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Self-Efficacy of nurses in COVID-19 isolation room of Sanglah Hospital, Denpasar: A mixed-method study

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ABSTRACT

Background and purpose: Nurses' self-efficacy during the pandemic is different from their self-efficacy before the pandemic. Managing self-efficacy is one way to support nurses' mental well-being and resilience. This study aims to describe and determine factors related to nurses' self-efficacy in the COVID-19 Isolation Room of Sanglah Hospital, Denpasar, Bali Province.

Methods: This is a mixed-methods study with a sequential explanatory design. In the first stage, a cross-sectional survey was conducted with a questionnaire in 132 nurses selected with total sampling. Statistical analysis was carried out using Chi-Square Test and Fisher's Exact Test at a 95% confidence level, to identify a relationship between nurses' characteristics and sources of self-efficacy with their self-efficacy levels. Subsequently, qualitative in-depth interviews were conducted with 12 informants selected by purposive sampling. Qualitative data were analyzed using thematic analysis.

Results: In the quantitative study, it was found that there was no relationship between the characteristics of nurses (age, gender, education level, years of service and training) and the level of self-efficacy ($p>0.05$). Meanwhile, the sources of efficacy (mastery experience, vicarious experience, social persuasion, physiological and emotional conditions) were found significantly associated with the level of self-efficacy ($p<0.05$). The qualitative study found that matters in line with these results, and other variables related to self-efficacy were personal, organizational, and external variables.

Conclusion: Sources of self-efficacy that nurses can utilize, as well as opportunities and support provided by nurse leaders, developed self-efficacy in treating COVID-19 patients. It is necessary to increase the significance of sources of self-efficacy, personal variables, and organizational support to increase self-efficacy.

Keywords: nurses, self-efficacy, COVID-19, Isolation Room and hospital

INTRODUCTION

The COVID-19 pandemic has caused various threats or risks, both biological and psychological, for nurses at the front lines of the COVID-19 outbreak.[1] The state of emergency due to COVID-19 puts nursing services under intense pressure because of high demands but insufficient resources resulting in work stress elevation. Symptoms of greater physical and psychological stress can affect the health and well-being of nurses.[2] During this COVID-19 pandemic, managing stress of nursing staff is a challenge for nursing leaders in providing support for the welfare and mental resilience of nursing staff, one of which is managing self-efficacy.[3]

Self-efficacy is a person's belief about their ability to produce the desired level of performance and the belief to be able to face difficulties and achieve goals effectively.[4,5] Self-efficacy not only plays a role in motivation and performance but also in the control of stress and anxiety.[6] Self-efficacy can control excessive reactions and self-regulation of psychological and emotional states so that it becomes a sensitive factor for psychological stress, fatigue, and poor mental health.[7] In carrying out their complex roles and functions, nurses can have basic and different coping self-efficacy, mainly the belief in overcoming the workload and relational difficulties in the workplace.[8]

Bandura states that self-efficacy can be changed, increased, or decreased through one or a combination of four sources: mastery experience, vicarious experience, social persuasion, and physiological and emotional state.[4] In addition, individual characteristics such as age, gender, level of education, and experience influence self-efficacy.[5]

Several previous studies have shown different findings of factors related to the level of self-efficacy. A study showed that education level, work experience, willingness to work in a nursing unit, and interest in nursing were significant factors related to nurses' self-efficacy in various care units.[9] A study of nurses' self-efficacy in palliative care shows that some factors significantly affected nurses' self-efficacy are work experience, interest in the nursing profession, knowledge and perception of palliative care.[10] Another study in nurses' self-efficacy in Indonesia shows a significant relationship between gender and hospital status with self-efficacy, while age, education, and length of work had no significant effect.[11]

The escalation of the COVID-19 cases made Sanglah Hospital change the function of several standard care units into COVID-19 Isolation Room. To meet the needs of nurses, Sanglah Hospital recruited new nurses and mobilized old nurses from other rooms to the COVID-19 Isolation Room. Various stressors such as the risk of contracting disease, high workload, difficulty dealing with uncooperative patients, and rejection reactions when the test results are positive can affect nurses' physical and mental health. The self-efficacy of new and old nurses is important to be developed and explored in an epidemic situation such as COVID-19 by looking at the sources of self-efficacy. High self-efficacy is an essential component in professional nursing practice[12] and the highest contributor to forming nurses' resilience[13,14] especially in facing the difficult situation of the current COVID-19 pandemic.

