Status of core competencies of wound, ostomy and continence nurses and their influence on career success: a cross-sectional study

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ABSTRACT

Objectives The wound, ostomy and continence nursing practice has its own scope and standards, and each standard requires relevant competency. However, the core competencies of wound, ostomy and continence nurses that contribute to the career success are poorly known. To identify associations between career success and core competencies of wound, ostomy and continence nurses in China.

Design A cross-sectional survey with a convenience sample.

Setting Participants were recruited from 108 hospitals in 28 provinces.

Participants A total of 123 wound, ostomy and continence nurses were recruited from 108 hospitals in 28 provinces. Multivariate logistic regression was undertaken to explore associations between career success outcomes and core competency scores of wound ostomy and continence nurses and their demographic characteristics.

Results The career success and core competency of wound, ostomy and continence nurses were both above average. Nurses who had higher total scores of core competency were more likely to have higher career success, including total score (OR=4.90), career satisfaction (OR=5.58) and perceived internal (OR=4.55)/external (OR=3.42) organisation competency. Higher competency in interpersonal communication (OR=7.70) and more time for wound care per month (OR=8.80) predicted higher career satisfaction. Additionally, nurses with higher professional development were more likely to score higher in perceived internal organisation competency of career success (OR=4.36) and the overall career success (OR=5.96).

Conclusions The career success and core competency of the wound, ostomy and continence nurses in China were at an above average level. The associations between career success and core competency of the wound, ostomy and continence nurses were positive, suggesting that competency enhancement could improve nurses' career success.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Participants from 108 hospitals in 28 provinces in China, which involved a wide range.
⇒ A cross-sectional design might limit its ability to identify the causal relationships between variables.
⇒ The majority of the variables were measured by subjective data, which could introduce report bias.

INTRODUCTION

As specialist nurses, wound, ostomy and continence (WOC) nurses resolve specialised and specific clinical problems in wound, stoma and incontinence. WOC nurses play an important role in reducing the occurrence of various complications, reducing the economic burden of patients and the healthcare system and improving medical care quality.1 2 Meanwhile, they also play a positive role in saving manpower and hours for the general surgical or medical nurses and in enhancing the quality of life of patients with incontinence and stoma problems.3 4 In 2009, the Wound, Ostomy and Continence Nurses Society (WOCNS) defined the role of a continence nurse and advanced practices of continence nurses, which was updated in 2018.3 5 6 The WOCNS believes that the tri-specialty certified WOC nurses possess unique knowledge, expertise for assessment and first-line management of incontinence as well as for prevention of incontinence. According to WOCNS, WOC nurses provide care to patients with urinary and/or faecal incontinence by conducting a focused assessment, performing physical examinations, synthesising data, developing a plan of care and evaluating interventions. The role includes, but is not limited to, serving as a clinician, consultant, educator and/or administrator/manager in various healthcare settings.5 6 Then, it could be seen that each of...
the various role of WOC nurses requires a corresponding competence. Competencies are an essential foundation for effective practice, education and evaluation of the professional role and core competencies reflect the knowledge and skills that all nursing practitioners (NP) should have and are considered the gold standard. As an essential professional in NP, WOC nurses are required to hold certain core competencies to fulfil their professional demands.

Though initiated in developed countries originally, the number of WOC nurses in developing countries like China have grown rapidly since the last decade due to the ever-increasing number of patients suffering from complex and changeable acute and chronic wounds. The role of WOC nurses in China comprises the core elements of what was defined by the WOCNS and was modified according to culture and practice. For example, though specialised in wound care, there is no clear classification of WOC nurses in mainland China. Different hospitals have various models, such as certified wound specialists and enterostomal therapists, who are divided into different subspecialties (pressure ulcer and refractory wound, surgical wound and lower limb ulcer and diabetic foot ulcer). However, their roles are specific and quite different from the general nurses, which determines their distinct competency. The concept of competencies dated back to McClelland in who believed that testing one’s competencies was a more effective predictor of job success than testing one’s intelligence. Since then, the concept of competency has been explored in a number of fields including businesses, organisations, industries as well as among health professionals like nurses. Shortly after its foundation, the National Association of Clinical Nurse Specialist began to explicate core competencies for clinical nurse specialist practice. For WOC nurses, core competencies are essential for the quality of care provided; therefore, the indices that should be included in the system when assessing the core competencies for WOC nurses have been put on the agenda. Based on the role defined by WOCNS and the practice of WOC nurses in China, Yin et al have developed a six-dimension system of core competencies for WOC nurses, namely: specialised clinical practice, critical thinking, health education, professional development, interpersonal communication and nursing management. This competency system was according to the roles and was found present in specialists of WOC nurses. Therefore, WOC nurses got wide acceptance and employment in China.

