Resilience among nurses: The role of demographic factors, mindfulness, and perceived stress

Running title: Factors influencing nurses' resilience

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Abstract

Aim: To examine the role of demographic factors, mindfulness, and perceived stress on resilience among nurses.

Background*:* Resilience is an important attribute in the nursing profession although factors affecting it are very diverse. Knowing these factors may help in enhancing nurses' resilience and their subsequent quality healthcare delivery.

Method: Utilizing a cross-sectional descriptive survey, a convenience sample was recruited to answer questions assessing resilience, perceived stress, and mindfulness in Taiwan between October and November 2021. Independent *t*-tests, one-way analyses of variance (ANOVAs), and hierarchical regression were used to analyse the data.

Results*:* A total of 816 nurses participated in the study. Postgraduate degree nurses had lower perceived stress (p=0.006) and higher resilience (p=0.003) compared to their college and undergraduate counterparts. Nurses working in internal medicine had significantly higher levels of perceived stress (p=0.006) and lower levels of mindfulness (p=0.005) compared to those in other departments. Single nurses had significantly higher levels of mindfulness (p=0.04) but lower levels of resilience (p=0.049) than those who were married. Educational level, perceived stress, and mindfulness were all factors that influenced nurses' resilience.

Conclusion: Higher educational levels, perceived stress, and mindfulness appear to influence nurses' resilience. Nurses should therefore be encouraged to upgrade themselves academically, attend refresher courses, and learn adaptive coping strategies.

Implications for nursing management: Hospital authorities should help nurses deal with stressful issues, and offer career development opportunities to update, upgrade and enhance their skillsets in the profession.

Keywords: mindfulness; nursing; resilience; stress; Taiwan

Introduction

Resilience among healthcare workers is not a new concept. It is believed to be associated with personality traits which indicates how and when an individual recovers from setbacks, challenges or disaster. It involves an individual's ability to recover easily and quickly or successfully cope from negative experiences by flexibly and positively adapting to the challenges they face in daily life (Campbell-Sills et al., 2006; Fredrickson et al., 2003; Hart et al., 2014). Resilience also comprises an individual's ability to adapt appropriately to adversity, uphold equilibrium, have environmental control, and move on in a positive manner (Jackson et al., 2007). Its definition is varied but themes consistent with resilience are strength, resistance, stable personality and temperament, high persistence, high self-directedness and/or flexible adaptation in the face of challenges (Campbell-Sills et al., 2006; Fredrickson et al., 2003; Hart et al., 2014; Robertson et al., 2016). How and when resilience is developed is uncertain. However, it is known that culture, personal growth, profession, and experience with adversities or challenges are probable contributing factors that influence the growth of an individual's resilience (Cassidy, 2015; Fleming & Ledogar, 2008; Jackson et al., 2007; Robertson et al., 2016; Zolkoski & Bullock, 2012). This is consistent with the middle-range theory of resilience which includes dispositional, relational, situational, and philosophical patterns of resilience (Polk, 1997). Furthermore, the individual and the environment are distinct but synergistically related (i.e., transactionally dynamic process of person-environment exchanges) producing diverse resilience (Greene, 2002; Morse et al., 2021; Polk, 1997). Consequently, different settings and times demand different types of resilience (e.g., professional, personal/individual, psychological) (Eley et al., 2018; Jackson et al., 2007; Martin & McDowall, 2021; Rees et al., 2015). It is indubitable that resilience among nurses is a much-needed value. However, due to the broad nature of this concept, researchers have continued to explore factors that influence resilience so that it can be improved. Therefore, the present study, explored how specific factors (e.g., demographics, mindfulness, and perceived stress) influence Taiwanese nurses' resilience.