This study aims to describe the nurses' self-efficacy and the relationship between nurses' characteristics and sources of self-efficacy toward the level of nurses' self-efficacy in the COVID-19 Isolation Room of Sanglah Hospital Denpasar. Thus, it can provide inputs to nursing managers and further researchers in developing appropriate strategies to improve nurses' self-efficacy in outbreak situations.

METHODS

Study design

This study is a mixed methods research with a sequential explanatory design, starting with quantitative research followed by qualitative research.[15-17] Quantitative research was conducted through cross-sectional surveys and qualitative research through in-depth interviews.

Study Setting

The study was conducted at the inpatient units of Sanglah Hospital Denpasar, which consisted of four isolation rooms for COVID-19 patients. Data collection was carried out from November to December 2020.

Population, Sample, and Sampling Technique

The population of the quantitative stage was all nurses in the isolation room of inpatient units, Sanglah Hospital Denpasar. A sample of 132 people was taken by total sampling with inclusion criteria: nurses providing direct nursing care to patients, including those in charge of shifts and implementing nurses, and willing to participate in the study.

Qualitative study informants were chosen from nurses with the lowest, moderate, and highest self-efficacy scores from each quantitative sample group. The quantitative group consisted of Group 1: nurses without work experience at Sanglah Hospital, Group 2: nurses with work experience at Sanglah Hospital but not in the isolation room, and Group 3: nurses who had already worked in isolation rooms. Interviews were also conducted with 3 heads of the isolation room of Sanglah Hospital so that the total number of informants was 12 people.

Instruments and Data Collection

Quantitative research aims to obtain an overview of the level of self-efficacy and the relationship between the characteristics of nurses (age, gender, education level, years of service and training) and sources of self-efficacy (mastery experience, vicarious experience, social persuasion, physiological and emotional state) toward the level of self-efficacy of nurses in the COVID-19 isolation rooms. Data was obtain using a questionnaire distributed to all respondents to be answered by themselves (self-administered). The questionnaire for the sources of self-efficacy consists of 16 items, compiled by the researchers based on the concept of Bandura.

The validity test results of the questionnaire conducted at the COVID-19 isolation room at another installation showed that there was 1 invalid item, so it was deleted from the questionnaire. The reliability test results on 15 valid items showed that all items were reliable with a Cronbach Alpha value of 0.905. The answer to the statement used a Likert scale with a value of 0-4 so that the score ranged from 0-60. The categorization of the meaning of the sources of self-efficacy was carried out based on the results of empirical research with the categories of less, sufficient, and high.

The self-efficacy level was measured with a 20-item questionnaire compiled by the researcher regarding the General Self-Efficacy-Scales by Schwarzer & Jerusalem,[18] the Occupational Self-Efficacy Scales from Rigotti,[19] and the Occupational Coping Self-Efficacy for Nurses by Pisanti.[8] The validity test on the 20 items on the self-efficacy level questionnaire showed all items were valid and reliable with a Cronbach Alpha value of 0.939. The answer to the statement used a Likert scale of 0-4, so that the score ranged from 0-80. The categorization of self-efficacy scores was divided into 3 based on the results of empirical research: low, moderate, and high.

Qualitative research aims to confirm and deepen the results of quantitative research. At this stage, the researcher conducted semi-structured interviews with informants assisted by interview guidelines.

Data analysis technique

Quantitative data were analyzed using SPSS 22.0 with univariate analysis to determine the frequency distribution of factors and the level of self-efficacy. Furthermore, bivariate analysis was conducted to determine the relationship between nurse characteristics and sources of self-efficacy toward the level of self-efficacy. The analysis technique used in the study was the Chi-Square test at a 95% confidence level, and data that did not meet the Chi-Square test requirements were continued with the Fisher's Exact Test.[20] Self-efficacy factors were related to the level of self-efficacy if the p-value <0.05.

