An evaluation of a positive psychological intervention to reduce burnout among nurses

Yuan-hui Luo[a,b], Hui Li[b], Virginia Plummer[c,d], Wendy M. Cross[e], Louisa Lam[c,e], Yu-fang Guo[f], Yi-zhen Yin[b], Jing-ping Zhang[b,*]

[a] *School of Nursing, The University of Hong Kong, Hong Kong SAR, China*
[b] *Nursing Psychology Research Centre of Xiangya School of Nursing, Central South University, Changsha, Hunan, China*
[c] *School of Nursing and Midwifery, Monash University, Victoria, Australia*
[d] *Peninsula Health, PO Box 52, Frankston 399, Australia*
[e] *School of Nursing and Healthcare Professions, Federation University Australia, Victoria, Australia*
[f] *College of Nursing, Hebei University, Baoding, Hebei, China*

ARTICLE INFO

ABSTRACT

This quasi-experimental study aimed to evaluate the positive psychological intervention of recording three good things on alleviating nurses' burnout. Eighty-seven nurses with burnout were recruited. Nurses in the study group recorded three good things using communication tool *WeChat* for six months, no records were made in the control group. After intervention, the score of exhaustion decreased considerably for nurses in the study group. Nurses recording three good things on average twice a week returned the lowest score of exhaustion. This intervention combined with appropriate surveillance and encouragement is recommended to reduce nurses' burnout and create a positive work environment.

Introduction

Burnout is usually regarded as a response to chronic professional stressors like high workload, unfavourable emotion and complex interpersonal relationships, which is mainly manifested as exhaustion, cynicism and reduced professional efficacy (Maslach, Schaufeli, & Leiter, 2001). Nurses' interactions with patients and their families may include exposure to unbearable workloads, substandard staffing levels, limited decision latitude and patient aggression, which make them susceptible to burnout (Klopper, Coetzee, Pretorius, & Bester, 2012; Yoon & Sok, 2016). A recent meta-analytic study found that medical area nurses experienced high levels of burnout: the prevalence rates of high emotional exhaustion, high cynicism and low professional efficacy were 31%, 24% and 38% respectively (Molina-Praena et al., 2018). Large-scale studies also revealed high levels of burnout in Chinese nurses, and 35.5% of nurses had burnout scores above norms for medical personnel (Wang, Kunaviktikul, & Wichaikhum, 2013; Zhou et al., 2015). The adverse outcomes of burnout have an impact on both patients and nurses: nurses with burnout might have implications for patient safety, especially with regard to nosocomial infections, medication errors and patient falls (Van Bogaert et al., 2014); nurses' own health is also threatened and psychological problems such as depression

and insomnia are verified to be associated with burnout (Kousloglou et al., 2014; Lin, Lin, Cheng, Wu, & Ou-Yang, 2016). Turnover is another intractable problem resulting from burnout, 22.5% of nurses expressed their intention to leave, in a study carried out in Shanghai, China (Jiang et al., 2017). Therefore, it is important to take measures to alleviate nurses' burnout to improve patient and nurse related outcomes.

Some interventions have been developed to ameliorate nurses' burnout and are categorized at "organisational-level" and "individual-level" interventions. Organisational interventions mainly refer to change in workplace environments and increase in job resources for nurses. Reducing workload, recruiting more staff, empowering nurses, providing professional development opportunities and co-worker supports were the most frequently used interventions (Ozbas & Tel, 2016; Rickard et al., 2012; Wittenberg-Lyles, Goldsmith, & Reno, 2014). Although most of these interventions yielded good results in reducing nurses' burnout, implementing them required significant external resources and generalization was not easy to achieve. At the individual-level, strategies that alleviated burnout by relaxation techniques, changing cognition, and improving coping mechanisms were commonly employed. Significant improvement was found early in the post intervention period, while they were not sustained. (Gunusen & Ustun,

2010; Sallon, Katz-Eisner, Yaffe, & Bdolah-Abram, 2017). In addition, the majority of individual-level interventions played a role in alleviating exhaustion of nurses while little change could be found in other manifestations of burnout, such as poor interpersonal relationship and reduced personal accomplishment (Deible, Fioravanti, Tarantino, & Cohen, 2015; Gunusen & Ustun, 2010).

