



Resilience enhancement among student nurses during clinical practices: A participatory action research study

Hwey-Fang Liang^{a,b,c,*}, Kuang-Ming Wu^d, Chang-Chiao Hung^a, Ying-Hsiang Wang^e, Niang-Huei Peng^f

^a Department of Nursing, Chang Gung University of Science and Technology, Chiayi Campus, 2, Sec., W., Jiapu Rd, Puzi City, Chiayi County 61363, Taiwan

^b Chronic Diseases and Health Promotion Research Center, 2, Sec., W., Jiapu Rd, Puzi City, Chiayi County 61363, Taiwan

^c Chang Gung Memorial Hospital at Chiayi, 6, Sec., W., Jiapu Rd, Puzi City, Chiayi County 61363, Taiwan

^d Department of Early Childhood Education, National Chiayi University, 85 Wen-lung tsun., Min-shiung., Chiayi 621, Taiwan

^e Department of Pediatrics, Chang Gung Memorial Hospital, Chiayi, Taiwan

^f Department of Nursing, Chang Jung Christian University, Tainan, Taiwan

ARTICLE INFO

Keywords:

Clinical practices
Participatory action research
Resilience
Student nurses

ABSTRACT

Background: Clinical practice is an essential component of nursing students' preparation for applying theoretical knowledge in a real-life setting. However, students often experience clinical practice as extremely stressful, which may disrupt their clinical performance, impact the quality of patient care they provide as well as their own physical and psychological health, and hinder their continuation into nursing careers. Resilience, understood as the capability to overcome challenges, is critical for these students.

Purpose: To develop and implement a resilience enhancement (RE)-based project for Taiwanese nursing students during their Last Mile practicum.

Design and Methods: A participatory action research (PAR) approach was used in which ongoing planning, action, and reflection informed real-time progress. Twenty-eight nursing students in clinical practice participated in the study. A six-workshop RE project was completed over the course of two months. Evaluation methods involved group discussion, individual interviews, and reflective diaries. Content analysis was applied to the data.

Results: Through a PAR-based project, participants achieved positive results. Three outcome themes were identified: Increasing self-exploration, Furthering confidence and competency, and Constructing resilience.

Conclusions: The PAR-based RE project helped students to develop resilience by enhancing their nursing knowledge and skills and practicing positive thinking and behavior.

Clinical Relevance: The findings can be a reference for nursing educators in designing RE programs for students during clinical practice to increase their professional competence and provide psychological supports.

1. Introduction

Nursing students usually experience stress and anxiety during clinical practice, which may hinder learning and lead to attrition (Turner and McCarthy, 2017). Previous studies (Moscaritolo, 2009; Shaban et al., 2012) have shown that students' stress in clinical practice not only impacts their academic performance but also their physical and psychological health, which can eventually compromise the quality of patient care, and patient safety. However, the clinical practicum is a required component of nursing education, offering knowledge application and clinical skill development in a practical learning environment (Shaban et al., 2012). Resilience helps students confidently face

and overcome challenges (Stephens, 2013).

2. Background

In Taiwan, to become a registered nurse, a student must complete one of three types of nursing education programs and then pass the national licensure examination (Li et al., 2011). Students can pursue a four-year bachelor of science in nursing (BSN), a five-year associate's degree in nursing (ADN) after graduating from a three-year junior high school, or a post-baccalaureate program in nursing for an additional 2–2.5 years, depending on the requirements of their respective nursing departments. In each, clinical practice is an essential component.

* Corresponding author at: 2, Sec., W., Jiapu Rd, Puzi City, Chiayi County 61363, Taiwan.

E-mail addresses: hfliang@gw.cgust.edu.tw (H.-F. Liang), kmwu@mail.ncyu.edu.tw (K.-M. Wu), cchung@gw.cgust.edu.tw (C.-C. Hung), pedwang@cgmh.org.tw (Y.-H. Wang), forever_pal.lily8@yahoo.com (N.-H. Peng).

<https://doi.org/10.1016/j.nedt.2019.01.004>

Received 5 August 2018; Received in revised form 19 December 2018; Accepted 14 January 2019

0260-6917/ © 2019 Elsevier Ltd. All rights reserved.

