Job satisfaction, work environment and intention to leave among migrant nurses working in a publicly funded tertiary hospital

YONG-SHIAN GOH PhD, MN, BHSN¹,² and VIOLETA LOPEZ PhD, MNA, BSN¹,²

¹Senior Lecturer, Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore and ²Professor, Alice Lee Centre for Nursing Studies, National University Health System, Singapore

Correspondence
Yong-Shian Goh
Alice Lee Centre for Nursing Studies
National University of Singapore, Singapore
Clinical Research Centre (MD 11)
10 Medical Drive
Singapore 117597
E-mail: shawn_goh@nuhs.edu.sg


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Aim(s) This study sought to explore the job satisfaction level of migrant nurses working in a multicultural society and, more specifically, the relationship between their job satisfaction levels, work environment, their intentions to leave and the predictors of their intentions to leave.

Background Nursing shortages have led to the increasing trend of employing migrant nurses, which necessitated studies examining nurses’ migration.

Evaluation A cross-sectional, correlational design using a stratified random sample was conducted on 495 migrant nurses working in a tertiary public-funded hospital in Singapore.

Results The results showed that migrant nurses were satisfied with their jobs; with job satisfaction negatively correlated with work environment. Interestingly, pre-existing groups of Chinese migrant nurses did not help newly arrived Chinese migrant nurses to assimilate better. Predictors of migrant nurses’ intentions to leave included having supportive nurse managers and nursing practice environment.

Conclusions The presence of a supportive work environment is essential to retain migrant nurses.

Implications for nursing management Health administrators need to empower nursing managers with skills to implement career development plans as part of hospitals’ retention strategies for migrant nurses. Information should also be provided during recruitment campaigns to enable migrant nurses to make informed choices.

Keywords: intention to leave, job satisfaction, work environment, migrant nurses, Singapore

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Background

Over the past decade, a worldwide nursing shortage has continued to plague the health-care industry. Several countries, including European countries, have expressed concern about the future of their health-care workforce, particularly given the growing demand for nurses (Tregunno et al. 2009, Campbell 2014). Strategies such as recruitment of migrant nurses, (Aiken 2007, Beaton & Walsh 2010) and reducing the overall turnover rate of nurses (Ujvarine et al. 2011) have been implemented to alleviate this shortfall. With an increasing trend for global migration and international recruitment campaigns, this have led to many studies being conducted on the issues related to nurses’ migration (Brown 2004, Omeri 2006).

If the nursing shortage continues to be unaddressed, it has been predicted that by 2020, the
United States (US) will require the staggering number of one million nurses (Juraschek et al. 2012). Despite aggressive recruitment campaigns directed at migrant nurses that seek to address this chronic shortage, the problem has not abated (Aiken 2007). In some countries, the number of migrant nurses comprises up to 20% of the total nursing population and, in 2015, many hospitals indicated an intention to increase the employment of migrant nurses 3.2 fold (Campbell 2014). Despite a large number of migrant nurses being employed in various health-care systems, nursing shortages persist because of high turnover rates within the profession (Buerhaus 2008, Donelan et al. 2008).

Under the push–pull theory of migration, individuals migrate seeking better social environments, economic opportunities (Bach 2004, Kingma 2007, 2008), higher wages and better living conditions (International Council of Nursing 2007, Djukic et al. 2010). However, many migrant nurses face work-related stressors (Kingma 2008) that create challenging relationships with their colleagues (Ea et al. 2010, Liou & Cheng 2011, Newton et al. 2012). Many studies have shown that there is a link between job satisfaction and employees’ intentions to leave (Hegney et al. 2006, Hayne et al. 2009). Thus, it is important to conduct studies that explore the factors related to job satisfaction among migrant nurses (Cohen et al. 2009).