In the healthcare setting, several sources of challenges confront nurses. These challenges include managing difficult patients, internal workplace challenges (e.g., communication, work overload, administration systems, and/or personal relationships), and external work issues (e.g., continuing professional development regulations, frequent policy changes, and revalidation) (Robertson et al., 2016). These factors can lead to distress which may impact negatively on their work output (e.g., suboptimal care, absenteeism, and compromised patient safety) and health (e.g., musculoskeletal disorders, burnout, and depression) which can lead to higher

turnover (Ahorsu et al., 2022; Manomenidis et al., 2019a, 2019b). This is understandable given that nurses have to bear, deal and/or manage tragedy, suffering, and human distress as part of their daily duties. This can be stressful especially if the nurse is poorly prepared or inadequately resourced. In these situations, a resilient nurse may overcome challenges and exceed expectations. More specifically, the professional and/or personal resilience of nurses has been identified to serve as a protective factor against the effects of stress as well as burnout, depression, and other work issues (Arrogante & Aparicio-Zaldivar, 2017; Jackson et al., 2007; Mróz, 2015; Tusaie & Dyer, 2004; Williams et al., 2016). These findings indicate that perceived stress is a likely factor that influences Taiwanese nurses' resilience.

Closely related to resilience issues among nurses are their coping strategies. Although resilience is an important factor in helping to mitigate challenges at work, coping strategies form an integral part of how the challenges are resolved. In terms of concept relatedness, resilience may be seen as an enabling or energizing factor among nurses that helps them to cope with their work challenges and to maintain healthy and stable psychological functioning whereas coping strategies are the actual tools used to mitigate the challenges. Therefore, resilient nurses will develop better adaptive and efficient coping strategies as they work through and overcome several challenges (Manzano García & Ayala Calvo, 2012; Yılmaz, 2017). Mindfulness (i.e., non-judgmental awareness of the present lived experience) is considered one of the most effective coping strategies that enhances individuals' positive emotions, reduces stress and increases well-being, and ultimately improves resilience (Galante et al., 2021; Lin et al., 2018; Ramasubramanian, 2017; Slatyer et al., 2018). Therefore, given that coping strategies are associated with resilience (McDonald et al., 2012; Yılmaz, 2017), it can be reasonably assumed that mindfulness, a type of coping strategy, may also influence nurses' resilience.

Individual factors and specific socio-demographic characteristics such as gender, educational level, number of years' experience, and ward type have been associated with nurses' resilience (Afshari et al., 2021; Gillespie et al., 2009; Jamebozorgi et al., 2022; Manomenidis et al., 2019b; Ren et al., 2018). Furthermore, prior studies have reported different socio-demographic characteristics due to differences in the type of nurses and age group among the samples studied (Afshari et al., 2021; Jamebozorgi et al., 2022; Kutluturkan et al., 2016). However, work experience stands out as one of the factors enhancing resilience with more years of working experience associated with higher resilience (Afshari et al., 2021; Jamebozorgi et al., 2022). Additionally, other studies have reported the differences between socio-demographic characteristics (e.g., males vs. females, and young vs. old) regarding

resilience (Afshari et al., 2021; Jamebozorgi et al., 2022; Kutluturkan et al., 2016). Therefore, the present study examined which of the demographic factors influence Taiwanese nurses' resilience. Furthermore, it also examined the differences in demographics on perceived stress and mindfulness as identifying these may further contribute to the understanding of resilience among nurses.

The aforementioned literature indicates that there are numerous studies examining resilience probably due to its diverse nature and its influence on quality healthcare delivery. Consequently, several factors appear to affect nurses' resilience which therefore calls for combined effort to delineate these factors through novel studies as well as replications. therefore, the present study examined the roles of demographic factors, mindfulness, and perceived stress on the resilience of nurses. More specifically, it examined the (i) socio-demographic differences in perceived stress, mindfulness, and resilience, and (ii) factors that influence resilience. Given the exploratory nature of the study, there were no specific hypotheses.

