patient–Nurse Ratio is Related to Nurses’ Intention to Leave Their Job through Mediating Factors of Burnout and Job Dissatisfaction. *International Journal of Environmental Research and Public Health*, 16(23).
<http://dx.doi.org/10.3390/ijerph16234801>
- Fiery, M.F. (2016). Exploring the impacts of self-compassion and psychological flexibility on burnout and engagement among animal shelter staff: A moderator analysis of the job demands-resources framework and a randomized controlled field trial of a brief self-guided online intervention (Order No. 10245438). ABI/INFORM Global. (1868419031). <https://www.proquest.com/dissertations-theses/exploring-impacts-self-compassion-psychological/docview/1868419031/se-2?accountid=38643>
- Finlay-Jones, A., Kane, R. & Rees, C. (2017). Self-Compassion Online: A Pilot Study of an Internet-Based Self-Compassion Cultivation Program for Psychology Trainees. *Journal of Clinical Psychology*, 73(7), 797-816.
- Finlay-Jones, A., Kane, R., & Rees, C. (2017). Self-Compassion Online: A Pilot Study of an Internet-Based Self-Compassion Cultivation Program for Psychology Trainees. *Journal of Clinical Psychology*, 73(7), 797-816.
<http://dx.doi.org/10.1002/jclp.22375>
- Hua J, Wenyuan W, Mingyuan Z. (1986). Preliminary analysis of SCL-90 assessment results of Chinese normal people. *Chinese Journal of Nervous and Mental Diseases*, (05): 260-263.
<https://kns.cnki.net/kcms/detail/detail.aspx?FileName=ZSJJ198605002&DbName=CJFQ1986>
- Irina, M. Z. (2020). The Right Toto Happiness of Citizens and the Improvement of the Quality of Urban Life. *Union of Jurists of Romania. Law Review*, X(X) (2).
- Jian C, Yan Liangshi Y, Lihua Z. (2011). The reliability and validity of the Chinese version of the Self-Compassion Scale. *Chinese Journal of Clinical Psychology*, 19(06): 734-736.
<https://kns.cnki.net/kcms/detail/detail.aspx?FileName=ZLCY201106007&DbName=CJFQ2011>
- Jiang, H., Ma, L., Gao, C., Li, T., Huang, L. & Huang, W. (2017). Satisfaction, burnout and intention to stay of emergency nurses in Shanghai. *Emergency Medicine Journal: EMJ*, 34(7), 448.
<http://dx.doi.org/10.1136/emered-2016-205886>
- María D Ruizi.org/10.1136/emered-2016-205886-2016-205886" 2017). Satisfaction, bonía D R Máximo J Sánchez - Ruiz & Ángela M Ortega Sánchez - Ruized-2016-205886-2016-205886" 2017). Satisfaction, burnout and intention to stahealthcare professionals during COVID - 19 crisis in Spain. *Research in Nursing & Health*, 44(4), 620-632. <http://dx.doi.org/10.1002/nur.22158>
- Maxwell-Jones, R., Edwards, A. & Knutton, N. (2021). Burnout in Professional Psychotherapists: Relationships with Self-Compassion, Work–Life Balance, and Telepressure. *International Journal of Environmental Research and Public Health*, 18(10), 5308.
- Miller, K.I., Zook, E.G. & Beth, H.E. (1989). Occupational Differences In The Influence Of Communication On Stress And Burnout In The Workplace: Burnout: Causes, Consequences, And Communication Burnout And Communication: *Management Communication Quarterly: McQ* (1986-1998), 3(2), 166.
<https://www.proquest.com/scholarly-journals/occupational-differences-influence-communication/docview/232857585/se-2?accountid=38643>.

- Miller, K. & Kelly, A. (2020). Is Self-Compassion Contagious? An Examination of Whether Hearing a Display of Self-Compassion Impacts Self-Compassion in the Listener. *Canadian Journal of Behavioural Science*, 52(2), 159-170.
- Pearce, L. (2021). From burnout to a top job in nursing research: what I have learned Senior nurse researcher Jill Maben talks about her career path and offers tips for a move into research. *Nurse Researcher* (2),
- Ridley, Jane, RN,M.ScN., C.Neph(C.), Wilson, Barbara, C.Neph(C.), Harwood, Lori, C.Neph(C.) & Laschinger, Heather K. (2009). Work environment, health outcomes and magnet hospital traits in the Canadian nephrology nursing scene: *CANNT Journal*, 19(1), 28-35. <https://www.proquest.com/trade-journals/work-environment-health-outcomes-magnet-hospital/docview/236628588/se-2?accountid=38643>.
- Ruiz-Fernández, M.D., Ramos-Pichardo, J., Ibáñez-Masero, O., Carmona-Rega, M., Sánchez-Ruiz, M.J. & Ortega-Galán, Á.M. (2021). Professional quality of life, self-compassion, resilience, and empathy in healthcare professionals during COVID-19 crisis in Spain. *Research in Nursing & Health*.
- Sallie, T. (2004). Understanding value and its implications for pay equity and the wage gap: A federal government case study (Order No. MQ98997). Available from ABI/INFORM Global. (305201111).
- The Implementation of a Cultural Change Toolkit to Reduce Nursing Burnout and Mitigate Nurse Turnover in the Emergency Department: JEN. (2019). *Journal of Emergency Nursing*, 45(4), 452-456. <http://dx.doi.org/10.1016/j.jen.2019.03.004>
- Vaillancourt, E.S. & Louise, W. (2020). The Intermediary Role of Burnout in the Relationship between Self-Compassion and Job Satisfaction among Nurses: Perspectives en Nursing. *Canadian Journal of Nursing Research*, 52(4), 246-254. <http://dx.doi.org/10.1177/0844562119846274>
- Van Bogaert, P., Timmermans, O., Weeks, S.M., van Heusden, D., Wouters, K. & Franck, E. (2014). Nursing unit teams matter: Impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care, and patient adverse events - A cross-sectional survey. *International Journal of Nursing Studies*, 51(8), 1123. <http://dx.doi.org/10.1016/j.ijnurstu.2013.12.009>
- Walker, M.S. (2009). Compassion within the relationship between the nurse and the older adult patient (Order No. 3348467). *Nursing & Allied Health Premium*. (304861490). <https://www.proquest.com/dissertations-theses/compassion-within-relationship-between-nurse/docview/304861490/se-2?accountid=38643>
- Zak, G. (2021). Autobiography, Self-care, and Compassion in Italian Humanism: The Case of Giovanni Conversini's *Rationarium vite*. *Antike und Abendland*, 67(1).
- Zhihong Y, Hong L. & Anli J. (2008). A study on the norms and diagnostic criteria of occupational burnout among nurses in Hangzhou area. *Chinese Journal of Nursing*, (03):207-209. <http://kns.cnki.net/kcms/detail/detail.aspx?FileName=ZHHL200803009&DbName=CJFQ2008>.