Positive psychological interventions (PPIs) used in this study are defined as treatment methods or intentional activities to enhance a person's positive emotions, cognitions and behaviours. In these methods and activities, people are usually required to finish a systematic exercise, for example, recording three good things, practicing gratitude, giving positive responses or using personal strengths (Sin & Lyubomirsky, 2009). During the past decade, PPIs have been widely used by researchers in both forms of single exercise and multi-exercise package. One online intervention indicated that compared with those doing six exercises, the depression in participants who undertook two or four exercises decreased to a larger degree (Schueller & Parks, 2012). A meta-analysis including PPIs and participant students, as well as some patients with mental health conditions such as anxiety and depression showed effectiveness in enhancing participants' well-being and reducing depressive symptoms (Bolier et al., 2013). Individuals recording three good things on Facebook every day were also found to promote positive emotions (Munson, Lauterbach, Newman, & Resnick, 2010). PPIs are emerging effective methods to improve the mental health of various populations, however their application in nursing has been limited (Rippstein-Leuenberger, Mauthner, Bryan Sexton, & Schwendimann, 2017). Therefore, this study aimed to explore whether the most widely used PPI, the exercise of recording three good things, could alleviate nurses' burnout.

Methods

Design and participants

The study used a quasi-experimental research design involving a study group and a control group. In order to avoid the contamination effect, material in the control group was collected from January to June 2016 while the intervention was applied to the study group from July to December 2016. The measures of burnout were administered prior to the intervention (T1), and six months after completion of the intervention (T2). The intervention was applied to nurses in the study group using *WeChat*, a common communication tool with mobile texting and voice messaging service in Mainland China. The functionality is equivalent to Facebook and WhatsApp. Based upon previous research and estimate of a 0.40 effect size (Fortney, Luchterhand, Zakletskaia, Zgierska, & Rakel, 2013), a sample size of 41 per group would be needed to yield 80% power at a 0.05 significance level.

Nurses from a tertiary hospital were invited to participate in this study. Inclusion criteria were: (i) officially employed licensed nurses; (ii) burnout score higher than 1.49; (iii) had a telephone on which *WeChat* could be installed. Intern nurses and nurses during maternity leave were excluded. Seven hospital departments were selected as follows: two medical departments, two surgical departments, one paediatric department, one operating room and one intensive care unit. Each department includes two units (unit 1 and unit 2). For example, a respiratory medical department has two units, both of them receiving patients with respiratory disease. The severity of disease, the number of nurses and patients and the physical environment are similar in both units. For the control group, a total of 129 questionnaires were distributed to participants in unit 1 in each department. Among the 125 effective questionnaires, 94 participants showed burnout. Interval sampling was used to select 47 participants from 94 participants, the order of which was produced randomly by the computer. One participant refused to participate and 46 participants were recruited to the control group. The same number of participants was recruited from unit 2 of each department for the study group. For the study group ninety

participants were screened for burnout by using the self-administered MBI-GS questionnaire from 126 effective results. Forty-five participants were selected by the same interval sampling. Four participants declined to participate and therefore 41 participants were included in the study group.

Ethical consideration

This research received ethical approval by the Directorate of Hospital and the Institutional Review Board of the University (Approval number 2015053). Participants were advised that participation was voluntary and it was their right to withdraw at any time. Privacy and confidentiality were also protected. The data were locked in one computer accessed only by the researchers and only used for research purposes.

Measurements

General information form

The questionnaire included demographic information such as sex, age, marital status, educational level, monthly income and work-related information such as length of employment, number of monthly night shifts, professional title and work department.