In Taiwan, the “Last Mile” course is a preceptor-guided undergraduate clinical practicum designed to help students adapt to the hospital environment and develop required clinical knowledge and skills. The Last Mile is typically a six-week, three-credit course with 216 practicum hours in the BSN program. School-hospital partnerships provide for this clinical education, which can result in students' employment at the same hospital upon graduation (Chang et al., 2017). Several studies have shown that students suffer isolation, overload, and stress during the practicum (Jiang et al., 2012; Liu et al., 2014).

Resilience is a protective factor that can help students face, overcome, and learn from challenges (Richardson, 2002; Thomas and Revell, 2016). Characteristics of resilience include hardiness, coping, optimism, faith, adaptability, self-esteem, and humor (Aburn et al., 2016; Grafton et al., 2010). Resilience is considered a dynamic process used by individuals to manage significant sources of stress (Jackson et al., 2018; Lekan et al., 2018). Scholars (Grafton et al., 2010; Thomas and Asselin, 2018) suggest helping students to develop their innate resilience to offset the inevitable impacts of the workplace. Roxburgh et al. (2010) studied the use of a computer-based program to foster nurses' resilience during their first year of employment. Other studies have used strategies of reflection (Keeley and Grier, 2005) and simulation and debriefing (Pines et al., 2014). Scholars recommend that resilience education be expanded and incorporated into nursing programs (Thomas and Revell, 2016).

3. Methods

3.1. Study Aim and Design

The aim of this study was to develop and implement a resilience enhancement (RE)-based project for Taiwanese nursing students during their Last Mile practicum. A participatory action research (PAR) design was chosen due to the transitional challenges the practicum presents (Chang et al., 2017). PAR provides for a participatory, cooperative, iterative process in building a learning environment that connects theory and practice with action and reflection (Ainley, 2000; Reason and Bradbury, 2001). Action research has been encouraged in nursing education (Coghlan and Casey, 2001) as well as in clinical training (Hunt, 1987; Hyrkäs, 1997). It allows for practical solutions and self-improvement (Fowler et al., 2014; Reason and Bradbury, 2001). The research project was designed to be a change agent (Hegney and Francis, 2015) responsive to the dynamic clinical practice environment. It enabled students to share their experiences, identify their stressors and coping strategies, and further their resilience development. The approach involved cycles of action comprising planning, action, and reflection phases.

3.2. Ethical Considerations

Before the study began, the research proposal was approved by the ethics committee of the Institutional Review Board of the Chang Gung Hospital (104-9694B). The researcher (first author) recruited participants by email and provided an oral explanation of the aim and process of the study before the first meeting. Participants were assured confidentiality, including in group discussion and personal interviews. They were informed that all data would be confidential, with recordings and transcriptions stored on a secure institutional server that met IRB standards. Researchers reiterated assurances of confidentiality, and assigned each participant a code for attribution of quotations. When participants are selectively quoted anonymity and confidentiality can be assured (Coffey et al., 1996).

Additionally, participants were advised to keep group discussions private. With participants' approval and informed consent, the researcher formalized the workshops and contact times. Researchers maintained an awareness that sharing of experiences or memories had the potential to cause emotional or psychological discomfort.

Participants were informed that they were free to end their participation in a discussion, an interview, or the entire study at any time. Personal assistance was available upon request. Moreover, there was little scope for situations getting out of hand before a need for intervention could be recognized, as the researcher has 15 years of mentor-teacher experiences with students.

3.3. Participants

Thirty senior nursing students from a cohort of 141 responded to the researcher's recruitment email and voluntarily participated in the project, reflecting a response rate of 21.3%. Of those 30, two were unable to complete the workshops due to illness and exhaustion from the clinical practicum; thus 28 (93.33%) completed the study. Participants were divided into smaller discussion groups. Each of the four, seven-member groups had a peer leader and met with two researchers who served as mentor-teachers. The researchers included two mentor-teachers and the first author, who did not grade students' academic performance but facilitated as well as observed to note the progress the project made possible.

