Proceeding Paper

The Impacts of Stress and Resilience on Intentions to Leave the Nursing Profession among Newly Graduated Nurses †

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Abstract: Registered nurses are a professional group that suffer from high levels of stress-related conditions. Thus, this study aimed to identify the impacts of stress and resilience on intentions to leave the nursing profession among newly graduated nurses (n = 165). A descriptive cross-sectional design and purposive sampling were used. Most of the respondents showed a moderate level of resilience and a high level of stress. Of the participants, 12.7% reported an intention to leave the nursing profession. A strong correlation was found between levels of resilience and stress among newly graduated nurses. Effective stress management and interventions to improve resilience in newly graduated nurses are highly recommended.

Keywords: nurses; psychological stress; resilience

1. Introduction

Nursing is a stressful job. A study conducted in Hospital Kuala Lumpur among ward nurses reported that approximately 24.6% of nurses experienced job-related stress [1]. Previous research has shown that newly graduated nurses face difficulties in the transition from being a student to becoming a registered nurse [2]. Thus, a 50% turnover rate was reported for the first three years of working [3]. Nurses' time and energy demands have increased over the last ten years. There are many causes of this situation, such as workload levels, lack of support from the management, personal problems, and working hours [4–6]. In addition, uncomfortable working surroundings and the hardship of building a good rapport with co-workers also produce difficulties for newly graduated nurses [5]. Other than these factors, newly graduated nurses, mainly those with bachelor's qualifications, are expected to be skilful within a brief period [2]. These difficulties are likely to affect their psychological well-being, thus increasing the rate of staff turnover and resignations.

The increased nursing-career turnover rate is due to junior nurses' lack of support and high stress levels [7]. Therefore, the stress levels among newly graduated nurses ought to be assessed to remedy the situation and ensure good coping skills to enable nurses to meet the challenges they face and stop turnover. Generally, during their first three months, most newly graduated nurses quit or transfer to other units because they believe they can reduce distress [8]. However, many decide to leave the profession and migrate to other high-income countries for healthier working environments and better career prospects and salaries. A report shows that Malaysia has a low nurse-per-population ratio compared to other developing countries. In 2019, there were 3.5 nurses per 1000 population compared to 11.3 in Japan and 6.2 in Singapore [9]. A high nurse–patient ratio is likely to contribute to poor nursing care quality and jeopardise patient safety [10].

Resilience serves as an adaptive strategy for dealing with adversity. Bouncing back from emotional setbacks and adapting to new circumstances in the face of stress is crucial for a person's health and well-being [11]. Therefore, nurses should have excellent resilience skills to ensure that they can handle their work challenges and be motivated to stay in the profession. Moreover, resilience may be a factor that can facilitate successful transition [12]. Thus, this study aimed to investigate the impacts of stress and resilience on intentions to leave the nursing profession among newly graduated nurses in Malaysia.

2. Methods

2.1. Study Design and Sampling

We used a cross-sectional study design to investigate the impacts of stress and resilience on intentions to leave the nursing profession among newly graduated nurses in Malaysia. The purposive sampling technique was used to recruit the samples in the study. Purposive sampling is also known as judgemental, selective, or subjective sampling. Given the use of this sampling method, the sample included the people who could provide the best information to achieve the study's objectives, were likely to have the information required for the research, and would be willing to share it [13]. The sample size was calculated using the Roasoft, Inc., sample-size calculator. For a population of 280 nursing graduates from 2018 to 2020, with significance at the 5% and a 95% confidence level, 163 samples were required; however, we managed to recruit 165 samples at the end of the data-collection period. The inclusion criteria for this study were that the participants worked as registered nurses in the hospital and had less than three years of work experience. Newly graduated nurses working part-time in the hospital or on study leave were excluded from this study.

2.2. Research Instrument

A self-administered questionnaire that consisted of three sections was used in this study. Section A concerned the subject's demographics and consisted of 6 items: gender, age, academic level, work experience, marital status, and intention to quit nursing. Section B comprised a 10-item Perceived Stress Scale adopted from Cohen, 1994 [14]. Responses were made according to a 5-point Likert-type scale, from 0 = "never" to 4 = "very often" based on the degree to which each statement applied to them over the last month. The values for all of the items scored using the 5-point scale were summed, with a higher score indicating a higher stress level. The total scores for each element indicated the level of stress as being normal (0–7 total score), mild (8–9 total score), moderate (10–12 total score), severe (13–16 total score), or extremely severe (17–40 total score).