As a crucial concept in nursing, career success combines the achievements and positive mental feelings pertaining to work that one accumulates and obtains gradually during their work experience. When analysing career success, both objective and subjective perspectives should be considered. While objective career success is the achievement that an individual gains during the career that can be observed and measured, subjective career success is the inner understanding and assessment of success on dimensions that an individual considers important, such as meaning of the job, job satisfaction and contributions to the organisation. Though job satisfaction and career satisfaction are the most commonly measured indices for subjective career success, job mobility in different organisations, different regions and different countries has also been focused on. In this boundary-less career era, successful individuals are those who can create value for the current organisation and who can be considered competitive by external organisations. Therefore, the three-dimensional theory of career success espoused by Eby et al is widely accepted. A number of studies have investigated the influencing factors of career success and demonstrated that both external factors like work environment, organisational support and internal factors like emotional intelligence and gender could influence career success. Recently, the association between ability, which is quite similar to competency, and career success has been focused on and explored in psychology.

The effect of competences on career success has been explored and confirmed by relevant studies, however, not been explored in this group of specialist nurses. Theoretically, the role of WOC nurses determines its competency, where the required competencies were most essential for their profession that contribute most for their career success. Then, it is reasonable to correlate the two variables together by suggesting that better core competency will benefit, advance or improve career success. Therefore, due to limit information about the career success and core competencies of WOC nurses, the present investigation aims to examine the status of core competencies and career success among the highly specialised nursing population of WOC nurses in China and compare the difference between core competencies and career success among WOC nurses bearing different characteristics, testing whether core competency and occupational character could exert influence on career success.

**METHODS**

**Design**

A cross-sectional survey was conducted with a convenience sample of nurses through continuing recruitment, from 28 provinces, autonomous regions and municipalities directly under the central government (total 31 in mainland China), except the provinces of Hainan, Tibet and Ningxia.

**Participants**

We included 108 hospitals in this study from March to May 2020. The inclusion criteria of eligible participants were: (1) as a certified WOC nurse, (2) the personnel worked in a hospital or community, (3) full-time or part-time job as a WOC nurse. Individuals were excluded if they were just students studying at school of nursing. A total of 126 questionnaires were distributed and completed, and 123
were eventually eligible (three removed with the role of nursing students), with a response rate of 97.62%.

MEASURES

Demographic characteristics
We developed a self-designed questionnaire to acquire general information including age, gender, level of hospital, years of work experience, educational level, certified as a WOC nurses’ form, work form of WOC nurses, form of employment, scope of service, workplace in stoma clinic, professional title, working position, in charge of WOC nurses’ training, attendance of the WOC nurses’ professional conference or WOC nurses’ continuing education, days of stoma care or wound care or incontinence care per month, papers published in journals and research programmes undertaken.

Core competencies of WOC nurses
The Chinese version of the core competency framework for WOC nurses was developed by a three-round Delphi method.

Career success
The scale of career success was developed in 2003 and has been translated into Mandarin. This scale covers three dimensions through 11 items using a 5-point rating scale (1 for strongly disagree, 5 for strongly agree); the range of this scale is 69–345 (207 for a mid-range), with higher scores indicating a higher level of competencies. The Cronbach’s coefficients for the total scale and subscales in this study were 0.99 and 0.96–0.98, respectively.

Procedure
This study was an online survey. Two members of our research group issued an invitation to graduates from the education programme of World Council of Enterostomal Therapists (WCET) to explain the purpose and importance of this survey through WeChat.