Methods

Participants and recruitment procedure

The present study utilized a cross-sectional descriptive survey to examine resilience among nurses. The target participants were registered nurses who were currently working in a hospital or a medical centre during the study period (October - November 2021). In Taiwan, a medical centre is responsible for the care of complex medical conditions that ordinary hospitals cannot handle. Such centres also provide clinical medical education, carry out research, and provide the highest level of healthcare. The inclusion criteria were participants (i) aged 20 years or above; (ii) working in the same department (or unit) during the study period; (iii) who agreed to participate in the study by providing written informed consent. The exclusion criterion was nurses who were working in an outpatient unit because Taiwanese outpatient units do not require nurses to work shifts (while all the other nursing units require shift-work), which is an important factor affecting nurses' psychosocial health. Data were collected between October and November 2021 by in-person invitation.

More specifically, the first author visited each unit in the hospital or medical centre in Taichung (a central city in Taiwan) to disseminate the study information. After explaining the study information and participants' rights to potential participants, the first author provided the informed consent form together with the surveys to the participants in the unit who were willing

to participate. Given that it took time to complete the surveys due to the participants' busy work schedules, the first author provided postal envelopes for the participants to post back the written informed consent and completed surveys. Therefore, participants completed the survey in their own time and at their own convenience. In total, 830 survey questionnaires were initially distributed and 821 were sent back to the first author (response rate: 98.9%). However, five surveys contained missing information and were excluded from further data analysis.

Participating in this study was purely voluntary without any risk or coercion. Participants were made aware of their right to withdraw at any time without having to give a reason. All the survey envelopes were addressed to the corresponding author's address who then separated the signed informed consent form from the survey thereby ensuring and protecting the anonymity and identity of participants.

Measures

Demographics data. A background information sheet was used to collect participants' information regarding their age (in years), working experience in nursing (in months), sex (male or female), educational level (junior college, undergraduate, or postgraduate), department (internal medicine or other), religious (yes or no), marital status (yes or no), and hospital level (medical centre or regional hospital).

Perceived Stress Scale-10 (PSS-10). The PSS-10, a 10-item instrument assessing perceived stress, is derived from the Perceived Stress Scale-14 (Cohen et al., 1983). The PSS-10 has been found to have strong psychometric properties across different populations (Bastianon et al., 2020; Liu et al., 2020; Sun et al., 2019). Moreover, the PSS-10 has been translated into traditional Chinese and used in the Taiwanese population with good psychometric properties (Chiu & Lu, 2013). PSS-10 items are rated on a five-point Likert scale (1=never; 5=very often). Scores on four items (i.e., Items 4, 5, 7, and 8) were reverse scored and added together. The range of PSS-10 scores is between 10 and 50, and higher scores indicate higher levels of perceived stress. The internal consistency of the PSS-10 in the present study's sample was very good (α=0.83).

Chinese Translation of Mindful Attention Awareness Scale (CMAAS). The CMAAS, a 15-item instrument assessing mindful attention awareness (i.e., mindfulness level), has been translated from the original English version (i.e., Mindful Attention Awareness Scale; MAAS) (Brown & Ryan, 2003). The MAAS has been found to have strong psychometric properties across different populations (Hansen et al., 2009; Jermann et al., 2009; Michalak et al., 2008; Poorebrahim et al., 2021). Moreover, the CMAAS has been used among the Taiwanese

population and has good psychometric properties (Chang et al., 2011). The 15 CMAAS items are rated on a six-point Likert scale (1=almost never; 6=almost always). All item scores were reverse scored and averaged together to create a mean CMAAS score. The range of the mean CMAAS score is between 1 and 6, and higher scores indicate higher levels of mindfulness. The internal consistency of the CMAAS in the present study's sample was excellent (α=0.91).

Questionnaire of Resilience (QR). The QR, a 10-item instrument assessing resilience, is an instrument developed by Taiwan researchers for Taiwanese healthcare workers (Hsiao et al., 2019). The QR developed and used for Taiwanese healthcare workers has been found to have good psychometric properties (Hsiao et al., 2019). The 10 QR items are rated on a five-point Likert scale (1=strongly agree; 5=strongly disagree). All item scores were reverse scored and averaged together to create a mean QR score. The range of the mean QR score is between 1 and 5, and higher scores indicate higher levels of resilience. The internal consistency of the QR in the present study's sample was excellent (α=0.90).