3.4. PAR-based RE Intervention Project

From December 2016 to February 2017, six workshops were held at one-week intervals in a discussion room of the hospital that was the participants' clinical practice site. In each workshop, a mentor-teacher gave a presentation of about 20 min on a core subject. The remainder of the 60–80 min workshop was given to peer-led group discussion about the core subject, generated from students' clinical practice experiences that week. Participant contact time totaled six to eight hours. The project comprised three main stages (Table 1) in a dynamic succession of cycles (Fig. 1) informed by and generating further group discussion in order to bring about resilience enhancement.

3.4.1. PAR Stage 1 - Plan

The initial stage of the project identified students' ongoing stressors and their attempts at resilience enhancement. Brainstorming in group discussion, participants explored existing problems and their successful resilience enhancement efforts.

The researchers facilitated and observed the process, discussed the appropriateness of the RE strategies presented in the workshops, and established a preliminary PAR-based RE program accordingly.

3.4.2. PAR Stage 2 - Action

The goal of Stage 2 was to develop an RE project appropriate to effect positive change for the participants. RE workshops addressed four topics: building self-confidence (including awareness of self-weakness, self-predominance, and self-appreciation), coping strategies (stressors, coping approaches, and relaxation strategies), building academic and psychological competency (knowledge and skill enhancement, building professional networks), and positive thinking (perspective, humor, spiritual support). The researchers developed the preliminary curriculum based on the results of the planning stage and on previous studies (Stephens, 2013; Yilmaz, 2017). The two mentor-teachers presented resilience strategies through activities such as clinical center training,

Table 1
Stages in the PAR-based RE intervention project.

Stage	Axis of subject
1. Planning for RE	1. Identification of stressors, coping strategies, and resilience 2. Classification and prioritization of resilience strategies or activities in workshops
2. Action	Implementation of the action plan
3. Reflection	Reclassification of resilience activities

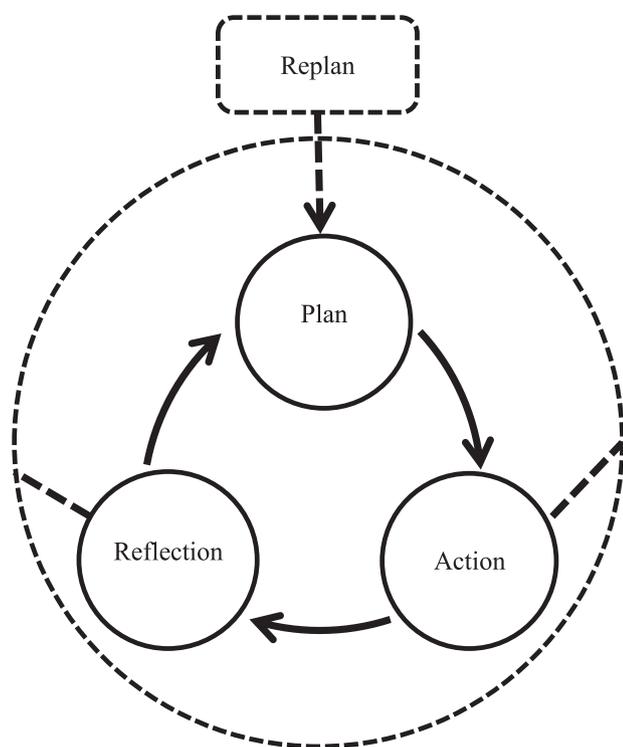


Fig. 1. Process of PAR-based RE intervention project.

demonstrations, relaxation exercises, and peer group discussions. The action research model allowed researchers to observe, monitor, and assess students' learning and development.

3.4.3. PAR Stage 3 - Reflection

In Stage 3, the researchers reviewed each step of the process including problems that arose and then planned for the next cycle. Students' reflective writings also informed the planning.

The participants were evaluated for resilience enhancement during the weekly workshops using participatory observations and group discussions. In-depth individual interviews were conducted at the conclusion of the program. Participants received continual feedback in keeping with the PAR cycling process. For instance, some participants noted their slow response times or lack of familiarity with the technical skills in the ward in which they worked, and that senior nurses with unfriendly attitudes toward them made them feel helpless. In response, special discussion sessions on enhancing nursing knowledge and skills were included in the workshops, and mentor-teachers arranged for the hospital's laboratory to be available for students' further practice.

Data formation and analysis occurred simultaneously throughout each stage, and evolving themes were incorporated into group discussions. In group discussion, the peer leader asked one or two participants to share about their clinical experience. Researchers facilitated, encouraging elaboration.