Job satisfaction is based on the two-factor theory of Herzberg (1987) that includes both intrinsic factors (i.e. motivators) and extrinsic factors (i.e. demotivators). Intrinsic factors include achievement, recognition, assuming more responsibilities and opportunities for career advancement. Conversely, extrinsic factors include supervision, interpersonal relationships, physical working conditions, salary and perceived job security. Some studies have shown that teamwork, adequate staffing and autonomy in decision making strongly affect job satisfaction (Randolph 2005, Hegney et al. 2006, Rodwell et al. 2009). To reduce turnover rates among migrant nurses, it is important that health-care administrators explore why nurses leave their positions and develop effective strategies to prevent further attrition (Arslan Yurumezoglu & Kocaman 2015). This study sought to conceptualise the phenomenon of job satisfaction among migrant nurses working in the Asian region. To date, very few studies have been conducted exploring job satisfaction and the intention of migrant nurses to leave. This research was particularly important, as the majority of migrating nurses originate from countries with homogenous populations and, upon migrating to Singapore, must face the challenges of working in a multicultural environment.

**Methods**

**Aim and objective**

The research objectives of this study were to: (i) explore the levels of job satisfaction of migrant nurses working in a multicultural environment; (ii) examine the relationship between job satisfaction levels, practice environments and nurses’ intentions to leave; and (iii) identify the predictors of migrant nurses’ intentions to leave.

**Study design**

A cross-sectional study was conducted between June and December 2012 using a stratified random sample of migrant nurses that were selected based on the nationality distribution of nurses registered with the Singapore Nursing Board (Singapore Nursing Board 2012). The inclusion criteria included non-Singaporean nurses employed for at least one year at the site of study. The sample size was calculated based on a power analysis for the regression model. A total of 429 nurses was required to achieve 90% power at a 5% level of significance (nQuery Advisor, 2001). Based on an anticipated non-response rate of 30%, the total number of participants required was 600.

**Outcome measures**

The research instrument comprised three parts: a demographic sheet, the job satisfaction questionnaire (JSQ) and the practice environment scale–nursing work index–revised (PES-NWI-R). All instruments were in English, as English literacy is a prerequisite for registration as a nurse in Singapore (Singapore Nursing Board 2012).

**Demographic sheet**

The demographic sheet collected information related to participants’ age, gender, citizenship, religion, marital status, highest nursing qualification, work experience in other countries, nursing experience, nursing practice environments, nursing ranks, intentions to leave and living arrangements.
Job satisfaction questionnaire (JSQ)

A 37-item JSQ was used to explore the following five domains of job satisfaction: (i) pay and benefits (10 items); (ii) support (seven items); (iii) autonomy and professional opportunities (10 items); (iv) scheduling (six items); and (v) relationships and interaction (four items). Participants were asked to rate each item on a scale of 5, ‘very satisfied’ to 1, ‘very dissatisfied’ (higher scores indicated positive job satisfaction). The internal consistency reliability of the JSQ in this study was Cronbach’s alpha 0.82.

Practice environment scale–nursing work index–revised (PES-NWI-R)

A 36-item PES-NWI-R was used to explore the following six domains of work environment: (i) hospital affairs (nine items); (ii) quality of care (10 items); (iii) nurse manager’s ability (five items); (iv) staffing and resource adequacy (four items); (v) good nurse–physician relationships (three items); and (vi) nursing information technology (five items). Participants were asked to rank each item on a scale of 1, ‘strongly agree’ to 4, ‘strongly disagree’ (a lower score indicated that the participant strongly agreed that an organisational characteristic was present) (Lake 2002, Liou & Cheng 2009). The internal consistency reliability of the PES-NWI-R in this study was Cronbach’s alpha 0.93.

Data collection and analysis

Ethical approval was obtained from the Institutional Review Board of the participating institution. The participants were provided with an information sheet explaining the study’s purpose. Participation was voluntary and participants were given 2 weeks to complete the questionnaire. Once completed, participants were told to place their questionnaires and signed consent forms into two separate sealed self-adhesive envelopes and to deposit these envelopes into boxes at the nurses’ station. The collected data were coded and entered into the IBM SPSS Statistics for Windows, Version 23.0 (IBM Corp 2013).