Statistical analysis
Analyses were performed with the SAS software, V.9.4 (SAS Institute). Descriptive statistics were used to present participants’ demographic characteristics, core competencies and career success. Continuous data were described as mean and SD when normally distributed, while categorical data as n (%). For univariate analysis, continuous variables were compared by independent t test, Kruskal-Wallis test or Wilcoxon rank test, and categorical variables were compared by the χ² test or Fisher’s exact test where appropriate. Clinically relevant factors or variables with p values of less than 0.05 in the univariate analysis were explored further in a multivariate analysis with the use of ascending or descending selection techniques. We used binary logistic regression model to evaluate the scores of core competencies as well as other potentially influential covariates (ie, the demographic data) as predictors of career success, where we divided the career success scores into high and low based on a median score. Results of logistic regression models were reported as OR with 95% CIs and p values <0.05. In addition, the relationship between core competencies and each dimension of the career success scale was also analysed with multivariate logistic regression by adjusting the relevant demographic factors. We used the Pearson correlation coefficient to explore the relationship between core competencies and career success of WOC nurses. All tests were two-tailed, and a p value of less than 0.05 was considered to indicate statistical significance.

Patient and public involvement
Participants were involved in the design, conduct or dissemination plans of this study.

RESULTS

Demographic information
A total of 126 WOC nurses responded to the investigation and returned the questionnaire. Among them, 123 nurses fitting the current criteria completed the questionnaires
and were included in the final analysis. The demographic characteristics of the participants are shown in Table 1. The average age for the sample was 39.37 years of age (SD=6.38), ranging from 27 to 57 years. On an average, participants had more than 10 years of work experience (M=18.20, SD=7.59) and had several years of practice as WOC nurses (M=5.43, SD=4.00). Most participants were women, who worked in top grade hospitals and held a bachelor’s degree. As WOC nurses, most of them were certificated by the school of WCET and provided specialised care for patients. More than three quarters of them (77.24%) practiced in stoma clinics. Less than half of the participants were found to have published papers and undertaken or participated in research programmes.

Descriptive statistics of variables
Table 2 presents the descriptive statistics of the main variables of the total and dimension score of career success and core competencies of WOC nurses and Figure 1 shows expected scores as well. Overall, both career success (M=39.07 SD=8.36) and core competencies (M=290.69, SD=47.35) of WOC nurses were rated above the average by the nurses.

Univariate analyses among the study variables are presented in Table 3. As for career success, participants undertaking different roles in WOC nurses’ professional conferences, WOC nurses’ training, WOC nurses’ continuing education and days of wound care per month held different levels of career success. The correlation coefficient was 0.62 (p<0.001) between core competency and career success of WOC nurses.

Logistic regression for career success
To analyse the influence of core competency on career success, two steps of regression were employed. Logistic regression was undertaken with career success or each dimension of the career success as the dependent variable separately (see Table 4 and online supplemental table 1, 2, and 3). The independent variables were the significant factors identified through univariate analysis and the sum scores of core competencies. As it is shown in Table 4, in the first step, the total score of core competencies and significant demographic factors were put into analysis. Among these results, higher scores in core competencies resulted in a 4.90 times more likelihood of higher scores in career success (p<0.001, 95% CI (2.032 to 11.814)), a 5.58 times more likelihood of career satisfaction of Chinese Career Success Scale (p<0.001, 95% CI (2.184 to 14.237)), a 4.55 times more likelihood of perceived in organisation competitiveness of Chinese Career Success Scale (p<0.001, 95% CI (1.944 to 10.656)) and a 3.42 times more likelihood of perceived external organisation competitiveness of Chinese Career Success Scale (p=0.0037, 95% CI (1.492 to 7.861)).

The second step revealed the dimensions of the impact of the core competencies on career success. The dependent variables were total scores and the dimensions of career success, and the independent variables were the six
dimensions of core competencies and significant demographic factors (see Table 4 and online supplemental tables 1, 2 and 3). Among these results, competency in interpersonal communication of core competencies (p<0.05, OR=7.70, 95% CI (1.453 to 40.830)) and days for wound care per month (p<0.05, OR=8.80, 95% CI (1.975 to 39.237)) were found to be factors impacting career satisfaction of Chinese Career Success Scale. Professional development (p<0.05, OR=4.36, 95% CI (1.017 to 18.672)) was identified to be impacting perceived internal organisation of career success and overall career success (p=0.0321, OR=5.96, 95% CI (1.164 to 30.459)).

