

Stress, coping and psychological well-being among new graduate nurses in China.

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Abstract

This study examined the relationships between demographic characteristics, sources of nursing stress and coping strategies, and psychological well-being within graduate nurses. Moving from the student role to the staff nurse role can be an uneasy journey, transition is recognized as a stressful experience, and many graduate nurses find it difficult to cope with their new roles in their first few months. Four self-report questionnaires were administered to a sample of 96 new graduate nurses in central China. Death and dying, workload, and inadequate preparation were the most common sources of nursing stress, whereas the most frequently used coping strategies were planning, acceptance, and positive reframing. A number of significant correlations were found among demographic characteristics, sources of nursing stress, coping strategies, and psychological well-being. Negative predictors of psychological well-being were denial (coping strategies) and death and dying (workplace stressor). Role transition is often difficult when an individual comes to a new environment and is given new responsibilities and expectations. Although this transition is stressful and they feel inadequately prepared, with assistance, the new graduate nurses can develop effective coping strategies to adjust to the new role.

Keywords: new graduate nurses | stress | coping | psychological well-being | nurses | nursing

Article:

The transition from being a nursing student to becoming a clinical nurse is challenging for the majority of new graduate nurses (Chang & Hancock, 2003). Moving from the student role to the staff nurse role can be an uneasy journey, transition is recognized as a stressful experience, and many graduate nurses find it difficult to cope with their new roles in their first few months (Gerrish, 2000).

Chang and Hancock (2003) reported that new graduate nurses experienced role ambiguities. In the first year of transition from being a student to a registered nurse, moving from “dependent

on” to “depended on” is stressful as new graduate nurses consolidate their nursing knowledge and master clinical skills (Goh & Watt, 2003).

When graduate nurses enter the work environment, they experience a shock, mainly because of their limited clinical experience and skill, and difficulties in adjustment (Zhao, Lu, Wang, & Luo, 2005). Some researchers have found that lack of confidence and support (Zhao et al., 2005) and a sudden increase in responsibility (Gerrish, 2000) are major causes of stress for new graduate nurses. Wangenstein, Johansson, and Nordstrom (2008) also found that new graduate nurses’ stress most frequently came from lack of experience as a nurse, difficult interactions with physicians, lack of organizational skills, and the challenges of new situations and progress. In addition, fear of making a mistake, maladjustment to the new environment, conflict with colleagues, and others’ unwillingness to provide help have been identified to be major stressors for new graduate nurses in the mainland of China (Zhao et al., 2005).

Lazarus and Folkman (1984) noted that coping strategies include attempts at managing or altering a problem (problem-focused coping) and regulating the emotional response to the problem (emotion-focused coping). Healy and McKay (2000) indicated that problem-solving and active coping strategies (e.g., trying to resolve the problem) were most commonly used by nurses, whereas seeking social support and self-control, an emotion-focused coping strategy, have been found to be the second and third most frequently reported coping styles used by the nurses, respectively.

Nurses rarely reported avoidance or resignation strategies, such as seeing the situation as the result of fate, acting as if nothing had happened, or avoiding being with people (Wong, Leung, So, & Lam, 2001). Healy and McKay (2000) found that positive coping (e.g., problem-solving action) was positively associated with well-being, whereas avoidance coping could result in higher levels of psychological distress.

Chang and Hancock (2003) concluded that the positive strategies used by new graduate nurses to reduce nursing stress can be summarized as seeking alternative activities to reduce stress, waiting and seeing, dealing with the problem, and doing negative activities. Gerrish (2000) found that although the transition from student to nurse was stressful and new graduate nurses felt inadequately prepared for their new role, they appeared to develop more active strategies to enable them to adjust in new responsibilities of their new role.

Studies of stress and coping have examined a variety of outcome variables, including physical outcomes, such as heart disease; social outcomes, such as a loss of a job; and psychological outcomes, such as psychological well-being and life satisfaction. Zhao and her colleagues (2005) reported that staff that experienced high role stress identified more symptoms of anxiety, depression, and social dysfunction. Wong and colleagues (2001) also found that employees who experienced role stress reported more symptoms of anxiety and depression as well as hysterical neurosis. Psychological distress has been found to be significantly related to nurses’ perceptions

of work-related stresses, and younger, less experienced nurses have reported experiencing more psychological distress (Zhao et al., 2005).

New graduate nurses have reported feeling anxious, overwhelmed, and worried about making mistakes in their first few months (Zhao et al., 2005). In addition, new graduate nurses have complained of being extremely tired, with little time for family or social life (Maben & Clark, 1998). Casey and colleagues (2004) found that graduate nurses did not feel comfortable until 1 year after being hired. These findings suggest that the transition from student to practicing professional nurse and from a familiar educational environment into the workforce may not be a smooth process.