Maslach burnout inventory-general survey (MBI-GS)

The Chinese version MBI-GS was used to measure nurses' burnout, which was translated and revised by Li and Shi (2003). The three dimensions of burnout in this new version were further developed and conceptualized in slightly broader terms: exhaustion, cynicism and reduced professional efficacy, which correspond to emotional exhaustion, depersonalization and reduced personal accomplishment in the old version (Maslach et al., 2001). It is a 16-item self-administered scale and each dimension had good reliability and validity. Higher scores on the subscales of exhaustion and cynicism indicated more burnout while the subscale of reduced professional efficacy was inverse. In this study, Cronbach's α for each dimension was 0.91, 0.80, and 0.87. The total score of burnout was divided into three levels: no burnout (0–1.49), some burnout (1.50–3.49), serious burnout (3.50–6) (Kalimo, Pahkin, Mutanen, & Topipinen-Tanner, 2003).

Implementation of the intervention

As described, recording three good things is an exercise included in PPIs. It is recommended that participants record three good things every night five times a week before sleeping. Such things could be ordinary, minor or important. A reflection on why things happen and why they are good is also suggested. In a preliminary pilot study, many participants failed to record reflections after the first several days, they indicated a preference for only recording three good things, as giving reflections took too long after a work day. It was also reported that just opening the good things box could improve the mood (Brownell, Schrank, Jakaite, Larkin, & Slade, 2015). Therefore, in this study, participants in the study group were requested to record three good things, without reflections, for six months using *WeChat*. As a common communication tool, basic messages could be sent individually by *WeChat*, posting pictures or texts was also available and people could build groups for group chat. For participants in the study group, seven groups were built in *WeChat*, each group included participants from the same unit. Some basic information about PPIs, objectives of the study and methods to record good things were put on the bulletin board of each group in *WeChat*. Participants could choose to post three good things on *WeChat* or send them to a researcher in the research team individually through a *WeChat* message. A reminder was sent to the groups in *WeChat* every day by the researcher. Good examples and positive affirmations about recording three good things were also posted anonymously on *WeChat* by the researcher to encourage

participants once a month. For participants in the control group, without *WeChat* groups built, no measures were recorded.

Data analysis

The SPSS 20.0 programme (IBM, 2011) was used in this study. Normality test was examined and non-parametric test was conducted for skewed data. In the preliminary analysis, Chi square test was used to determine whether there was comparability between the control group and the study group in general information. When $> 1/5$ of the grid had a theoretical frequency < 5, Fisher's test was applied. Independent sample *t*-test and Mann-Whitney *U* test were employed to compare the score of burnout between the two groups. After the intervention, the differences in burnout between pre-test and post-test for the two groups were examined using paired *t*-test and Wilcoxon signed-rank test. One-way analysis of variance was performed to compare exhaustion in different recording times.

Results

Demographics

Eighty-seven nurses were recruited at the baseline assessment. The majority of participants were female (97.70%). The average age was 28.05 ± 4.86 (20–43) years, the mean of length of employment was 6.54 ± 5.88 (1–24) years. For the baseline comparison, no significant demographic differences were noted between the study group and the control group (Table 1). After intervention, 72 participants finished both pre and post measurement, the attrition rate was 17.24%. There is no significant difference in demographic characteristics between nurses with attrition and without attrition.

Retention of study participants

In the control group, there were three withdrawals for medical reasons and five withdrawals due to maternity leave. Thirty-eight participants remained in the control group for the second evaluation after six months. In the study group, one nurse preferred not to continue and there were six withdrawals due to maternity leave. Thirty-four participants participated in the whole six-month positive psychological intervention.

Changes in burnout

In the overall sample of 87 nurses, six participants suffered from serious burnout (6.9%) while others experienced some burnout. The average scores for exhaustion, cynicism and reduced professional efficacy were 2.37 ± 1.06, 2.03 ± 1.02, 2.19 ± 1.22 respectively.