Qualitative data were analyzed with thematic analysis through the stages of developing interview transcripts, identifying data, initializing codes, identifying themes, reviewing themes, defining themes, and naming the themes.[21]

This research has obtained an Ethical Eligibility Letter from the Research Ethics Commission of the Faculty of Medicine, Udayana University/Sanglah Hospital, Number: 2108/UN14.2.2.VII.14/LT/2020 dated October 26, 2020, as well as a research permit from the Director of Human Resources and Education at Sanglah Hospital Denpasar, Number: LB .02.01/XIV.2.2.1/39430/2020 on November 2, 2020.

RESULT

Respondents' Characteristics

Most of the respondents were 20-30 years old (50.8%), dominated by the female (72%), about 68.9% had a Diploma in Nursing education with more than 5 years of service (50.8%), and most of them (68.9%) received training in infectious disease nursing care (Table 1).

Table 1. Nurses' characteristics in the COVID-19 isolation room, Sanglah Hospital Denpasar

Variable	Frequency	Percentage
Age (years)		
20–30	67	50.8
31–40	53	40.1
>40	12	9.1
Gender		
Male	37	28
Female	95	72
Education		
Associate degree DIII in nursing	91	68.9
Bachelor degree in nursing - Ners	41	31.1
Years of Service		
No work experience	10	7.6
<1	22	16.7
1–5	33	25.0
>5	67	50.7
Training		

None	41	31.1
Yes	91	68.9

Sources of Self-Efficacy

Based on a descriptive analysis of the four sources of self-efficacy, it was found that the highest percentage of meaningfulness of self-efficacy sources was social persuasion, about 88.7%. It was followed by mastery experience of 84.1%, physiological and emotional state of 83.4%, and the lowest was the vicarious experience of 82.6%.

Self-Efficacy Levels

The respondents' self-efficacy levels showed an average score of 64.72 (range 41-80) and most (68.2%) with moderate levels of self-efficacy, 22% with high levels of self-efficacy, and only 9.8% with low levels of self-efficacy. Group 3 (nurses who were already working in isolation rooms) had a higher average score of 66.67 (range 53-80) compared to other groups (Table 2)

Table 2. Self-efficacy level of all respondents and each group

Parameter	Total Respondents (n=132)	Groups		
		Group 1 (n=33)	Group 2 (n=69)	Group 3 (n=30)
Self-efficacy level				
Low	13 (9.8 %)	7 (21.2%)	4 (5.8%)	2 (6.7%)
Moderate	90 (68.2%)	19 (57.6%)	49 (71.0%)	22 (73.3%)
High	29 (22.0%)	7 (21.2%)	16 (23.2%)	6 (20.0%)
Average scores	64.72	63.03	64.48	66.67
Standard deviation	±10.47	±12.54	±9.68	±8.95
Score range	41-80	41-80	41-80	53-80
Modus	60	60	60	80

- *Group 1 = nurses without work experience at Sanglah Hospital*
- *Group 2 = nurses with work experience at Sanglah Hospital but not in the isolation room*
- *Group 3 = nurses had already worked in isolation rooms*

The Relationship between Nurse Characteristics and Self-Efficacy Level

The bivariate analysis found no relationship between all nurses' characteristics and the level of self-efficacy, with p>0.05 (Table 3). The in-depth interviews support this result; most characteristics of nurses were not much different in affecting self-efficacy in providing care for COVID-19 patients, although informants stated that experience is essential. Informants stated that various characteristics of nurses were needed for various stressors.