This study used the theory of stress coping (Lazarus & Folkman, 1984) as a conceptual framework and looked for the relationships among demographic characteristics, sources of nursing stress, coping strategies, and psychological well-being using stress-coping theory in new graduate nurses in central China. We hypothesized that new graduate nurses would experience sources of nursing stress, but if they were able to use more effective coping strategies, they would maintain a higher level of psychological well-being. Method

Design, Setting, and Sample

The study used a descriptive, cross-sectional, and correlational design. Four hospitals in a major city in central China were chosen to collect data. All four hospitals were comprehensive hospitals with combined clinical practice, teaching, and research activities. The convenience sample consisted of all new graduate nurses in the four hospitals. All nurses who worked their 1st year after graduation were invited to participate. A power analysis was used for estimating sample size. A sample size of 85 with a power of 0.80, alpha level at .05 (two-sided), and effect size of 0.30 were found to be necessary for this study. The sample consisted of 96 participants (Table 1).

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Instruments

Four instruments were used to identify demographic characteristics, sources of nursing stress, coping strategies, and psychological well-being of the new graduate nurses. The four questionnaires were Demographic Questionnaire, The Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981), The Brief Cope Questionnaire (Carver, Scheier, & Weintraub, 1989), and the General Health Questionnaire (12-version, GHQ-12; Goldberg & Williams, 1988).

The Demographic Questionnaire was designed by the authors for information on age, sex, nursing educational background, monthly income, employment status, and the clinical unit where the nurse currently worked.

The NSS (Gray-Toft & Anderson, 1981) was used to measure the frequency and sources of stress nurses experienced at work. It consists of 34 potentially stressful situations that are measured on a 4-point Likert-type scale (0 = never to 3 = very frequently). The scale consists of seven subscales measuring workload, uncertainty about treatment, conflict with other nurses, conflict with physicians, inadequate preparation, lack of support, and death and dying. Scoring is calculated by adding up the individual item responses for each subscale, providing a score for each subscale. The total score is then summed, with higher score indicating higher levels of specific sources of workplace stress. The reliability coefficients for the seven subscales in this study ranged from 0.83 to 0.87.

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Coping strategies were examined by the Brief Cope (28-item version; Carver et al., 1989), which includes 14 coping strategies (active coping, use of emotional support, use of instrumental support, positive reframing, planning, humor, acceptance, religion, self-distraction, denial, substance use, behavioral disengagement, venting, and self-blame). Brief Cope uses a 4-point Likert-type scale to assess each coping strategy. Responses range from 1 = I haven't been doing this at all to 4 = I've been doing this a lot. Each of the 14 subscales has two items, scoring involves adding up the individual items for the subscale. High scores for a specific coping method indicate that the respondent often uses this method when dealing with a stressful event. The reliability coefficients for the subscales in this study ranged from 0.71 to 0.80.

GHQ-12 is a reliable and valid instrument that has been used to measure psychological well-being (Montazeri et al., 2003). The scale asks whether the respondent has experienced a particular psychological distress symptom or behavior recently. There are four factors in the scale: anxiety, depression, social dysfunction, and loss of confidence with 12 psychological situations. Responses are on a 4-point Likert-type scale (less than usual, no more than usual, rather more than usual, or much more than usual, from 0 to 3). A summed score is calculated by adding up scores on the individual subscales. In this study, to gain a better description of psychological well-being, the scoring was revised to 0 = more than usual and 3 = less than usual. High scores indicate a higher level of psychological well-being. The reliability coefficient for the instrument in this study was 0.73.

In this study, the NSS and GHQ-12 were used with permission from the authors. The Brief COPE Inventory (BCI) was in the public domain and did not require permission to use. The NSS and GHQ-12 originally were in English and were translated into Chinese and back translated into English prior to use in this study.

Data Analyses

Descriptive statistics were used to describe characteristics of the sample. The Pearson's correlation was used to examine the relationships among variables. Multiple regression analysis

was used to identify predictor of psychological well-being among new graduate nurses in central China.

Results

The demographic characteristics of the new graduate nurses are shown in Table 1. All participants were female. The most common stressors were death and dying, workload, and inadequate preparation. The most frequently used coping strategies were planning, acceptance, and positive reframing. The most common psychological symptoms were anxiety, depression, and loss of confidence.

Coping strategies (planning and acceptance) and psychological well-being were found to be significantly positively correlated. In addition, there were significant negative correlations between some sources of nursing stress and psychological well-being. These sources were death and dying, conflict with physicians, inadequate preparation, conflict with other nurses, and workload. A significant negative correlation was also found between the coping strategies of denial and behavioral disengagement and psychological well-being.