No significant difference was found between the control group and the study group regarding the baseline score of burnout ($p > 0.05$). The mean scores and standard deviations of burnout for the two groups before and after the intervention are presented in Table 2. The score for exhaustion in the study group diminished significantly following the intervention. Paired *t*-test indicated that the variation was statistically significant ($p = 0.041$). A slight increase in cynicism and professional efficacy was evident in both groups.

The recording times about three good things

The number of participants recording three good things during each week is displayed in Fig. 1. This figure indicated that the number of participants recording three good things twice a week increased gradually. During the first three months, participants who recorded four and five times a week showed a declining trend. Thereafter, a stable level was noted with four participants recording five times and occasionally participants recorded four times in the following three months.

Table 1
Comparison of demographics between two groups before intervention.

Demographic characteristics	Control group		Study group		χ^2	p
	$n = 46$	%	$n = 41$	%		
Sex						
Male	1	2.2	1	2.4	0.000[a]	1.000
Female	45	97.8	40	97.6		
Age						
≤25	18	39.1	20	48.8	0.898	0.638
26–34	21	45.7	15	36.6		
≥35	7	15.2	6	14.6		
Length of employment						
≤3	19	41.3	22	53.7	1.365	0.505
4–9	12	26.1	9	22.0		
≥10	15	32.6	10	24.4		
Marital status						
Unmarried	23	50.0	22	53.7	0.116	0.733
Married	23	50.0	19	46.3		
Monthly income (RMB)						
≤3000	11	23.9	2	4.9	6.538	0.088
3001–5000	11	23.9	12	29.3		
5001–7000	15	32.6	19	46.3		
≥7001	9	19.6	8	19.5		
Educational level						
Junior college	3	6.5	2	4.9	0.512[a]	1.000
Bachelor	41	89.1	38	92.7		
Master	2	4.3	1	2.4		
Professional title						
Nurse	7	15.2	1	2.4	4.274[a]	0.124
Senior nurse	30	65.2	32	78.0		
Chief nurse	9	19.6	8	19.5		
Department of work						
Medical	14	30.4	9	22.0	2.618[a]	0.624
Surgical	20	43.5	15	36.6		
Paediatric	4	8.7	7	17.1		
Operating room	6	13.0	7	17.1		
Intensive care unit	2	4.3	3	7.3		
Number of monthly night shifts						
0–1	12	26.1	11	26.8	0.201	0.904
2–3	14	30.4	14	34.1		
≥4	20	43.5	16	39.0		

[a] Fisher's test.

The number of participants recording once and three times per week was steady initially. Thereafter, one showed a sudden decrease and another rose slightly at the beginning of the fourth month. Minor fluctuations were revealed in participants recording less than once a week with no more than two participants in each week.

Considering the significant reduction of exhaustion for nurses in the study group, the exact effect of recording times was measured after the intervention. Seven participants recorded an average of three good things less than twice a week (Group A); seventeen participants recorded twice a week (Group B) and ten participants recorded more than twice a week (Group C). The difference in exhaustion among these three groups is demonstrated in Table 3. One way analysis of variance showed significant differences in exhaustion between the three groups. Further, Student Newman Keuls (SNK) pairwise comparison indicated that the score for exhaustion was lowest for participants in Group B, while comparing to Groups A and C. The result suggests that participants who record three good things twice a week experience less burnout.

Discussion

Nurses in this study reported the highest score on the exhaustion dimension of the Maslach Burnout Inventory, a finding consistent with other studies (Gomez-Urquiza et al., 2016; Losa Iglesias & Becerro de

Table 2
The mean scores and standard deviations of burnout for two groups.