DISCUSSION
The results showed that career success and core competencies in Chinese WOC nurses are at the above average level. Higher scores in core competencies resulted in a 4.90 times more likelihood of higher scores in career success in this study. Our findings concluded that higher competencies are a positive predictive factor of higher career success. Moreover, we explored the effect of subscales of competencies on career success and the results showed that competency in interpersonal communication and professional development influenced WOC nurses’ career success. We found that the core competencies and career success of the WOC nurses in China are positively associated with their self-development characteristics. There are no clear differences between WOC advanced practice, WOC specialty nurses and wound treatment associates in China; additionally, different hospitals currently have different models. In addition, most specialist nurses are on unclear duties, without satisfying promotion opportunities, salaries and welfare programmes; get limited retraining after graduation and lack a defined role or position. Specialist nurses spend most of their time on clinical practice and the participation in education, management, and research is relatively limited.

Table 1 Continued

| Variable | Category | N (%)/M (SD) |
|----------|----------|-------------|
| Participated in WOC nurses’ continuing education | Yes | 108 (87.80%) |
| | No | 15 (12.20%) |
| Days of stoma care per month | ≤7 days | 67 (54.47%) |
| | 7–14 days | 23 (18.70%) |
| | 14–21 days | 23 (18.70%) |
| | >21 days | 10 (8.13%) |
| Days of wound care per month | ≤7 days | 59 (47.97%) |
| | 7–14 days | 21 (17.07%) |
| | 14–21 days | 25 (20.33%) |
| | >21 days | 18 (14.63%) |
| Days of incontinence care per month | ≤7 days | 96 (78.05%) |
| | 7–14 days | 14 (11.38%) |
| | 14–21 days | 8 (6.50%) |
| | >21 days | 5 (4.07%) |
| Published paper in journals | Yes | 75 (60.98%) |
| | No | 48 (39.02%) |
| Research programmes | Yes | 59 (47.97%) |
| | No | 64 (52.03%) |

Table 2

| Category | Number of items | Range of actual scores | Scores within this study | 95% CI of actual scores |
|----------|----------------|------------------------|-------------------------|------------------------|
| Career success (CCSS) | 11 | 15–55 | 39.07 (8.36) | 37.57 to 40.56 |
| Career satisfaction (CS) | 5 | 9–25 | 18.72 (4.30) | 17.95 to 19.48 |
| Perceived in organisation competitiveness (PIOC) | 3 | 3–15 | 10.64 (2.61) | 10.18 to 11.11 |
| Perceived external organisation competitiveness (PEOC) | 3 | 3–15 | 9.71 (2.80) | 9.21 to 10.21 |
| Core competencies of WOCN (CCS-WOCN) | 69 | 99–345 | 290.69 (47.35) | 282.24 to 299.14 |
| Competency in specialised clinical practice (CSCP) | 21 | 36–105 | 89.76 (13.63) | 87.33 to 92.20 |
| Competency in critical thinking (CCT) | 10 | 13–45 | 38.27 (6.73) | 37.07 to 39.47 |
| Competency in health education (CHE) | 11 | 11–55 | 47.18 (8.14) | 45.73 to 48.63 |
| Competency in professional development (CPD) | 12 | 22–65 | 51.23 (10.79) | 49.30 to 53.15 |
| Competency in interpersonal communication (CIC) | 7 | 7–35 | 30.07 (5.23) | 29.13 to 31.00 |
| Competency in nursing management (CNM) | 8 | 10–40 | 34.19 (6.08) | 33.10 to 35.27 |