Predictors of Psychological Well-Being

Multiple regressions were performed to identify which independent variables were the best predictors of psychological well-being. Denial as coping strategies ($\beta = -.37$, $p < .05$) and death and dying as workplace stressor ($\beta = -.23$, $p < .05$) were the best negative predictors of psychological well-being, accounting for 19% of variance of psychological well-being ($F = 10.58$, $R^2 = .19$, $p < .05$).

Discussion

Sources of Nursing Stress

Individual sources of stress. China now has a market economy, and the comprehensive hospitals are limited to the number of people they may hire. In China, hospitals carried out personnel reform measures in 2000. All secondary and associate degree nursing graduates were declared qualified to be informal staff (contract or temporary), whereas nurses with a baccalaureate degree were determined qualified to be formal staff (Hu & Liu, 2005). With the reform policy, a hospital may hire 5 to 10 new formal staff members every year, yet there may be hundreds of applicants. The hospitals select their staff based on (a) applicants' educational background, (b) exams organized by the hospitals, and (c) personal relationships.

With the push for profit, managers of hospitals in China strive for maximal returns while using minimal resources (Hu & Liu, 2005). Thus, they prefer to employ more informal staff (contract or temporary) to reduce costs (Hu & Liu, 2005). It is not surprising, therefore, that although most of the nurses (98.9%) in this study had a higher education (associate degree or bachelor of science in nursing [BSN]), the majority received less than 1,000 RMB per month, and most

(84.4%) were not formally employed. The informal nurses have no security and feel unstable about work. This situation can lead new graduate nurses to experience a socioeconomic strain. Lower economic status can cause one to have lower social status in China, an inferiority complex, and more stress. In addition, the hospitals often give tests to the nurses' clinical skills and knowledge, which can cause great psychological strain to the new nurses.

Organizational sources of stress. Organizational sources of stress refer to stress related to nursing work. In this study, death and dying, workload, and inadequate preparation were found to be the three most frequently identified work stressors. These three stressors also were identified as major stressors in previous studies of new graduate nurses (Chang & Hancock, 2003; Gerrish, 2000).

The fact that dealing with death and dying was the most common workplace stressor was unexpected. Prior research suggested that workload was the most common workplace stressor for nurses (Xianyu & Lambert, 2006). The reason for this difference might be that the death of a patient is a distressing psychological experience, and in their first year, the new graduate nurses have limited nursing experience and have encountered such situations. Thus, they might not know how to control their feelings or to express their emotions appropriately when confronting a patient's death or the dying process. Another reason is that death is considered unlucky in Chinese culture. In addition, the nursing curricula about hospice care and the elderly care is deficient in China. Chinese nurse do not receive adequate education and preparation on dealing with death and dying during their nursing education (Xianyu & Lambert, 2006).

The second and third most frequently identified sources of nursing stress were workload and inadequate preparation. The fact that workload was the second most frequently cited workplace stressor is not surprising. The newly qualified nurses must learn and adjust to a new role. They come to the clinical area, have no experience, and have to quickly gain knowledge and master skills. In addition, when they rotate to a new unit, they may feel unfamiliar with the environment and have to once again learn new things. The new graduate nurses also often experience a heavy workload as a result of the difficulties they have in prioritizing tasks and managing time because of their lack of experience (Chang & Hancock, 2003). In addition, another reason is the managerial nature that resulted in the hiring patterns. In China, nurses perform many nonnursing jobs that overwhelm new graduates, for example, collecting supplies, such as drainage bag, blood collection tube, nursing recording sheet; receiving the drug from the pharmacy; inputting the daily costs of patients into computer; escorting patients to do various checks, for example, taking patients for an electrocardiograph examination.

Inadequate preparation is common for new graduate nurses in China. It is possible that they have limited nursing experience and are unfamiliar with the new work environment. Thus, new graduate nurses may feel a lack of skills, experience, and confidence (Gerrish, 2000; Goh & Watt, 2003; Li, Zhang, & Xue, 2007). The gap between theory and practice is also a problem. What new graduate nurses learned in school may be different from what actually occurs in

clinical areas (Zhao et al., 2005). The new nurses are usually instructed by the supervisor/preceptor for about 1 month and then must work solely on their own. It is not surprising, therefore, that new graduate nurses may feel a lack of adequate preparation when encountering clinical problems in their 1st year.

Coping Strategies

In this study, planning, acceptance, and positive reframing were the three most frequently identified coping strategies. These coping styles are all positive, adaptive, and effective (Carver et al., 1989). Chang and Hancock (2003) and Wangenstein and colleagues (2008) also found that new graduate nurses use positive strategies to reduce their stress. In addition, the use of direct action strategies is considered to reflect the pragmatic nature of Chinese people in dealing with life's difficulties (Wong et al., 2001).