Variables	Control group		t/Z	p	Study group		t	p
	T1	T2			T1	T2		
Exhaustion	2.40 ± 0.93	2.51 ± 1.58	− 0.621	0.534	2.34 ± 1.20	1.97 ± 0.77	2.024	0.041
Cynicism	2.19 ± 1.10	2.28 ± 1.58	− 0.497	0.619	1.86 ± 0.90	1.92 ± 0.84	− 0.717	0.479
Reduced professional efficacy	2.32 ± 1.30	2.02 ± 1.51	0.893	0.377	2.04 ± 1.12	1.91 ± 1.09	0.814	0.422

Bengoa Vallejo, 2013). This study provides evidence that a PPI of recording three good things can effectively ameliorate exhaustion of nurse burnout. Recently published studies also reported a decrease in burnout in nurses after a one or two-month intervention. However, the scores rebounded to the level of pre-test at follow-up (Deible et al., 2015; Isaksson Ro, Gude, Tyssen, & Aasland, 2010). This may imply that it is difficult to maintain the level of effectiveness of reducing burnout by conducting short-term interventions. Therefore, this study implemented a six-month PPI to help nurses build up a positive thinking mode and then develop positive thought-action habits to resist burnout. Furthermore, compared with other psychological interventions, the exercise of recording three good things has the following three merits. First, it is simple and has strong operability. Second, the forms of intervention are not confined. Instead of a face-to-face intervention, it can be carried out over the internet using online media such as Facebook, WhatsApp and *WeChat* to facilitate communication and the delivery of key intervention messages. Finally, this exercise does not require a professional implementer. Researchers could apply such intervention after minimal training. Consequently, the generalization of this exercise is relatively easy to achieve.

However, this intervention had no statistical effects on nurses' cynicism and reduced professional efficacy. Two possible conditions are considered to explain this phenomenon. One condition is that the exercise of recording three good things is probably not able to diminish cynicism and reduced professional efficacy. Another explanation could be that this intervention actually decreased the cynicism and enhanced efficacy during the first several months while it failed to maintain effectiveness over time. Other studies based on an individual-oriented intervention also found that such approaches could usually improve nurses' exhaustion but did not help with the other two dimensions (Gunusen & Ustun, 2010; Isaksson Ro et al., 2010). A significant quadratic trajectory of personal accomplishment was described in a one-month mindfulness-based intervention: the level of personal accomplishment in nurses was improved at the post-test time while much reduction happened after one-month follow-up (Gauthier, Meyer, Grefe, & Gold, 2015). Nevertheless, an organisational intervention showed increased job engagement and personal efficacy in nurses by increasing access to professional development, clinical supervision and supports (Rickard et al., 2012). Therefore, if nurses receive insufficient external resources, such as timely performance feedback, skill development and other supports from the organisation, it may be difficult to alleviate cynicism and enhance professional efficacy. For further research, the short-term effects of recording three good things on cynicism and reduced professional efficacy could be investigated. If temporary effectiveness exits, how to maintain such effects would also deserve further exploration.