CCSS, Chinese Career Success Scale; CCS-WOCN, Core Competency Scale for Wound Ostomy Continence Nurses.
Professional development capability covered research, personal competency development and nursing curriculum development skills in our scale, which required the nurses to provide high quality of care to patients and promote personal development through changeable and creative jobs. These were consistent with international standards. Our findings showed high professional development capability among WOC nurses predicted a 4.36 times organisation competitiveness and 5.96 times career success in this study. As per WOC practice, the WOC registered nurse (RN), WOC graduate-level prepared RN and the WOC advanced practice RN have a role in translating evidence into practice.29 In our studies, there were only 13.01% of nurses with master’s and doctoral degrees, 60.98% with papers published in journals and 47.97% participating in research programmes in the last 5 years. The educational level of participants in this study might limit the WOC nurses’ ability to undertake research and promote WOC care because a master’s degree or higher is particularly helpful for professional development.30 31 A Chinese survey with 53 316 specialist nurses reported that 96.5% nurses engaged in clinical practice and 62.4% in nursing research.36 The specialist nurses spent almost all their time on clinical practice and had very limited time to do research. Another study in China covering 31 provincial capitals and autonomous regions showed 62.7% nurses did not undertake recertification.32 Furthermore, there are currently no unified training materials, uniform access standards for specialist nurses and standardised training systems and recertification regulations in China.1 Currently, a growing number of encouraging achievements have achieved after years of efforts and explorations by the government and professionals. In 2018, Anhui Province took the lead in carrying out the pilot work of nurses’ prescribing right, realising the ice-breaking journey of prescriptive authority for nurses.33 In 2022, The specialised nurses had the right to prescribe in Shenzhen,34 which was a breakthrough of nurse prescription authority in legislation made for the first time. These actions will promote the WOC nurses’ career development in the future, with the implementation of the prescriptive authority nationally. Additionally, the performance management of the specialised nurses had explored in multidimensional evaluation in hospital in China, according to comprehensive performances of clinical, educational, research contributions.35 Thus, the nurse administrators should explore to provide more opportunities for further, high-level training, elucidate responsibilities and hierarchical employment of nurses and develop incentive policies for WOC nurses.

The interpersonal capability in our study included communication, self-adaptation and teamwork/cooperation skills. WOC nurses with higher interpersonal capability had 7.70 times career success in this study. This is consistent with the findings of a previous study, reporting that these skills were necessary for conducting professional duties.36 Interpersonal capability was developed through effective interactions in the organisation, which was beneficial for the development of professional competence and transfer experience. Among advanced nurse practitioners, improving intrapractice collegiality, professional and social interaction are the notable areas to work on which may give them the opportunity to negotiate resources, administrative support and receive better compensation, which in turn may enhance their job satisfaction.37 Many Chinese WOC nurses work in inpatient

Figure 1 The scores of career success and core competency for minimum, maximum and actual scores and abbreviations are shown in table 2.
### Table 3  Univariate analyses of the factors associated with career success (N=123)

| Category                                      | Sum scores Mean (SD) | t/F   | P     |
|------------------------------------------------|----------------------|-------|-------|
| Years of practice as a WOC nurse              |                      |       |       |
| <5                                             | 38.47 (9.02)         |       |       |
| 10 May                                         | 39.21 (7.86)         |       |       |
| >10                                            | 41.25 (6.48)         |       |       |
| Sex                                            |                      |       |       |
| Female                                         | 38.92 (7.96)         |       |       |
| Male                                           | 41.43 (14.14)        |       |       |
| Level of worked hospital                       |                      |       |       |
| Top grade hospital                             | 39.54 (8.56)         |       |       |
| Other hospital                                 | 36.47 (6.79)         |       |       |
| Type of worked hospital                        |                      |       |       |
| General                                        | 39.39 (8.47)         |       |       |
| Specialised                                    | 36.08 (6.88)         |       |       |
| Certificated as a WOC nurse from               |                      |       |       |
| school of WCET                                 | 39.12 (8.66)         |       |       |
| National/Provincial Nursing Association        | 38.71 (6.44)         |       |       |
| Work form of a WOC nurse                       |                      |       |       |
| Full-time                                      | 41.62 (5.59)         |       |       |
| Part-time and nurse manager                    | 39.00 (7.84)         |       |       |
| Part-time and clinical nursing/teaching        | 38.55 (9.29)         |       |       |
| Scope of service                               |                      |       |       |
| Across the hospital                            | 39.44 (7.44)         |       |       |
| Parts of department in hospital                | 39.95 (9.65)         |       |       |
| In the department and other                    | 37.53 (9.54)         |       |       |
| Practice in stoma clinic                       |                      |       |       |
| Yes                                            | 39.38 (8.70)         |       |       |
| No                                             | 38.00 (7.14)         |       |       |
| Highest level of nursing education             |                      |       |       |
| Associate degree                               | 41.25 (2.50)         |       |       |
| Bachelor degree                                | 38.51 (8.47)         |       |       |
| Master and above                               | 42.06 (8.19)         |       |       |
| Professional title                             |                      |       |       |
| Nurse                                          | 38.36 (10.25)        |       |       |
| Senior nurse                                   | 38.77 (8.68)         |       |       |
| Nurse supervisor or above                      | 40.00 (6.85)         |       |       |
| Working position                               |                      |       |       |
| Nurse                                          | 40.13 (7.71)         |       |       |
| Head nurse                                     | 38.02 (8.90)         |       |       |
| In charge of WOC nurses’ training              |                      |       |       |
| Yes                                            | 39.64 (8.11)         |       |       |
| No                                             | 34.23 (9.20)         |       |       |
| Joined in WOC nurses’ professional conference  |                      |       |       |
| Yes                                            | 39.85 (8.10)         |       |       |
| No                                             | 35.65 (8.81)         |       |       |