Data analysis

The participants' characteristics were first analyzed using descriptive statistics (including means and frequencies). Several independent *t*-tests and one-way analyses of variance (ANOVAs) were used to examine if different demographic characteristics had different levels of perceived stress, mindfulness, and resilience. Finally, hierarchical regression models were constructed to examine (i) which demographic variables were potential factors explaining resilience (Model 1) and (ii) whether perceived stress and mindfulness were potential factors explaining resilience (Model 2). Additionally, collinearity was tested for in the regression models and the variance inflation factor (VIF) showed that there were no collinearity issues in the regression models (i.e., VIF < 10) (Thompson et al., 2017). All other assumptions (i.e., independence [Durbin-Watson statistic = 1.87 to 1.88], homoscedasticity [checked by the residuals versus fits plot], and normality [skewness = -0.14 to 0.04; kurtosis = 0.32 to 1.07]) underlying the tests used were considered and met. All the statistical analyses were performed using IBM SPSS 24.0 (IBM Corp.: Armonk, NY).

Results

The mean age of the present sample (N=816) was 33.07 years (SD=9.02) and on average, the participants had worked 108.22 months (SD=98.67). Most of the participants were females (n=777; 95.2%) and had an undergraduate degree (n=671; 82.2%). Nearly one-fifth of the participants (n=148; 18.1%) worked in an internal medicine department with the rest being

in a variety of departments, such as emergency departments, rehabilitation departments, intensive care units, gynecology and pediatrics departments, surgery departments, operation rooms, mental health departments, respiratory care wards, and hemodialysis units. Nearly two-thirds of the participants (n=533; 65.3%) and almost all participants (n=745; 91.3%) were not married and working in a medical centre respectively. The participants' levels of perceived stress, mindfulness, and resilience were 17.44 out of 50 (SD=5.42; assessed using the PSS), 4.18 out of 6 (SD=0.81; assessed using the CMAAS), and 4.06 out of 5 (SD=0.47); assessed using the QR) (Table 1). These results indicate that the participants had lower levels of perceived stress, moderate levels of mindfulness, and higher levels of resilience.

The one-way ANOVA showed that postgraduate degree participants had significantly lower levels of perceived stress (15.63 [postgraduate] vs. 18.05 [junior college] and 17.59 [undergraduate]; F=5.22; p=0.006) and higher levels of resilience (4.22 [postgraduate] vs. 3.97 [junior college] and 4.05 [undergraduate]; F=5.73; p=0.003). Moreover, participants who were working in the internal medicine department had significantly higher levels of perceived stress (18.54 vs. 17.19; t=2.75; p=0.006) and lower levels of mindfulness (4.01 vs. 4.22; t=2.84; p=0.005) than those working in other departments. Additionally, participants who were not married had significantly higher levels of mindfulness (4.22 vs. 4.10; t=2.10; p=0.04) and lower levels of resilience (4.03 vs. 4.10; t=1.97; p=0.049) than those who were married. No significant differences were found in other demographic variables regarding levels of perceived stress, mindfulness, and resilience (Table 2).

The hierarchical regression model showed that before considering perceived stress and mindfulness (i.e., Model 1), participants with a postgraduate degree had significantly higher resilience than those with an undergraduate degree (β=0.112; p=0.003). After perceived stress and mindfulness were entered into the regression model (i.e., Model 2), participants with a postgraduate degree remained having significantly higher resilience than those with an undergraduate degree (β=0.076; p=0.03). Moreover, participants who were married had higher resilience than those who were not married (β=0.086; p=0.03). Perceived stress (β=-0.313; p<0.001) and mindfulness (β=0.126; p=0.001) were also significantly associated with participants' resilience (Table 3). Moreover, perceived stress and mindfulness together explained 15.3% of the variance for resilience.