3.5. Data Collection

Numerous qualitative methods were used to collect data during all project stages: group discussions, reflective diaries, participatory observation and field notes, and personal interviews. In group discussions and diaries, participants reflected on their clinical practice. Diaries serve to construct a narrative and analysis of students' observations during clinical practice (Hayman et al., 2012). The researchers suggested at least one diary entry for each clinical practice event, and the peer leader was asked to provide one or two cases related to the core subject to discuss in each workshop. Throughout the project,

researchers acted as participatory observers, taking field notes on the discussions and group dynamics. Using a semi-structured interview guide, the first author conducted individual, recorded interviews of approximately 40–60 min with 12 volunteer participants at the conclusion of the program to gain a deeper understanding of the experiences of each participant. Questions included “What did you learn from the RE project?”, “Did you benefit from RE, and if so, how?”, and “Are there any comments you'd like to share with me about the effects of RE?”. Group discussions and interviews were transcribed verbatim.

3.6. Data Analysis

Content analysis of all transcripts, following Forman and Damschroder (2007) and Graneheim and Lundman (2004), encompassed the following: (1) reading all of the texts several times to understand the general content, (2) determining significant units and extracting the major codes, and (3) integrating and classifying codes based on similar themes and extracting underlying concepts and content. Credibility, dependability, confirmability, and transferability ensured the accuracy and reliability of this study. Guba (1981) viewed neutrality as data and interpretational confirmability. Furthermore, the researchers confirmed participants' experiences through sustained engagement in order to assess credibility. The first author conducted the six workshops, overseeing the PAR process to ensure dependability. Confirmability of researchers' neutrality and the data was ascertained through participant feedback. Thick description of text and field notes enhanced transferability of the study.

4. Results

Twenty-eight female student nurses completed the study. Their ages ranged from 22 to 24, with a mean age of 22.3 years ($SD = 0.44$). Twenty (71.4%) of the 28 participants did their practicum in wards, five (17.9%) in intensive care units, and three (10.7%) in operating rooms in regional teaching hospitals.

Through an inductive qualitative content analysis, the following three outcome themes emerged from the data: increasing self-exploration, furthering confidence and competency, and constructing resilience. Student quotes are referred to as S1, S2, etc., and G, I, and R indicate the sources – group discussion, personal interview, and reflection diaries – respectively.

4.1. Increasing Self-exploration

Throughout the cycles of the study, students had opportunities for self-exploration including identifying stressors and means of rebounding from adversity during the Last Mile practicum.

(a) Identifying sources of stress and coping strategies

Participants experienced stress and anxiety before starting and during the clinical practicum but were unsure of the sources of that stress.

“I felt nervousness, especially the night before the first day of practicum. I could not sleep well. I worried about the matters I could not predict or handle in clinical practice.” (S1, R).

The stress impacted their daily lives as well as their clinical learning, especially early in the clinical practice.

“The bad experience caused me to lack focus during orientation on the initial days in the clinical setting.” (S2, G).

(b) Sense of belonging

After participating in the RE workshops, the students reported that they were better equipped for self-recovery and, further, felt that they

were not alone. One of the participants said:

“I appreciate that RE group discussion assisted me in identifying my stressors, how to let them go, and resilience strategies. Interestingly, not only I faced those stressors but also my peers in the RE group.” (S5, I).

Participants shared their coping strategies and assessed themselves to determine their own best means of fostering resilience. One of the participants said:

“We shared coping strategies, like where to eat delicious food, playing electronic games, playing online, or talking on the phone to get peers' support. From that sharing, I learned and recognized what were the appropriate ways for me.” (S7, R).

4.2. Furthering Confidence and Competency

Participants described initial frustrations with academics and clinical practice in the practicum; the RE project improved their learning, confidence, and competency.

(a) Furthering professional nursing knowledge and skills

Participants initially had difficulties translating knowledge into practice efficiently because of poor integration skills, time management, and communication. Participants were hesitant and made mistakes.

One said, “I struggled with my slow action, which senior staff nurses often complained about.” (S8, G).