More and more nurses chose to record three good things twice a week, which means twice a week appears to be the most popular frequency for nurses to undertake such an exercise. The comparison of nurses' exhaustion between different recording times also suggested that recording three good things on average twice a week could ameliorate exhaustion to a larger degree. Moss and Wilson (2015) deemed that compared with solely experiencing positive emotions or negative emotions, holding both emotions simultaneously or successively would be able to better promote personal development, such as mastery of complex skills, learning to set reasonable goals and getting strong interpersonal communication. This probably indicates that a complex dynamic of emotions exists in human beings, keeping an appropriate balance between positive emotions and negative emotions being essential to achieve well-being. In this study, we consider that recording three good things twice a week may help nurses keep such a balance between positive emotions and negative emotions, then further facilitating well-being and decreasing the occurrence of burnout.
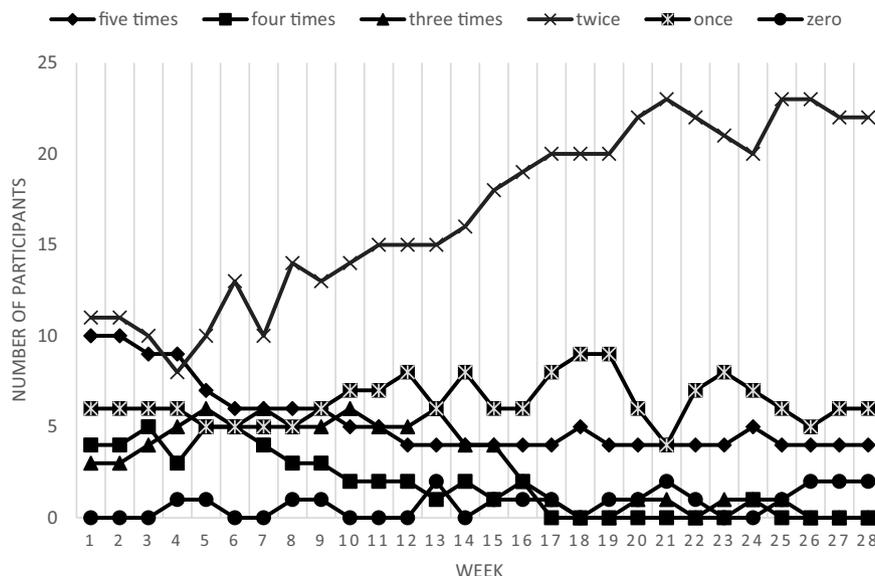

Fig. 1. The recording times about three good things.

Table 3
Comparison of exhaustion in different recording times.

	0–1 time Group A ($n = 7$)	2 times Group B ($n = 17$)	≥3 times Group C ($n = 10$)	F	p
Exhaustion	2.51 ± 0.60	1.65 ± 0.65	2.14 ± 0.86	4.142	0.025

Limitation

Due to limited human and financial resources, we have not conducted follow-up research at this stage. Although this intervention showed significant positive effects on alleviating nurses' exhaustion over six months, a longitudinal study is required to explore the long-term influence. Additionally, it is common and unavoidable to follow and chat with other colleagues on *WeChat* for nurses in the same department, in order to avoid the contamination effect, the measurements for the control group and the study group were conducted non-simultaneously. The likelihood of different workloads and management should be considered in the two periods while disseminating the intervention effects.

Conclusion

This is the first time that the three good things intervention has been used in nurses from different departments in a hospital. This new simpler intervention offers opportunities for the large and growing numbers of nurses to enhance positive emotions and alleviate burnout, by way of self-care. The findings of this study could be generalized to nurses in a broad range of healthcare settings, where clinical managers would encourage nurses to record three good things twice a week after a brief introduction of PPIs. Sending automatic reminders every day in messages would be encouraging. Alternatively, managers might require nurses to share positive experiences during the week in the team meeting, or starting a meeting with question "what are the good things we shared recently?" This could become a regular part of the meeting. Such measures would bring positive thinking and emotions to the attention of both managers and nurses. It is also beneficial for nurses to increase the awareness of the importance of self-care for getting a better mental health, incorporate the exercise of recording three good things into everyday life and turn it into habit.

A convenient intervention was implemented for nurses with burnout. Compared with the control group, nurses in the study group who were required to record three good things showed less exhaustion after following the six-month intervention. Accordingly, it is helpful for nurses to do the exercise of recording three good things. Furthermore, performing such exercises twice a week shows promise in reducing nurses' susceptibility to exhaustion. It is also recommended to validate the long-term effects of recording three good things and test how long it would take to develop a habit to focus on positive things around them. By doing so, nurses would be able to maintain positive emotions and suffer less burnout. This intervention combined with appropriate surveillance and encouragement is recommended to reduce nurses' burnout and create a positive work environment.

Acknowledgements

Declaration of competing interest

None.