Acceptance and positive thinking were also frequently used by these graduate nurses to handle work stress. In China, the nurses were not very satisfied about their work and some of them left nursing, which changed their profession. Maybe these strategies helped the nurses persevere in difficult work situations and continue to adopt direct action coping strategies to handle difficulties at work (Wong et al., 2001). For example, these positive action strategies may be seeking supportive system to release negative emotions, or reading and listening to music to divert attention, or taking training in relaxation.

Relationships Between Demographic Characteristics, Sources of Nursing Stress, Coping Strategies, and Psychological Well-Being

Significant positive correlations were found between the new graduate nurse's educational background and all the workplace stressors, except lack of support and conflict with other nurses. The development of high technology in China is a challenge to individual professional knowledge and work ability and may contribute to new graduate nurses' stress. In the information age, new graduate nurses with a higher level of education are expected to accept new technology, and they have the knowledge and ability to work with technology. In addition, their increased educational level has enhanced their self-esteem, but the nature of their jobs has not changed. Thus, they feel they cannot use their abilities (Ren, Li, & Hu, 2003). This was also identified by Zhao and colleagues (2005) and Li and colleagues (2007), who found conflict between new graduates' ideals and values and their actual practice. The above also help to explain the significant positive correlation between age and all the workplace stressors, except lack of support and conflict with other nurses.

Some workplace stressors were significantly positively correlated with coping strategies. For example, significant positive correlations were found between workload, denial, and behavioral disengagement; between death and dying and denial; and between lack of support and denial. All of these are emotion-focused coping strategies, and they have been identified as ineffective coping styles (Carver et al., 1989). Significant positive correlations also were found between

inadequate preparation, denial, and planning; between conflict with other nurses and active coping, denial, and use of emotional support; and between uncertainty concerning patient treatment, denial, and use of instrumental support. These findings suggest that new graduate nurses often use a variety of alternative activities to reduce stress. Their ways of coping are both problem focused and emotion focused. Chang and Hancock (2003) also found that new graduate nurses not only used some negative coping strategies to deal with stress but also developed more active strategies to reduce stress.

Significant negative correlations were found between death and dying, conflict with physicians, inadequate preparation, conflict with other nurses, and workload and psychological wellbeing. These results were expected. As shown in prior research, these sources of nursing stress can have negative impacts on individual psychological well-being (Wong et al., 2001).

Significant negative correlations were also found between less effective coping strategies, such as denial and behavioral disengagement and psychological well-being. The new graduate nurses who used more ineffective coping strategies had lower levels of psychological well-being. These findings are also consistent with previous studies, which found that more avoidance (e.g., denial and behavioral disengagement) might result in a lower level of psychological well-being (Healy & McKay, 2000).

Significant positive correlations were found between the effective coping strategies of planning and acceptance and psychological well-being. The new graduate nurses who used more effective coping strategies had higher levels of psychological well-being.

The findings also showed that denial and the source of nursing stress, death and dying, were the best negative predictors of psychological well-being. Denial and death and dying decreased psychological well-being, or led to psychological distress. Previous research also indicated that the use of avoidance coping often results in a higher level of psychological distress (Healy & McKay, 2000).

Implications

Understanding the effects of role transition is important to both nursing administrators and nursing educators; it can not only assist future graduates in the clinical area but also provide suggestions for nursing curricula and teaching methods. By identifying issues faced by graduate nurses in central China, nursing educators can pay more attention to reinforcing knowledge and skills related to clinical practice, hastening the integration of nursing theory and practice, improving the nursing curricula, and helping nursing students develop effective coping strategies to deal with the stress in the workplace. Nursing administrators should also be able to provide more effective orientation, preceptorships, and mentoring programs. In addition, the nursing administrators should provide psychological support besides the skill support (e.g., new graduates may be admeasured to experienced nurses for psychological support, clinical instruction, and supervision) and assist them to use the effective coping strategies mentioned in

this study to reduce the stress. Moreover, consideration could be given to how courses assist new graduate nurses to develop the clinical, organizational, and managerial skills necessary to their future role. Such efforts also might assist new graduate nurses to develop effective strategies to reduce their stress and improve their coping abilities (e.g., time management, planning ahead, and developing a sense of humor).

Limitations

First, some of the instruments used were developed in Western countries, and they may not have been validated for use with a Chinese mainland population. Thus, further and more studies are needed to establish their validity with a Chinese mainland population. Second, future research is needed on random samples of new graduate nurses.

Conclusions

Role transition is often difficult when an individual comes to a new environment and is given new responsibilities and expectations. As the new graduate nurses in this study identified, the transition from student to qualified nurse is stressful. Although this transition is stressful and they feel inadequately prepared for their new role, with assistance, the new graduate nurses can develop effective coping strategies to enable them to adjust to the new role.

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Authors' Note

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Declaration of Conflicting Interests

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