"In terms of age, even though young, they are indeed more agile, more caring is not related to the age... no... but from the maturity of experience. In terms of education, there is an influence, compared to an associate degree - DIII, Bachelor degree is more sophisticated, right.. Right now, all are computerized... the youth with bachelor's education is more advanced regarding technology. In working experiences, all seniors can make decisions…" (I 11, Nurse)

Table 3. Relationship between nurses' characteristics and self-efficacy levels

Nurses' characteristics	Self-efficacy level			Total f (%)	*p*
	Low f (%)	Moderate f (%)	High f (%)		
Age (Years)					
20-30	7 (10.4)	44 (65.7)	16 (23.9)	67 (100)	
31-40	4 (7.5)	40 (75.5)	9 (17.0)	53 (100)	0.414
>40	2 (16.7)	6 (60.0)	4 (33.3%)	12 (100)	
Gender					
Male	4 (10.8)	23 (62.2)	10 (27.0)	37 (100)	0.631
Female	9 (9.5)	67 (70.5)	19 (20.0)	95 (100)	
Education					
Associate degree D-III in nursing	9 (9.9)	64 (70.3)	16 (19.8)	91 (100)	0.658
Bachelor degree in nursing – Ners	4 (9.8)	26 (63.4)	11 (26.8)	41 (100)	
Years of Service					
No work experience	2 (20.0)	6 (60.0)	2 (20.0)	10 (100)	0.487
<1	4 (18.2)	14 (63.6)	4 (18.2)	22 (100)	
1–5	1 (3.0)	23 (69.7)	9 (27.3)	33 (100)	
>5	6 (9.0)	47 (70.1)	14 (20.9)	67 (100)	
Nursing training in infectious disease care					
None	5 (12.2)	28 (68.3)	8 (19.5)	41 (100)	0.780
Yes	8 (8.8)	62 (68.1)	21 (23.1)	91 (100)	

Relationship between sources of self-efficacy with level of self-efficacy

Bivariate analysis revealed significant relationship between all sources of self-efficacy (mastery experiences, vicarious experience, social persuasion and physiological&emotional state) and the level of self-efficacy with $p<0.05$ (Table 4).

Table 4. Relationship between sources of self-efficacy with nurses' self-efficacy levels

Sources of self-efficacy	Self-efficacy level			Total f (%)	p
	Low f (%)	Moderate f (%)	High f (%)		
Mastery experiences					
Lack	5 (23.8)	16 (76.2)	0 (0.0)	21 (100.0)	0.000
Sufficient	8 (10.3)	58 (74.4)	12 (15.4)	78 (100.0)	
High	0 (0.0)	16 (48.5)	17 (51.5)	33 (100.0)	
Vicarious experiences					
Lack	4 (17.4)	17 (73.9)	2 (8.7)	23 (100.0)	0.000
Sufficient	8 (11.0)	58 (79.5)	7 (9.6)	73 (100.0)	
High	1 (2.8)	15 (41.7)	20 (55.6)	36 (100.0)	
Social Persuasion					
Lack	4 (26.7)	11 (73.3)	0 (0.0)	15 (100.0)	0.000
Sufficient	5 (7.2)	57 (82.6)	7 (10.1)	69 (100.0)	
High	4 (8.3)	22 (45.8)	22 (45.8)	48 (100.0)	

Phyisiological & Emotional State					
Lack	4 (18.2)	17 (77.3)	1 (4.5)	22 (100.0)	0.000
Sufficient	9 (9.7)	68 (73.1)	12 (17.2)	93 (100.0)	
High	0 (0.0)	5 (29.4)	12 (70.6)	17 (100.0)	

The in-depth interviews also support those results. Judging from the mastery experiences, the informant stated that the ability and confidence in treating COVID-19 patients were mainly obtained from direct internships in the N* Isolation Room and experience of treating outbreak patients. The vicarious experience was mainly obtained by observing friends/seniors as role models. The informant stated that social persuasion in support from the team leader, head of the room, and management in dealing with various patients, families, and other professions is important and can reduce stress. Physiological and emotional conditions such as fatigue, uncomfortable personal protective equipment (PPE), and seeing the patient's poor condition are enough to affect the service to the patient.