Section C included 25 items from the Connor–Davidson Resilience Scale (CD-RISC), adopted from Connor and Davidson [15]. CD-RISC is rated on a five-point scale, from 0, which indicates "not true at all", to (4), which indicates "very often", and higher scores suggest greater resilience. Total scores range from 0 to 100 [15]. Scores ranging from 0–19 are considered to indicate a very low level of resilience, scores from 20–40 a low level of resilience, scores from 41–62 a moderate level, scores from 63-83 a high level of resilience, and scores from 84–100 a very high level of resilience [11]. The original authors granted permission to use the CD-RISC.

A reliability test was conducted to measure the reliability of the questionnaire used in this study. For the first questionnaire, the Perceived Stress Scale, the Cronbach's alpha was 0.75. For the second questionnaire, CD-RISC, the Cronbach's alpha was 0.84. Thus, both scales were reliable and could be used in this study.

2.3. Ethical Considerations

The Ethics Committee, Universiti Teknologi MARA (UiTM), gave ethical approval for this study (600-IRMI (5/1/6)). The participants were assured that their involvement in the study was voluntary and that no personal characteristics would be identifiable from the collected data.

2.4. Data-Collection Process

We obtained a list of alumni who graduated from 2018 to 2020 with a diploma and a bachelor of nursing qualification from the department of student affairs in a public university. The respondents were contacted for permission purposes and to explain the study's objective. After the respondent gave permission, the questionnaires were administered in the form of an online survey; a Google form was sent to the respondents.

2.5. Data Analysis

Statistical Program Package for Social Sciences (SPSS) software version 21.0 (IBM, Armonk, NY, USA) was used to analyse the data. Descriptive statistics were used in frequency (n) and percentage (%) analyses to calculate means (M) and standard deviations (SD). Then, Pearson correlation analyses were performed to test the strength of the relationships between stress and resilience and between stress, resilience and sociodemographic variables (age and work experience). A parametric independent-sample t-test was also used to determine the relationships between level of resilience and sociodemographic variables of gender, academic level, and intention to leave the nursing profession.

3. Results

3.1. Sociodemographic Characteristics and Intentions to Leave

Table 1 shows the sociodemographic characteristics of the participants. Most of the respondents, 89.0% (n = 147), were female, with a mean age of 23.9. Of the participants, 58.8% (n = 97) graduated with a degree and 41.2% (n = 68) had a diploma in nursing. The majority of the participants had less than a year of work experience, and 12.7% reported an intention to leave the nursing profession.

Table 1. Descriptive analysis of demographic characteristics and intentions to leave the nursing profession.

Variables	Frequency (n)	Percentage (%)
Gender		
Male	18	10.90
Female	147	89.11
Age (mean, SD)	23.9	2.10
Academic level		
Degree	97	58.8
Diploma	68	41.2
Work experience		
<1 year	128	77.6
$1 \leq 2$ years	30	18.2
$2 \leq 3$ years	7	4.2
Intention to leave		
Yes	21	12.7
No	144	87.3

3.2. Associations between Stress, Resilience, and Intention to Leave

The independent-sample t-test was used to measure the differences between the two groups with respect to the means. The test was used to compare the means of sociodemographic characteristics, such as gender, marital status, academic qualifications, and intention to leave the nursing profession, with resilience and perceived stress, respectively. A significant difference in relation to perceived stress could be observed between males and females, with female participants showing higher stress levels than males ($t = -4.20$, $p = 0.001$). Gender differences also existed with respect to resilience, with males scoring higher than females ($t = 2.40$, $p = 0.017$). Table 2 summarises the independent-sample t-test results.

Table 2. Summary of the independent-sample *t*-test results comparing sociodemographic characteristics with perceived stress and resilience.

	Perceived Stress			Resilience		
Variables	**Mean (SD)**	***t*-Stats (df)**	***p*-Value**	**Mean (SD)**	***t*-Stats (df)**	***p*-Value**
Gender						
Male	17.28 (2.74)	−4.20 (163)	0.001 *	51.17 (2.75)	2.40 (163)	0.017 *
Female	20.23 (2.82)			48.07 (5.38)		
Academic qualification						
Degree	19.95 (3.97)	−0.59	0.981	48.47 (5.10)	0.20 (163)	0.315
Diploma	19.99 (3.99)			48.31 (5.47)		
Intention to leave the nursing profession						
Yes	20.71 (3.54)	1.34 (163)	0.182	46.29 (4.89)	−2.00 (163)	0.047 *
No	19.79 (2.86)			48.72 (5.23)		

Note: * Significant at *p* < 0.05.

Pearson correlation coefficients were used to analyse the correlations between age, work experience, resilience, and perceived stress among newly graduated nurses (Table 3). There was a positive correlation between age (r = 0.26, *p* = 0.01), work experience (r = 0.53, *p* = 0.01), and resilience. Work experience and perceived stress were moderately correlated (r = 0.33, *p* = 0.01). Finally, there was a strong negative correlation between resilience and perceived stress, indicating that those with high resilience scored lower for perceived stress (r = −0.99, *p* < 0.01).