Discussion

The present cross-sectional survey study examined the role of demographic factors, mindfulness, and perceived stress on resilience among nurses. More specifically, it examined

(i) the socio-demographic differences in perceived stress, mindfulness, and resilience, and (ii) the factors that influenced resilience. The socio-demographic findings indicated that nurses with a postgraduate degree had lower perceived stress and higher resilience compared to their college and undergraduate counterparts. This difference may be due to several reasons. The most likely reason is that postgraduate degree nurses are likely to have acquired more knowledge and skills in nursing than undergraduates and that they are able to deal more effectively with their perceived stress which may have boosted their resilience (which then becomes cyclical). This is in line with previous findings that resilient nurses develop better adaptive coping strategies as they go through and overcome work-based challenges (Manzano García & Ayala Calvo, 2012; Yılmaz, 2017). This finding also supports previous studies which showed that postgraduates had comparatively better resilience than undergraduates (Afshari et al., 2021; Jamebozorgi et al., 2022; Ren et al., 2018).

It was also found that nurses working in internal medicine departments had significantly higher levels of perceived stress and lower levels of mindfulness compared to those working in other departments. This suggests that the nurses working in internal medicine departments are overwhelmed and have fewer coping resources. Fortunately, the findings showed that there was no significant difference in their resilience which suggests that this cyclical condition is not currently significant in impacting negatively upon their health and their quality of healthcare. Nonetheless, this should be addressed promptly. Similarly, a previous study found no difference in resilience between nurses who worked in different wards (Jamebozorgi et al., 2022).

Additionally, nurses who were unmarried had significantly higher levels of mindfulness but lower levels of resilience than those who were married. Several factors such as age, educational levels, work experience, and the department in which they worked may account for this finding. It has been suggested that married individuals have higher resilience due to the additional layer of social connection in their social support systems compared to unmarried individuals (Ang et al., 2018; Dordunoo et al., 2021). This may have accounted for the lower levels of resilience among unmarried nurses even though they have higher levels of mindfulness. However, this is also contrary to previous findings on resilience (Afshari et al., 2021; Kutluturkan et al., 2016). Future qualitative studies may be needed to delineate the basis of socio-demographic factors such as marital status underlying nurses' resilience. The present study's finding extends those already in the extant literature.

There were no significant between-group differences for sex, religion, and hospital levels concerning perceived stress, mindfulness, and resilience. This is in contrast with previous studies which reported that males either had higher or lower levels of resilience (Afshari et al., 2021; Jamebozorgi et al., 2022; Ren et al., 2018). Some previous studies among nurses reported no significant sex difference in stress which is consistent with the findings of the present study (Jamebozorgi et al., 2022; Liu et al., 2022). With regards to mindfulness, males had significantly higher levels compared with females which is contrary to other studies (e.g., Vitale, 2021). The exact reasons for this inconsistent finding are not known but cultural differences may be one of the reasons. On the other hand, there are no prior studies examining religion and hospital type (e.g., medical centre vs. regional hospital) on perceived stress, mindfulness and resilience among nurses. Future studies should use a qualitative study design to examine these demographic variables as it may provide further information on how nurses function effectively in their workplaces.

The hierarchical regression analysis found that only educational level (i.e., for socio-demographic characteristics) predicted resilience among nurses. More specifically, those with a postgraduate degree had significantly higher resilience than those with an undergraduate degree. This supports the ANOVA results on differences between educational levels of participants in the present study. It has been posited that nurses who acquire knowledge either through refresher courses or higher education degrees are able to acknowledge the importance of resources, and get access to and manage limited resources effectively to improve their utilization without necessarily hampering quality healthcare delivery (Jamebozorgi et al., 2022; Kutluturkan et al., 2016).