"K room staff is like attend training in the N* room … so from there we know how to work in the infection room, then after that we understand… this is how it works in an isolation room… oooh, I dare to take care of COVID patients, I am sure, basically after trying to be confident and happy, how to serve patients, managing patients up to managing their room" (I 4, RN, Nurse)*

"The direction from the seniors in the team means that I am not very receptive when I learn by reading. However, if I see it directly or told it directly, it is more understandable. There are role models, but each is specific, such as this one is good at management and the others good at other skills… I am observing everyone… Oh.. this one good at this skill, then I started to imitate it" (I 5, PC).

Exploration of other variables related to self-efficacy found 3 themes, personal variables, organizational variables, and external variables. Personal variables were altruism, self-motivation, commitment, and spirituality. The organizational variables included nursing management in terms of team management and scheduling, mentoring methods, and hospital facilities, especially regarding PPE quality. External variables were in the form of external support, both support from family and rewards from the government.

"The passion for caring the patients, motivation, and desire to help patients make us survive in it…" (I8, RW)

"..because that is my job as a nurse, regardless of the patient's condition, we must continue to treat the patient as much as possible" (I3,WS)

" I have observed that when there is special assistance from our friends who are competent in the ventilator section, the progress is incredible" (I10,KY)

DISCUSSION

The description of the respondent's self-efficacy level shows that most of the respondents had a moderate level of self-efficacy. Viewed from the data per group, Group 3 (nurses initially assigned to the isolation room) showed a higher average score than the other two groups. The experience of self-success (mastery experience) in the past was the most influential thing on self-efficacy.[4,8] In Group 3, nurses already had experience in treating infectious patients such as Avian Influenza, MERS-CoV, Pulmonary Tuberculosis with the same standard of PPE use and already experienced to avoid the dangers of contracting the disease, so that they had higher self-confidence to treat COVID-19 patients and face the main stressor, the fear of being infected.

Why nurses' characteristics did not related to self-efficacy?

This study found no relationship between age and level of self-efficacy (p=0.414). Older individuals tend to have various experiences and efforts to overcome the difficulties of the events that occur.[5,22] However, the COVID-19 pandemic is a relatively new situation for all nurses since there has never been an outbreak in a long time that has caused various changes in a short time. Several studies have also found that age is not associated with self-efficacy.[11,23,24]

Most (72%) of the respondents were women, and there was no relationship between gender and self-efficacy level (p=0.631). This is different from the view of differences in the development of male and female abilities.[5,25] Men have a more mature readiness in overcoming problems and finding solutions.[11,26] This difference may be due to the absence of distinction in the responsibilities of male and female nurses and local socio-cultural factors where Balinese women have the identical toughness as men in carrying out work responsibilities and facing various problems.

The level of education in this study was not related to the level of self-efficacy (p=0.658). This does not align with the view that higher education provides more opportunities to overcome life's problems.[5] In in-depth interviews, the informant stated that various characteristics of nurses were needed for various stressors, and there was no special division of tasks between associate degree diplomas and Bachelors of Nursing in caring for the patients so that in this study, the level of education did not affect self-efficacy. Several studies found something similar to this study, the Bachelor of Nursing (Ners) had higher critical thinking, but there was no significant relationship between education level and self-efficacy.[11,27,28]

The period of service as a nurse in this study was not related to the level of self-efficacy (p=0.487). Bandura stated that the longer a person works in an organization or company, the higher the self-efficacy in a particular field.[5] This study found that the experience of working in an isolation room affected self-efficacy as in Group 3, but the period of work as a nurse was not related. This was because the experience of caring for COVID-19 patients is a "new experience" for all respondents, both nurses with short and longer tenures. Self-efficacy is determined by the length of work and the individual's experience in responding to success or failure.[5]

Infectious disease nursing care training in this study was not related to self-efficacy (p=0.780). This was due to the online training method through zoom media. According to the informant, it was less permeable than direct internships in the isolation room who have experienced treating epidemic patients or assisting intensive patients using special equipment.