Another explained that she “spent a lot of time cleaning my patient's perineum before doing her catheterization. That's why I missed her CBC accumulation and examination and was late for her X-ray. The resulting complaints of the health care providers made me very frustrated.” (S9, R).

Procedures occurred too quickly for students, and they found themselves too slow to react in a clinical setting. Reflecting on the need to deal with many complicated things at the same time, one said:

“When the physicians came to visit my patients, I had to prepare the patients' data and information and then handle the doctor's orders and respond to the patient's needs or families' requests. If something unexpected occurred, such as the admission of a new patient in poor condition, I didn't have good time management to manage everything.” (S4, R).

(b) Increasing interpersonal communication skills

Interpersonal communication was another challenge for participants. One said, “Sometimes I had difficulty answering health care providers calling from a different unit because they used terminology I'd never heard.” (S14, G).

Another participant said, “I had trouble communicating with patients or families who were immigrants. I had to take more time to communicate with them or get help from people from the same country as them.” (S11, G).

Some participants were reluctant to express their difficulties to senior nurses to get assistance. One student said, “I would not express my frustration and stress to my senior; I would be worried about and embarrassed by their blame” (S22, G).

Participants found that the sharing and information in the RE group helped to address their deficiencies. One participant said:

“I felt powerless and stupid in communicating with patients in the beginning days. But I got information regarding care practices and communication skills from peers in RE, and I had the opportunity for more practice in the clinical training center in the hospital to empower my skills.” (S10, I).

Another said, “I often had problems finding information from the online database. I appreciated that my RE peers assisted me by sharing database technology, such as CINAHL and MEDLINE.” (S26, I).

Participants learned not only from their peers' shared experiences but also appreciated that the RE mentor-teachers created a continuous, structured learning environment that complemented the clinical practicum. They felt empowered to develop autonomous professional practice skills along with strategies useful in a variety of practice settings.

One participant said, “In the RE group, I had the chance to go to the lab in the hospital to practice unfamiliar skills. I appreciate that the teachers assisted in arranging laboratory time for me to train.” (S12, I).

Because RE supported consistent practical application of nursing knowledge, skills, and judgment, students grew in self-confidence. Participants also learned how and where to find support when they experienced an insufficiency of knowledge and skills.

4.3. Constructing Resilience

The RE project's process of gradually coping with adversity allowed students to continually cultivate resilience.

(a) Self-encouragement

Participants knew that completing the practicum was imperative for graduation. One said, “I told myself every morning of every day, ‘Keep going, I can do it, I can get through it no matter what happens.’” (S15, G).

(b) Building support

Participants described the importance of support, especially from their peer groups.

One said, “I often called my family to tell them what happened in my daily life, including the practicum course. They supported, comforted me. My mom always told me to endure the hardship to achieve the academic goals.” (S23, G).

However, it was their peers who understood the clinical practice challenges. One said, “Our RE small group members took the Last Mile practicum together. Although we were in different clinical units, their support was the most powerful because they understood what I experienced and gave me suitable suggestions.” (S17, I).

(c) Learning positive thinking

Participants recognized that the difficulties and setbacks they faced in clinical practice were unavoidable and that shifting their thinking was very important. One participant stated:

“Some of my RE peers had positive emotions, such as passion and humor that infected me with enthusiasm and positive thinking instead of pessimism. It encouraged me daily.” (S18, I).

Through the RE group, participants learned to use humor to face the difficulties they encountered and resolved to make a greater effort to successfully adapt to their clinical practice. One said:

“At the beginning of the practicum, I was late getting off duty and missed supper. But I thought, ‘Missing supper will allow me to lose weight!’ I learned such positive thinking from the peer discussion. It helped me to turn any adversity around.” (S25, I).

5. Discussion

The findings from this study not only reveal the stressors nursing students face in clinical practice but also demonstrate the effectiveness of PAR as a useful strategy for furthering competence and resilience.

5.1. Increasing Self-exploration

Stress and anxiety were the most common experiences before and during the clinical practicum, impacting nursing students' performance and well-being. This finding corresponds to previous studies (Jahanpour et al., 2016; Jimenez et al., 2010) that noted the stress of clinical practice. Stress negatively affects students' ability to interact with clients, master clinical objectives, and achieve successful learning outcomes (Duffy, 2009; Ganzer and Zauderer, 2013), which may hinder their professional progress (Chan et al., 2009; Shaban et al., 2012). Using a positive approach such as PAR to assist students in developing resilience is essential to learning outcomes.