Continued
settings and play a crucial role in the multidisciplinary team involved in patients’ management. Thus, interpersonal capability is the foundation skill needed by WOC nurses, which leads to acquisition of positive attitudes and skills for improving engagement, increasing quality of care and intent to stay, achieving better job performance and improving job satisfaction.38 39 Thus, the WOC nurses should improve their interpersonal capability in a variety of ways, including combining with its own experience, training, participation in the conference and online study. Moreover, nurses’ managers should give more attention to WOC nurses’ interpersonal capability and provide more opportunities to promote the capability of WOC nurses.

Our study showed more time spent on wound care could lead to higher job satisfaction. More days on wound care resulted in an 8.80 times more likelihood of higher scores in career success. In China, wound care mainly includes preventing and treatment of pressure injuries and diabetic foot, delivering care for postoperative wound infection and other wound-related complications. A study in China reported that many WOC nurses often felt overwhelmed by a lack of practical experience and coping strategies when dealing with complex wound care, because the clinical practice training was only half of that in the USA. Moreover, wound care needs a multidisciplinary approach to provide continuous wound management and is a challenging job for nurses. A review has shown that general nurses and graduating students have limited ability in wound care.40 Thus, further wound care clinical practice could result in respect and recognition for WOC nurses from doctors as well as patients, which is an important factor in improving job satisfaction.15 Therefore, more targeted training and practice should also focus on knowledge and skills in wound care.

There are some limitations to this study. First, although participants were selected from 108 hospitals in 28 provinces, this study only included 123 WOC nurses, which might reduce the power of this findings. Those findings could be downgraded. Second, the study used a cross-sectional design, limiting its ability to identify the causal relationships between the core competence, demographic

| Category | Sum scores Mean (SD) | t/F | P |
|----------|----------------------|-----|---|
| Participated in WOC nurses’ continuing education | −2.198 | 0.028* |
| Yes | 39.72 (8.31) |
| No | 34.33 (7.39) |
| Days of stoma care per month | 4.964 | 0.174 |
| ≤7 days | 37.91 (8.65) |
| 7–14 days | 38.26 (7.38) |
| 14–21 days | 42.17 (8.73) |
| >21 days | 41.50 (6.11) |
| Days of wound care per month | 14.312 | 0.003* |
| ≤7 days | 36.31 (8.08) |
| 7–14 days | 40.05 (8.69) |
| 14–21 days | 42.24 (8.09) |
| >21 days | 42.56 (6.52) |
| Days of incontinence care per month | 4.557 | 0.207 |
| ≤7 days | 38.27 (8.59) |
| 7–14 days | 41.00 (6.66) |
| 14–21 days | 43.25 (8.17) |
| >21 days | 42.20 (6.61) |
| Published paper in journals | −1.14 | 0.254 |
| Yes | 39.69 (7.95) |
| No | 38.08 (8.97) |
| Research programmes | 0.578 | 0.563 |
| Yes | 39.36 (7.79) |
| No | 38.80 (8.92) |

*P<0.05.
WCET, World Council of Enterostomal Therapists; WOC, wound, ostomy and continence.
data and career success. Third, selection bias existed as most participants came from tertiary hospitals, the top-grade hospitals in China. Moreover, the majority of the variables were selected by subjective measures, which might introduce report bias.