The importance of sources of self-efficacy

Social persuasion had the highest percentage of meaningfulness (88.7%) compared to other sources of self-efficacy. It was supported by the results of interviews where the informant stated the importance of support from superiors and coworkers in dealing with various stressors, reducing stress, and calming. Individuals who are verbally persuaded by people they respect, such as supervisors, will increase confidence in job success and minimize doubts in overcoming problems,[4,8] especially if the persuasion is realistic.[29] In the context of the patient care room, the head of the room and the team leader plays an important role in maintaining the morale of the staff or work team. Nursing leaders are decision-makers, controllers of information, can provide or withdraw much-needed support for staff and provide opportunities for self-improvement.[12]

The mastery experiences of all respondents had a significant percentage of 84.1%, slightly different from that stated by Bandura and Pisanti[4,8] where mastery experiences were the most influential source of efficacy. However, the higher self-efficacy scores in Group 3 nurses showed that previous experience of caring for isolated patients was also quite influential. Nurses in Group 3 also stated that the COVID-19 outbreak was much

more physically and mentally draining with more severe and varied stressors, so verbal persuasion from superiors was also essential. Nurses in Group 1 and 2 who already had an internship opportunity in the isolation room also need feedback from their superiors to increase their confidence. Not all things learned will be put into practice because reinforcement motivation is needed, so that mastery of the experience fosters self-efficacy.[30]

Physiological and emotional stages were sources of self-efficacy with a significant percentage of 83.4%. A positive mood increases the perception of self-efficacy, while sad mood reduces it. If someone feels more comfortable facing the task, they will feel more capable and have higher self-confidence.[4] Some informants stated that the feeling of thirst, heat, tightness, stuffy, wet, bad mood, and fatigue they felt when providing nursing care by wearing complete PPE, especially with poor quality for a long time (more than 2 hours), prompted them to hurry removing PPE so that the care provided to patients was not optimal.

The experience of the vicarious got the lowest percentage of significance at 82.6%. The informant revealed that before opening the new room, the internship experience at the Nusa Indah Room through observing and directly caring for patients was very important in forming confidence in caring for COVID-19 patients. However, along with the escalation of cases and the establishment of the M* Room and K* as COVID-19 intensive care rooms, the experience of internships in the N* Room and training in an intensive room outside the COVID-19 room was felt to be not enough to make informants believe that they were treating intensive COVID-19 patients with special tools such as ventilators and HFNC. The staff and head of the room stated that direct assistance by competent intensive nurses directly on COVID-19 patients made staff understand quickly, have more confidence, and be more courageous in caring for COVID-19 intensive patients. The social model's success in transferring knowledge and effective strategic skills to manage environmental demands can only be obtained from a social model that is considered competent.[4]

Other variables affecting self-efficacy

A more in-depth exploration of other variables that affect self-efficacy from personal, organizational, and external variables has provided an understanding that nurses' self-efficacy during a pandemic is multifactorial. Personal and organizational variables seem to make a dominant contribution in building self-efficacy to deal with the challenging situations faced by the COVID-19 Isolation Room's nurses. Self-efficacy is significantly positively related to altruism,[31] learning motivation,[32] commitment[33] and spirituality.[34] Manojlovich states that self-efficacy is a mediator between structural empowerment and professional nursing practice and emphasizes the importance of nursing leadership.[35] Structural empowerment concerns access to growth opportunities to increase knowledge and skills, resources (facilities, time), information (organizational decisions and policies) and support (feedback and guidance).

The limitations of this study were the risk of researcher and objectivity bias of the results considering that the first researcher was the coordinator of nursing services in the COVID-19 Isolation Room. Researchers anticipate this by only using codes and anonymous participants in the quantitative questionnaire and forming a team of interviewers so that the study's internal validity can be maintained.

CONCLUSION

Most of the respondents had a moderate level of self-efficacy, and nurses who initially worked in the isolation room had the highest average score and range of self-efficacy scores compared to other groups. The level of self-efficacy was not related to the characteristics of the respondents, but the results of the interviews

stated that experience was very important. There was a significant relationship between all sources of self-efficacy and the level of self-efficacy, with the highest percentage was on social persuasion due to the high-stress level experienced by nurses. Nurses could utilize sources of self-efficacy, including personal, organizational variables, external support, opportunities, and support provided by nurse leaders to form self-efficacy in treating COVID-19 patients.