Funding

References

Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013). Positive psychology interventions: A meta-analysis of randomized controlled studies. *BMC Public Health, 13*, 119. https://doi.org/10.1186/1471-2458-13-119.

Brownell, T., Schrank, B., Jakaite, Z., Larkin, C., & Slade, M. (2015). Mental health service user experience of positive psychotherapy. *J Clin Psychol, 71*(1), 85–92. https://doi.org/10.1002/jclp.22118.

Deible, S., Fioravanti, M., Tarantino, B., & Cohen, S. (2015). Implementation of an integrative coping and resiliency program for nurses. *Glob Adv Health Med, 4*(1), 28–33. https://doi.org/10.7453/gahmj.2014.057.

Fortney, L., Luchterhand, C., Zakletskaia, L., Zgierska, A., & Rakel, D. (2013). Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: A pilot study. *Ann Fam Med, 11*(5), 412–420. https://doi.org/10.1370/afm.1511.

Gauthier, T., Meyer, R. M., Grefe, D., & Gold, J. I. (2015). An on-the-job mindfulness-based intervention for pediatric ICU nurses: A pilot. *J Pediatr Nurs, 30*(2), 402–409. https://doi.org/10.1016/j.pedn.2014.10.005.

Gomez-Urquiza, J. L., Aneas-Lopez, A. B., Fuente-Solana, E. I., Albendin-Garcia, L., Diaz-Rodriguez, L., & Fuente, G. A. (2016). Prevalence, risk factors, and levels of burnout among oncology nurses: A systematic review. *Oncol Nurs Forum, 43*(3), E104–E120. https://doi.org/10.1188/16.onf.e104-e120.

Gunusen, N. P., & Ustun, B. (2010). An RCT of coping and support groups to reduce burnout among nurses. *Int Nurs Rev, 57*(4), 485–492. https://doi.org/10.1111/j.1466-7657.2010.00808.x.

IBM, C (2011). *IBM SPSS statistics for windows (version 20.0).* Armonk, NY: IBM Corp.

Isaksson Ro, K. E., Gude, T., Tyssen, R., & Aasland, O. G. (2010). A self-referral preventive intervention for burnout among Norwegian nurses: One-year follow-up study. *Patient Educ Couns, 78*(2), 191–197. https://doi.org/10.1016/j.pec.2009.07.008.

Jiang, H., Ma, L., Gao, C., Li, T., Huang, L., & Huang, W. (2017). Satisfaction, burnout and intention to stay of emergency nurses in Shanghai. *Emerg Med J.*. https://doi.org/10.1136/emermed-2016-205886.

Kalimo, R., Pahkin, K., Mutanen, P., & Topipinen-Tanner, S. (2003). Staying well or burning out at work: Work characteristics and personal resources as long-term predictors. *Work & Stress, 17*(2), 109–122. https://doi.org/10.1080/0267837031000149919.

Klopper, H. C., Coetzee, S. K., Pretorius, R., & Bester, P. (2012). Practice environment, job satisfaction and burnout of critical care nurses in South Africa. *J Nurs Manag, 20*(5), 685–695. https://doi.org/10.1111/j.1365-2834.2011.01350.x.

Kousloglou, S., Mouzas, O., Bonotis, K., Roupa, Z., Vasilopoulos, A., & Angelopoulos, N. (2014). Insomnia and burnout in Greek Nurses. *Hippokratia, 18*(2), 150–155.

Li, C., & Shi, K. (2003). Effects of distributive justice and procedural justice on professional burnout. *Acta Psychologica Sinica, 35*(5), 677–684.

Lin, T. C., Lin, H. S., Cheng, S. F., Wu, L. M., & Ou-Yang, M. C. (2016). Work stress, occupational burnout and depression levels: a clinical study of paediatric intensive care unit nurses in Taiwan. *J Clin Nurs, 25*(7-8), 1120–1130. https://doi.org/10.1111/jocn.13119.