Students in this study were initially unsure of the sources of their stress. The RE group assisted them in identifying those sources, along with coping strategies. Because the group consisted of peers with equivalent levels of knowledge, skills, and experience, their sharing was mutually beneficial and led to a sense of belonging. Mohamed et al. (2014) described a sense of belonging as feeling accepted and respected by peers and having an identity.

5.2. Furthering Confidence and Competency

As students, participants had limited clinical knowledge and experience. In comparing experiences with their peers in RE, they recognized that they had poor integration between theory and practice, time management, and communication. This finding is consistent with a previous study (Jahanpour et al., 2016) that found students commonly have barriers to practical learning, including inappropriate communication, and theory-practice gaps. In the RE group, interaction with and practical support from peers facilitated students' clinical learning. Similarly, Ravanipour et al. (2015), found that students learn from peers with greater depth and less stress than from conventional learning approaches. In this study, having mentor-teachers who guided but did not grade them further allowed students to progress in their learning with less stress. In an RE group that includes peers' and mentor-teachers' positive encouragement, students may develop a positive work perception and affirm their intention to continue on to a nursing career (Christopher et al., 2015).

5.3. Constructing Resilience

Participants experienced frustrations and lack of self-confidence because they perceived themselves as lacking in necessary knowledge and skills. Similarly, Duchscher (2009) found that new nurses experience stress in role performance, moral distress, discouragement, and disillusionment during the early months of their clinical practice. The students in this study also worried about encountering senior nurses, especially if they had questions or made mistakes. They felt ashamed about expressing their frustration and stress. Reluctance around this type of self-expression is culturally inherent among Taiwanese students, as evidenced in other studies (Hodkinson and Poropat, 2014) that focus on conservative behaviors with superiors such as senior nurses. As King et al. (2017) found, students are hampered by poor clinical placements, where they do not establish a rapport with the clinical team and are treated disrespectfully. In RE, however, mentors create learning environments that empower students through facilitated discussion, coaching, challenging common thinking, and group work. Study participants were guided in defining and setting goals and monitoring their own progress. As a result, they became more self-regulated, effective, and resilient, developing autonomous professional practice skills and response strategies. These results are consistent with previous studies (Adamson and Dewar, 2015; Mackay et al., 2014; Thomas and Asselin, 2018) in which PAR was found to be a valuable strategy for developing a model of resilience empowerment.

The present study also found that mentor-teachers can play an important role in advocating for students by serving as spokespersons for

their needs in the clinical setting. The researchers brought student nurses' challenges and needs to the attention of both academic and student affairs administrators.

5.4. Study Limitations

The inclusion criteria restricted participants to those taking the Last Mile practicum and thus excluded those with a different curriculum of clinical practice. The participants' adverse, educational, and cultural experiences may be circumstantially limited, but the experience of stress among student nurses is widespread across varying circumstances and settings. Because recruiting was done in a regional teaching hospital, transferability of the findings may be limited; they may not reflect the experiences of students in clinical practice at hospitals of differing levels.

Finally, the collected data is qualitative rather than quantitative. Future study using quantifiable measures is suggested.

6. Conclusions

Through a PAR approach to develop resilience among and provide supports for nursing students in a clinical practicum, this study assisted students in identifying stressors and coping strategies, discovering a sense of belonging, and fostering positive thinking. Additionally, it enabled peer-to-peer learning that furthered students' professional growth. Active involvement of participants is recommended as a positive contribution to the exploration, development, and implementation of education and support programs. The findings can inform nurse educators in designing appropriate resilience empowerment projects and in shaping comprehensive programs that promote nursing students' resilience in the clinical setting.

Funding Source

This study was supported by Ministry of Science and Technology, Taiwan (105-2511-S-255-005) and Chang Gung Memorial Hospital at Chiayi (BMRP824).

Conflict of Interest

None.

Ethical Approval

The research was approved by the ethics committee of the Institutional Review Board of the Chang Gung Hospital (104-9694B).

Acknowledgments

The authors would like to thank the participants for their support in making this study possible.