Table 3. Pearson correlation coefficient results for age, work experience, resilience, and perceived stress.

Variables	**1**	**2**	**3**	**4**
1. Age	1			
2. Work experience	0.89 *	1		
3. Resilience	0.26 *	0.53 *	1	
4. Perceived stress	−0.08	0.33 *	−0.99 *	1

Note: * Significant at *p* < 0.05.

4. Discussion

Currently, more than 10% of the registered nurses working in hospitals are new graduates [16]. Previous research has shown that the shift from being a student (graduate) to a professional registered nurse can be demanding for new nurses [16]. Perceived stress is a common factor contributing to nurses' intentions to leave. Resilience is considered one of the psychotherapeutic approaches for dealing with stress among newly graduated nurses. Thus, this study aimed to investigate perceived stress, resilience, and intentions to leave the nursing profession among newly graduated nurses.

This study's findings suggested that most participants reported moderate stress levels. A study by Blomberg et al. in Sweden also found high stress levels among newly graduated nurses [17]. Nurses have some of the highest stress levels among healthcare professionals due to such factors as caring for terminally ill patients, being excluded by co-workers, and having their abilities questioned by their peers. Additionally, shift rotation interrupts their personal lives and may further increase their stress levels [6]. Another study also agreed that shift rotation is another major long-term cause of stress and exhaustion among nurses [4]. Another stressor is night-shift work, with plenty of rest and unfamiliar hospital shifts causing sleep disorders and work–life imbalances [18].

Significant differences between males and females could be observed in terms of stress and resilience levels. Males reported lower levels of stress and higher resilience levels compared to their female counterparts. Many factors could have contributed to these differences. Physiological variations between males and females, such as hereditary

susceptibility and hormone and cortisol levels, may manifest themselves emotionally and behaviorally [19]. In addition, females and males adopt different coping skills, with females coping more negatively with adversity. Thus, females reporting high stress and low resilience can be explained.

In this study, there was a relationship between age and level of resilience. This finding indicated that the older the respondents, the higher their resilience levels. Previous studies have also reported similar findings [20,21]. Nearly twice as many nurses between the ages of 27.1 and 40 reported moderate or high levels of resilience compared to those under 27. Compared to nurses under the age of 27, nurses over the age of 40 were three times more likely to indicate moderate or high resilience. [20]. Similarly, nurses older than 36 had a higher resilience level than 18-to-30-year-old nurses [21]. This could be possibly due to individuals acquiring better coping skills as they age. A previous [16] study reported that respondents who worked less than two years had the highest stress levels relative to those with 3–5 years or over five years of work experience, due to a lack of nursing skills [16]. The stress levels among newly graduated nurses with different work experiences are likely to be the same.

This study's findings indicated a strong negative correlation between perceived stress and resilience. The finding is in agreement with [11,22,23], which suggested that low levels of resilience correlated with high levels of stress. Resilience plays a vital role in overcoming stressful challenges in workplaces. Individuals with high levels of resilience can overcome challenges, adapt to surrounding stresses, and adopt positive coping mechanisms.

In this study, 12.4% of all newly graduated nurses intended to leave the nursing profession. A study reported similar findings among newly graduated nurses in China, suggesting that 17.2% had the intention to leave as they entered the nursing profession [6]. Furthermore, the statistic increased to 59.6%, 74.4%, and 71.8% at 4, 8, and 12 months, respectively, due to stress and professionalism. Moreover, according to the research by Liang et al. [8], newly graduated nurses experience stress at the first level of working in the hospital area and stress was still present even though they had acquired ample knowledge and skills during theoretical classes and practical sessions before being employed. Workplace stress puts nurses' physical and mental health at risk, affects their family and social relationships, and contributes to high nursing turnover [4]. As resilience is highly correlated with stress, having a high resilience level provides nurses with a protective factor, thus preventing them from leaving the nursing profession.

5. Conclusions

The findings of this study provide evidence of factors associated with perceived stress and their associations with intentions to leave the profession in newly graduated nurses. In addition, newly graduated nurses reported moderate levels of perceived stress, and this finding was supported by data from previous studies. However, since the current study is a cross-sectional study conducted among newly graduated nurses in only one university, the results can be considered limited. There was also a lack of representativeness for male nurses. However, notwithstanding these limitations, the findings suggest new insights into factors that contribute to perceived stress. Effective stress management and interventions to improve resilience in newly graduated nurses are highly recommended.

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Institutional Review Board Statement: The Ethics Committee, Universiti Teknologi MARA (UiTM), gave ethical approval for this study (600-IRMI (5/1/6)).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

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