Losa Iglesias, M. E., & Becerro de Bengoa Vallejo, R. (2013). Prevalence and relationship between burnout, job satisfaction, stress, and clinical manifestations in Spanish critical care nurses. *Dimens Crit Care Nurs, 32*(3), 130–137. https://doi.org/10.1097/DCC.0b013e31828647fc.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annu. Rev. Psychol. 52*, 397–422.

Molina-Praena, J., Ramirez-Baena, L., Gomez-Urquiza, J. L., Canadas, G. R., De la Fuente, E. I., & Canadas-De la Fuente, G. A. (2018). Levels of burnout and risk factors in medical area nurses: A meta-analytic study. Int J Environ Res Public Health, 15(12). doi:https://doi.org/10.3390/ijerph15122800

Moss, S. A., & Wilson, S. G. (2015). The positive emotions that facilitate the fulfillment of needs may not be positive emotions at all: the role of ambivalence Explore-J Sci. Heal. (Vol. 11, pp. 40-50).

Munson, S. A., Lauterbach, D., Newman, M. W., & Resnick, P. (2010). Happier Together: Integrating a Wellness Application into a Social Network Site (Vol. 6137, pp. 27-39): Persuasive Technology.

Ozbas, A. A., & Tel, H. (2016). The effect of a psychological empowerment program based on psychodrama on empowerment perception and burnout levels in oncology nurses: Psychological empowerment in oncology nurses. *Palliat Support Care, 14*(4), 393–401. https://doi.org/10.1017/s1478951515001121.

Rickard, G., Lenthall, S., Dollard, M., Opie, T., Knight, S., Dunn, S., & Brewster-Webb, D. (2012). Organisational intervention to reduce occupational stress and turnover in

hospital nurses in the Northern Territory, Australia. *Collegian, 19*(4), 211–221.

Rippstein-Leuenberger, K., Mauthner, O., Bryan Sexton, J., & Schwendimann, R. (2017). A qualitative analysis of the three good things intervention in healthcare workers. *BMJ Open, 7*(5), e015826. https://doi.org/10.1136/bmjopen-2017-015826.

Sallon, S., Katz-Eisner, D., Yaffe, H., & Bdolah-Abram, T. (2017). Caring for the caregivers: Results of an extended, five-component stress-reduction intervention for hospital staff. *Behav Med, 43*(1), 47–60. https://doi.org/10.1080/08964289.2015.1053426.

Schueller, S. M., & Parks, A. (2012). Disseminating self-help: Positive psychology exercises in an online trial. *J. Med. Internet Res. 14*(3), 4–13. https://doi.org/10.2196/jmir.1850.

Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology, 65*(5), 467–487. https://doi.org/10.1002/jclp.20593.

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. *Int J Nurs Stud, 51*(8), 1123–1134. https://doi.org/10.1016/j.ijnurstu.2013.12.009.

Wang, X., Kunaviktikul, W., & Wichaikhum, O. A. (2013). Work empowerment and burnout among registered nurses in two tertiary general hospitals. *J Clin Nurs, 22*(19-20), 2896–2903. https://doi.org/10.1111/jocn.12083.

Wittenberg-Lyles, E., Goldsmith, J., & Reno, J. (2014). Perceived benefits and challenges of an oncology nurse support group. *Clin J Oncol Nurs, 18*(4), E71–E76. https://doi.org/10.1188/14.cjon.e71-e76.

Yoon, H. S., & Sok, S. R. (2016). Experiences of violence, burnout and job satisfaction in Korean nurses in the emergency medical centre setting. *Int J Nurs Pract, 22*(6), 596–604. https://doi.org/10.1111/ijn.12479.

Zhou, W., He, G., Wang, H., He, Y., Yuan, Q., & Liu, D. (2015). Job dissatisfaction and burnout of nurses in Hunan, China: A cross-sectional survey. *Nurs Health Sci, 17*(4), 444–450. https://doi.org/10.1111/nhs.12213.