References

- Aburn, G., Gott, M., Hoare, K., 2016. What is resilience? An integrative review of the empirical literature. *J. Adv. Nurs.* 72, 980–1000.
- Adamson, E., Dewar, B., 2015. Compassionate care: student nurses' learning through reflection and the use of story. *Nurse Educ. Pract.* 15 (3), 155–161.
- Ainley, B., 2000. Primary care: action research in the implementation process. *Community Pract.* 73, 470–472.
- Chan, C.K., So, W.K., Fong, D.Y., 2009. Hong Kong baccalaureate nursing students' stress and their coping strategies in clinical practice. *J. Prof. Nurs.* 25 (5), 307–313.
- Chang, C.P., Lee, T.T., Mills, M.E., 2017. Clinical nurse preceptors' perception of e-portfolio use for undergraduate students. *J. Prof. Nurs.* 33 (4), 276–281.
- Christopher, S.A., Chiarella, E.M., Waters, D., 2015. Can Generation Y nurses supply areas of shortage? New graduate challenges in today's job market. *Aust. J. Adv. Nurs.* 33 (2), 35–44.
- Coffey, A., Holbrook, B., Atkinson, P., 1996. Qualitative data analysis: technologies and representations. *Sociol. Res Online* 1, 1–12.

- Coghlan, D., Casey, M., 2001. Action research from the inside: issues and challenges in doing action research in your own hospital. *J. Adv. Nurs.* 35 (5), 674–682.
- Duchscher, J.E.B., 2009. Transition shock: the initial stage of role adaptation for newly graduated registered nurses. *J. Adv. Nurs.* 65 (5), 1103–1113.
- Duffy, A., 2009. Guiding students through reflective practice—the preceptors experiences. A qualitative descriptive study. *Nurse Educ. Pract.* 9, 166–175.
- Forman, J., Damschroder, L., 2007. Qualitative content analysis, empirical methods for bioethics: a primer. *Adv. Bioeth.* 11, 39–62.
- Fowler, C., Wu, C., Lam, W., 2014. Participatory action research: involving students in parent education. *Nurse Educ. Pract.* 14 (1), 76–81.
- Ganzer, C.A., Zauderer, C., 2013. Structured learning and self-reflection: strategies to decrease anxiety in the psychiatric mental health clinical nursing experience. *Nurs. Educ. Perspect.* 34 (4), 244–247.
- Grafton, E., Gillespie, B., Henderson, S., 2010. Resilience: the power within. *Oncol. Nurs. Forum* 37 (6), 698–705.
- Graneheim, U.H., Lundman, B., 2004. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ. Today* 24 (2), 105–112.
- Guba, E.G., 1981. Annual review paper: criteria for assessing the trustworthiness of naturalistic inquiries. *ECTJ-Educ. Commun. Tech.* 29 (2), 75–91.
- Hayman, B., Wilkes, L., Jackson, D., 2012. Journaling: identification of challenges and reflection on strategies. *Nurs. Res.* 19 (3), 27–31.
- Hegney, D.G., Francis, K., 2015. Action research: changing nursing practice. *Nurs. Stand.* 29 (40), 36–41.
- Hodkinson, C.S., Poropat, A.E., 2014. Chinese students' participation: the effect of cultural factors. *Educ. Train.* 56 (5), 430–446.
- Hunt, M., 1987. The process of translating research findings into nursing practice. *J. Adv. Nurs.* 12 (1), 101–110.
- Hyrkäs, K., 1997. Can action research be applied in developing clinical teaching? *J. Adv. Nurs.* 25 (4), 801–808.
- Jackson, J., Vandall-Walker, V., Vanderspank-Wright, B., Wishart, P., Moore, S.L., 2018. Burnout and resilience in critical care nurses: a grounded theory of managing exposure. *Intensiv. Crit. Care Nurs.* 48, 28–35.
- Jahanpour, F., Azodi, P., Azodi, F., Khansir, A.A., 2016. Barriers to practical learning in the field: a qualitative study of Iranian nursing students' experiences. *Nurs. Midwifery Stud.* 5 (2), e26920.