CONCLUSIONS

WOC nurses with different characters hold different levels of career success and core competencies; career success and core competencies among WOC nurses in China are at an above average level. In addition, core competencies are proved to hold a positive impact on career success. These findings were in accordance with the characteristics of development of WOC nurses in China. For better competencies to contribute to higher career success, the education and training of WOC nurses are suggested to be competency-centred, goal-targeted and specialty-focused; diversified comprehensive evaluation of work performance is to be explored to promote the career development; the prescriptive authority for nurses is to be implemented in more and more medical institutions in China. The development of WOC nurses in China has been guided by the experience of other developed countries and was adapted to Chinese culture and practice, which may provide a reference for other developing countries.

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Table 4 Logistic regression analysis for career success (N=123)

| Variable                                                                 | Estimated | SE   | Wald χ² | P     | OR   | 95% CI  Lower | Upper      |
|--------------------------------------------------------------------------|-----------|------|---------|-------|------|--------------|------------|
| Step 1                                                                   |           |      |         |       |      |              |            |
| Sum score of core competencies (ref=1)                                   | 0.795     | 0.225| 12.527  | 0.000*| 4.900| 2.032        | 11.814     |
| In charge of WOC nurses’ training                                      | 0.961     | 0.546| 3.099   | 0.078 | 6.834| 0.804        | 58.084     |
| Joined in WOC nurses’ professional conference                           | -0.630    | 0.379| 2.769   | 0.096 | 0.284| 0.064        | 1.251      |
| Participated in WOC nurses’ continuing education                       | 0.391     | 0.394| 0.983   | 0.322 | 2.184| 0.466        | 10.224     |
| Days of wound care per month (ref=1)                                    |           |      |         |       |      |              |            |
| 7–14 days                                                                | -0.255    | 0.417| 0.893   | 0.345 | 1.733| 0.554        | 5.424      |
| 14–21 days                                                               | 0.409     | 0.395| 4.883   | 0.027†| 3.366| 1.147        | 9.876      |
| >21 days                                                                 | 0.652     | 0.465| 5.027   | 0.025†| 4.292| 1.201        | 15.337     |
| Step 2                                                                   |           |      |         |       |      |              |            |
| Competency in specialised clinical practice (ref=1)                      | -0.256    | 0.385| 0.444   | 0.505 | 0.599| 0.133        | 2.705      |
| Competency in critical thinking (ref=1)                                 | 0.125     | 0.455| 0.076   | 0.783 | 1.284| 0.216        | 7.630      |
| Competency in health education (ref=1)                                   | -0.483    | 0.504| 0.917   | 0.338 | 0.381| 0.053        | 2.747      |
| Competency in interpersonal communication (ref=1)                       | 0.651     | 0.415| 2.459   | 0.117 | 3.677| 0.722        | 18.724     |
| Competency in nursing management (ref=1)                                | 0.139     | 0.404| 0.119   | 0.730 | 1.321| 0.272        | 6.425      |
| Competency in professional development (ref=1)                          | 0.892     | 0.416| 4.591   | 0.032†| 5.955| 1.164        | 30.459     |
| In charge of WOC nurses’ training                                      | 1.049     | 0.553| 3.596   | 0.058 | 8.147| 0.932        | 71.217     |
| Joined in WOC nurses’ professional conference                           | -0.625    | 0.391| 2.548   | 0.111 | 0.287| 0.062        | 1.329      |
| Participated in WOC nurses’ continuing education                        | 0.369     | 0.412| 0.802   | 0.370 | 2.093| 0.416        | 10.531     |
| Days of wound care per month (ref=1)                                    |           |      |         |       |      |              |            |
| 7–14 days                                                                | -0.375    | 0.463| 0.655   | 0.418 | 1.423| 0.398        | 5.080      |
| 14–21 days                                                               | 0.343     | 0.416| 0.680   | 0.409 | 2.917| 0.939        | 9.056      |
| >21 days                                                                 | 0.760     | 0.507| 2.248   | 0.134 | 4.425| 1.101        | 17.780     |

*P<0.01. †P<0.05.

WOC, wound, ostomy and continence.
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