To increase the self-efficacy of nurses, it is necessary to increase the meaning of the sources of self-efficacy and nurses' personal variables and get support from the organization. Nurses should foster communication with superiors and work teams, appreciate their successes, accept failures positively, and practice successful role models. The significance of personal variables can be increased, among others, by being grateful, increasing self-motivation, commitment and spirituality. Hospitals can improve nurses' self-efficacy by giving appreciation, good nursing leadership in a pandemic situation, increasing the dissemination of guidelines, facilitating mentoring activities, meeting the need for good quality PPE, and providing psychological assistance.

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AUTHOR CONTRIBUTION

RDDP compiled the research, collected, analyzed data, and compiled the manuscript. DSL and CBJL developed the research concept and design, provided input, suggestions, and feedback for research proposals and manuscript preparation.

CONFLICT OF INTEREST

No conflict of interest declared by the author

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REFERENCES

1. World Health Organization. Mental health and psychosocial considerations during the COVID-19 outbreak [Internet]. 2020. Available from: https://apps.who.int/iris/handle/10665/331490.
2. Mo Y, Deng L, Zhang L, Lang Q, Liao C, Wang N, et al. Work stress among Chinese nurses to support Wuhan in fighting against COVID-19 epidemic. *Journal of Nursing Management*. 2020; 28(5): 1002-1009.
3. Duncan DL. What the COVID-19 pandemic tells us about the need to develop resilience in the nursing workforce. *Nursing Management*. 2020; 27(3).
4. Bandura A, Wessels S. Self-efficacy. na; 1994.
5. Bandura A. Self-efficacy: The exercise of control. New York: Freeman. 1997.
6. Bandura A, Locke EA. Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*. 2003; 88(1): 87-89.