After controlling for socio-demographic characteristics, it was also found that perceived stress and mindfulness significantly influenced nurses' resilience. Higher levels of perceived stress affected resilience negatively whereas higher levels of mindfulness affected resilience positively. Therefore, stress faced by nurses should be taken seriously and mitigated using appropriate and effective coping strategies (e.g., mindfulness exercise) because stress has the ability to trigger predisposed illnesses (Ahorsu et al., 2021; Ahorsu et al., 2022; Jamebozorgi et al., 2022; Kukreti et al., 2021; Kutluturkan et al., 2016; Lu et al., 2021). These findings are also consistent with a previous study which demonstrated that coping style, job stress, and education level are factors that influence resilience (Ren et al., 2018).

Limitations

There are some limitations in the present study. The study used a cross-sectional design which means that causal relationships between the study variables could not be determined. Therefore, longitudinal designs are needed to further delineate such relationships. Also, self-report measures and scales were used to gather the data in the present study. The use of self-report measures is prone to social desirability response bias although measures were taken to overcome such bias (e.g., anonymity and confidentiality). In addition, the findings only apply to nurses of inpatient departments. Therefore, readers should be cautious in generalizing the findings to all nurses. Future research should be carried out among all nursing groups to increase the representativeness of the nursing samples studied. Lastly, the sample in the present study comprised a small number participants who had a postgraduate degree (9.8%) which may have possibly influenced the study's findings. Therefore, future studies with a larger proportion of participants with a postgraduate degree should be carried out to corroborate the present study's findings.

Conclusion

The present cross-sectional survey study showed that higher educational levels, perceived stress, and mindfulness influenced nurses' resilience. The findings imply that nurses should be encouraged to upgrade themselves academically to enhance their knowledge and skills in healthcare delivery. Also, hospital authorities should help nurses deal with stressful issues, and offer career development opportunities to update, upgrade and enhance their skillsets in the profession. Future studies should continue to explore other variables that may influence nurses' resilience given that the factors in the present study only explained 15% of the variance in resilience.

Implications for nursing management

The findings of the present study have several implications for nurse managers and/or nursing management. First, stress in any form and of any magnitude can trigger physical and/or mental health illnesses. Therefore, it will be beneficial that issues that cause distress or are deemed stressful among nurses are identified and resolved quickly and efficiently. This will improve their physical and mental health and consequently their aptitude and preparedness for work which may ultimately will enhance their resilience. Second, to boost the abilities of nurses to withstand or cope with stress, management should introduce courses on coping strategies for

nurses which again would likely improve their resilience. Although this study had no data on coping strategies, other studies have demonstrated the positive effect of this intervention on nurses' resilience (e.g., McDonald et al., 2012; Yılmaz, 2017). Third, as higher education appeared to positively influence the resilience of nurses, management should (i) introduce policies on daily information sessions where nurses can be updated and upgraded in ways of handling or managing cases within a department or unit by a senior colleague or specialist, (ii) offer refresher courses for all nurses at least once a year at the hospital level, and (iii) offer an opportunity for nurses to upgrade their academic levels, especially to those without a

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Table 1. Participants' characteristics (N=816)

	n (%) or mean (SD)/range
Age (in years)	33.07 (9.02)/20-69
Working experience (in months)	108.22 (98.67)/1-504
Sex	
Female	777 (95.2)
Male	39 (4.8)
Education	
Junior college	65 (8.0)
Undergraduate	671 (82.2)
Postgraduate	80 (9.8)
Department	
Internal medicine	148 (18.1)
Other	668 (81.9)
Religious	
No	348 (42.6)
Yes	468 (57.4)
Marital status	
Single	533 (65.3)
Other	283 (34.7)
Hospital level	
Medicine center	745 (91.3)
Regional hospital	71 (8.7)
Perceived stress	17.44 (5.42)/2-40
Mindfulness	4.18 (0.81)/1.6-6.0
Resilience	4.06 (0.47)/1.7-5.0

Table 2. Comparison levels of nurses' perceived stress, mindfulness, and resilience between demographic variables