- Jiang, R.S., Chou, C.C., Tsai, P.L., 2012. Preceptor-guided clinical Practica and the learning experiences of nursing students. *J. Nurs. Res.* 20 (2), 152–157.
- Jimenez, C., Navia-Osorio, P.M., Diaz, C.V., 2010. Stress and health in novice and experienced nursing students. *J. Adv. Nurs.* 66 (2), 442–455.
- Keeley, A.C., Grier, E.C., 2005. Professional resilience, practice longevity, and Parse's theory for baccalaureate education. *J. Nurs. Educ.* 44 (12), 548–554.
- King, C., Russell, K., Bulsara, C., 2017. Promoting student belongingness: 'WANTED'-the development, implementation and evaluation of a toolkit for nurses. *Aust. J. Adv. Nurs.* 34 (3), 48–53.
- Lekan, D.A., Ward, T.D., Elliott, A.A., 2018. Resilience in baccalaureate nursing students: an exploration. *J. Psychosoc. Nurs. Ment. Health Serv.* 56 (7), 46–55.
- Li, Y.S., Chen, H.M., Yang, B.H., Liu, C.F., 2011. An exploratory study of the relationship between age and learning styles among students in different nursing programs in Taiwan. *Nurse Educ. Today* 31 (1), 18–23.
- Liu, H.Y., Wang, L.H., Tai, H.C., Yu, K.L., Cheng, H.Y., Tsai, H.M., 2014. The stress and learning effects of Last-Mile curriculum among nursing students from three types of nursing programs. *JCGUST* 21, 45–62 (in Chinese).
- Mackay, M.T., Brown, R.A., Joyce-McCoach, J.T., Smith, K.M., 2014. The development of a model of education for casual academic staff who support nursing students in practice. *Nurse Educ. Pract.* 14 (3), 281–285.
- Mohamed, Z., Newton, J., McKenna, L., 2014. Belongingness in the workplace: a study of Malaysian nurses' experiences. *Int. Nurs. Rev.* 61 (1), 124–130.
- Moscaritolo, L.M., 2009. Interventional strategies to decrease nursing student anxiety in the clinical learning environment. *Nurse Educ.* 48, 17–23.
- Pines, E.W., Rauschhuber, M.L., Cook, J.D., Norgan, G.H., Canchola, L., Richardson, C., Jones, M.E., 2014. Enhancing resilience, empowerment, and conflict management among baccalaureate students: outcomes of a pilot study. *Nurse Educ.* 39 (2), 85–90.
- Ravanipour, M., Bahreini, M., Ravanipour, M., 2015. Exploring nursing students' experience of peer learning in clinical practice. *J. Educ. Health Promot.* 4, 46.
- Reason, P., Bradbury, H., 2001. *Handbook of Action Research: Participative Inquiry and Practice*. Sage, Thousand Oaks, CA.
- Richardson, G.E., 2002. The metatheory of resilience and resiliency. *J. Clin. Psychol.* 58 (3), 307–321.
- Roxburgh, M., Lauder, W., Topping, K., Holland, K., Johnson, M., Watson, R., 2010. Early findings from an evaluation of a post-registration staff development programme: the Flying Start NHS initiative in Scotland, UK. *Nurse Educ. Pract.* 10 (2), 76–81.
- Shaban, I.A., Khater, W.A., Akhu-Zaheya, L.M., 2012. Undergraduate nursing students' stress sources and coping behaviours during their initial period of clinical training: a Jordanian perspective. *Nurse Educ. Pract.* 12 (4), 204–209.
- Stephens, T.M., 2013. Nursing student resilience: a concept clarification. *Nurs. Forum* 48 (2), 125–133.
- Thomas, L.J., Asselin, M., 2018. Promoting resilience among nursing students in clinical education. *Nurse Educ. Pract.* 28, 231–234.
- Thomas, L.J., Revell, S.H., 2016. Resilience in nursing students: an integrative review. *Nurse Educ. Today* 36, 457–462.
- Turner, K., McCarthy, V.L., 2017. Stress and anxiety among nursing students: a review of intervention strategies in literature between 2009 and 2015. *Nurse Educ. Pract.* 22, 21–29.
- Yilmaz, E.B., 2017. Resilience as a strategy for struggling against challenges related to the nursing profession. *Chin. Nurs. Res.* 4 (1), 9–13.