7. Fida R, Laschinger HK, Leiter MP. The protective role of self-efficacy against workplace incivility and burnout in nursing: A time-lagged study. *Health Care Management Review*. 2018; 43(1): 21-29.
8. Pisanti R, Lombardo C, Lucidi F, Lazzari D, Bertini M. Development and validation of a brief occupational coping self-efficacy questionnaire for nurses. *Journal of Advanced Nursing.* 2008; 62(2): 238-247.
9. Soudagar S, Rambod M, Beheshtipour N. Factors associated with nurses' self-efficacy in clinical setting in Iran, 2013. *Iranian Journal of Nursing and Midwifery Research.* 2015; 20(2): 226–231.
10. Kurnia TA, Trisyani Y, Prawesti A. Factors associated with nurses' self-efficacy in applying palliative care in intensive care unit. *Jurnal Ners*. 2018; 13(2): 219-226.
11. Handiyani H, Kusumawati AS, Karmila R, Wagiono A, Silowati T, Lusiyana A, et al. Nurses' self-efficacy in Indonesia. *Enfermeria Clinica*. 2019; 29: 252–256.
12. Manojlovich M. Promoting nurses' self-efficacy: A leadership strategy to improve practice. *JONA: The Journal of Nursing Administration.* 2005; 35(5): 271–278.
13. Gillespie BM, Chaboyer W, Wallis M, Grimbeek P. Resilience in the operating room: Developing and testing of a resilience model. *Journal of Advanced Nursing.* 2007; 59(4): 427–438.
14. Mariani BU. Faktor-faktor personal sebagai prediktor terhadap resiliensi perawat di Rumah Sakit Penyakit Infeksi Prof. Dr. Sulianti Saroso [Personal factors as predictors of nurses' resilence at Infectious Disease Hospital of Prof. Dr. Sulianti Saroso]. *The Indonesian Journal of Infectious Diseases.* 2017; 1(01): 14-21.
15. Ivankova NV, Creswell JW, Stick SL. Using mixed-methods sequential explanatory design: From theory to practice. *Field methods*. 2006; 18(1): 3-20.
16. Creswell JW, Clark VL. Mendesain dan melaksanakan mixed method research [Designing and implementing mixed method research]. Yogyakarta: Pustaka Pelajar. 2018.
17. Sugiyono PD. Metode penelitian kombinasi (mixed methods). Bandung: CV. Alfabeta. 2014.
18. Schwarzer M, Jerusalem M. Meas. Heal. Psychol. A user's portfolio. Causal Control Belief. 1995; 35–37.
19. Rigotti T, Schyns B, Mohr G. A short version of the occupational self-efficacy scale: Structural and construct validity across five countries. *Journal of Career Assessment*. 2008; 16(2): 238-255.
20. Santjaka A. Aplikasi SPSS untuk analisis data penelitian kesehatan [SPSS application for data analysis of health research]. Yogyakarta: Nuha Medika; 2015. 93–104 p.
21. Clarke V, Braun V. Thematic analysis. *The Journal of Positive Psychology*. 2017; 12(3): 297-298.
22. Molinari DL, Monserud M. Rural nurse cultural self-efficacy and job satisfaction. *Journal of Transcultural Nursing*. 2009; 20(2): 211–218.
23. Semiatin AM, O'Connor MK. The relationship between self-efficacy and positive aspects of caregiving in Alzheimer's disease caregivers. *Aging & Mental Health.* 2012; 16(6): 683–688.
24. Walumbwa FO, Hartnell CA. Understanding transformational leadership-employee performance links: The role of relational identification and self-efficacy. *Journal of Occupational and Organizational Psychology*. 2011; 84(1): 153–172.
25. Zimmerman BJ. Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*. 2000; 25(1): 82–91.
26. Imus FS, Burns S, Weglarz DM. Self-efficacy and graduate education in a nurse Anesthesia program: A pilot study. *AANA Journal*. 2017; 85(3): 205–216.
27. McLaughlin K, Moutray M, Muldoon OT. The role of personality and self-efficacy in the selection and retention of successful nursing students: A longitudinal study. *Journal of Advanced Nursing*. 2008; 61(2): 211–221.
28. Gloudemans HA, Schalk RM, Reynaert W. The relationship between critical thinking skills and self-efficacy beliefs in mental health nurses. *Nurse Education* Today. 2013; 33(3): 275–280.
29. Stewart L. Crisis intervention training for nurses. University of Florida, USA; 2000.
30. Zulkosky K. Self-efficacy: a concept analysis. In Nursing forum 2009 Apr (Vol. 44, No. 2, pp. 93-102). Malden, USA: Blackwell Publishing Inc.
31. Febriansyah G, Frieda NR. Hubungan antara efikasi diri dengan altruisme pada relawan Palang Merah Indonesia [The relationship between self-efficacy and altrunism among volunteers of Indonesian Red Cross (*Palang Merah Indonesia*)]. *Jurnal EMPATI*. 2019; 7(4): 1350-1360.
32. Hassankhani H, Aghdam AM, Rahmani A, Mohammadpoorfard Z. The relationship between learning motivation and self efficacy among nursing students. *Research and Development in Medical Education*. 2014; 4(1): 97-101.
33. Abidin MI, Pongtuluran Y, Maria S. Pengaruh kepuasan kerja, lingkungan kerja dan efikasi diri terhadap komitmen organisasi di Rumah Sakit SMC Samarinda [The effects of work satisfaction, work environtment, and self-efficacy on organization commitment at SMC Hospital in Samarinda]. *AKUNTABEL*. 2017; 13(1): 1-10.

34. Astuti AD. Hubungan tingkat spiritualitas dengan self efficacy pada pasien diabetes melitus di Wilayah Kerja Puskesmas Mlati I Yogyakarta (Skripsi) [The relationship between spiritualitaly and self-efficacy among patients with diabetes mellitus in Mlati I Publich Health Center in Yogyakarta]. 2017. (Undergraduated Thesis, Universitas Muhammadiyah Yogyakarta)
35. Manojlovich M. Promoting nurses' self-efficacy: a leadership strategy to improve practice. *JONA: The Journal of Nursing Administration.* 2005; 35(5): 271-278.