		Perceived stress		Mindfulness		Resilience	
	n	M (SD)	*t/F (p)*	M (SD)	*t/F (p)*	M (SD)	*t/F (p)*
Sex			0.42 (0.67)		1.49 (0.14)		1.12 (0.26)
Female	777	17.42 (5.38)		4.16 (0.81)		4.06 (0.47)	
Male	39	17.79 (6.15)		4.37 (0.74)		3.97 (0.53)	
Education			5.22 (0.006)*		0.72 (0.49)		5.73 (0.003)*
Junior college	65	18.05 (6.22)[a]		4.16 (0.91)		3.97 (0.53)[a]	
Undergraduate	671	17.59 (5.26)[a]		4.16 (0.80)		4.05 (0.47)[a]	
Postgraduate	80	15.63 (5.79)		4.28 (0.77)		4.22 (0.39)	
Department			2.75 (0.006)*		2.84 (0.005)*		0.84 (0.43)
Internal medicine	148	18.54 (5.59)		4.01 (0.80)		4.03 (0.47)	
Others	668	17.19 (5.36)		4.22 (0.80)		4.06 (0.47)	
Religious			1.63 (0.10)		0.03 (0.97)		0.18 (0.86)
No	348	17.80 (5.22)		4.18 (0.81)		4.05 (0.49)	
Yes	468	17.17 (5.55)		4.18 (0.80)		4.06 (0.46)	
Marital status			1.55 (0.12)		2.10 (0.04)*		1.97 (0.049)*
Single	533	17.65 (0.54)		4.22 (0.83)		4.03 (0.49)	
Others	283	17.04 (5.40)		4.10 (0.75)		4.10 (0.43)	
Hospital level			0.59 (0.55)		1.31 (0.19)		0.51 (0.61)
Medicine center	745	17.40 (5.42)		4.19 (0.81)		4.06 (0.48)	
Regional hospital	71	17.80 (5.44)		4.06 (0.77)		4.03 (0.40)	

* $p<0.05$

[a] Significant difference with those at postgraduate level after Bonferroni adjustments.

Table 3. Hierarchical multiple regression models in explaining levels of nurses' resilience[a]

	Model 1		Model 2	
	B (SE)	β (p)	B (SE)	β (p)
Independent variable				
Age (in years)	0.003 (0.004)	0.055 (0.49)	<0.001 (0.004)	0.008 (0.91)
Working experience (in months)	-0.001 (<0.001)	-0.110 (0.14)	<0.001 (<0.001)	-0.094 (0.17)
Sex (Ref: female)	-0.082 (0.078)	-0.037 (0.29)	-0.092 (0.072)	-0.042 (0.20)
Junior college (Ref: undergraduate)	-0.089 (0.061)	-0.051 (0.15)	-0.078 (0.056)	-0.045 (0.17)
Postgraduate (Ref: undergraduate)	**0.177 (0.060)**	**0.112 (0.003)**	**0.121 (0.056)**	**0.076 (0.03)**
Department (Ref: internal medicine)	0.040 (0.044)	0.033 (0.36)	-0.008 (0.040)	-0.007 (0.83)
Marital status (Ref: single)	0.064 (0.043)	0.064 (0.14)	**0.086 (0.040)**	**0.086 (0.03)**
Religious (Ref: no)	0.007 (0.033)	0.007 (0.84)	-0.006 (0.031)	-0.006 (0.84)
Perceived stress	--	--	**-0.027 (0.003)**	**-0.313 (<0.001)**
Mindfulness	--	--	**0.074 (0.023)**	**0.126 (0.001)**
Model diagnosis and fit				
F-value (*p*-value)	2.26 (0.02)		17.05 (<0.001)	
Variance inflation factor	1.016-5.200		1.019-5.220	
R^2 (adjusted R^2)	0.022 (0.012)		0.175 (0.165)	

[a]Significant values are reported in **bold.**