Normality on the dependent variable (i.e. job satisfaction level) was determined using a histogram prior to data analysis (Chan 2003). Descriptive statistics were used to describe the sample characteristics. Means and standard deviations (SD) were used to quantify the variables in the study. A Pearson correlation coefficient analysis (r) was used to test the relationships between the study variables and logistic regression was used to examine the predictors of migrant nurses’ intentions to leave.

Results

Sample characteristics

A total of 495 migrant nurses participated in the study, resulting in an overall response rate of 82.5%. The

Table 1

<table>
<thead>
<tr>
<th>Characteristics of the study population (n = 495)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
</tr>
<tr>
<td>&lt;30</td>
</tr>
<tr>
<td>31–40</td>
</tr>
<tr>
<td>41–50</td>
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<tr>
<td>&gt;50</td>
</tr>
<tr>
<td>Marital status</td>
</tr>
<tr>
<td>Single</td>
</tr>
<tr>
<td>Married</td>
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<tr>
<td>Divorced</td>
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<tr>
<td>Separated</td>
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<tr>
<td>Widowed</td>
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<tr>
<td>Others</td>
</tr>
<tr>
<td>Religion</td>
</tr>
<tr>
<td>Christianity</td>
</tr>
<tr>
<td>Other Christian</td>
</tr>
<tr>
<td>Buddhist/Taoism</td>
</tr>
<tr>
<td>Free Thinker (No religion)</td>
</tr>
<tr>
<td>Hindu</td>
</tr>
<tr>
<td>Islam</td>
</tr>
<tr>
<td>Years of working experience as a nurse</td>
</tr>
<tr>
<td>&lt;8 years</td>
</tr>
<tr>
<td>&gt;8 years</td>
</tr>
<tr>
<td>Nursing practice environment</td>
</tr>
<tr>
<td>General medical surgical</td>
</tr>
<tr>
<td>Intensive care</td>
</tr>
<tr>
<td>Perioperative</td>
</tr>
<tr>
<td>Emergency</td>
</tr>
<tr>
<td>Oncology</td>
</tr>
<tr>
<td>Nephro-urology</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Citizenship</td>
</tr>
<tr>
<td>Filipino</td>
</tr>
<tr>
<td>Malaysian</td>
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<tr>
<td>Chinese PRC</td>
</tr>
<tr>
<td>Indian national</td>
</tr>
<tr>
<td>Myanmar national</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td>Highest nursing qualification</td>
</tr>
<tr>
<td>Certificate</td>
</tr>
<tr>
<td>Diploma</td>
</tr>
<tr>
<td>Advanced Diploma</td>
</tr>
<tr>
<td>Bachelor Degree</td>
</tr>
<tr>
<td>Master Degree</td>
</tr>
<tr>
<td>Doctor of Philosophy</td>
</tr>
<tr>
<td>Have you worked in any other country other than Singapore before?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Any intention to leave?</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

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majority of participants were female (i.e., 98%) and less than 40 years of age (i.e., 89.7%) (see Table 1). The study population comprised a group of well-educated individuals, more than half of the participants (i.e., 62.4%) had a college degree or higher level of education. Over half of the migrant nurses (i.e., 56.6%) had less than 8 years’ work experience and almost half of the nurses (i.e., 48.1%) had previously worked in countries other than Singapore. Of the study population, approximately 16.6% of the migrant nurses expressed intentions to leave their jobs.

**Job satisfaction level**

The migrant nurses surveyed were moderately satisfied with their job (mean = 3.43, SD = 0.43) (see Table 2). Indian nurses reported the highest levels of job satisfaction followed by Malaysian, Filipino, Myanmar and Chinese nurses. A post-hoc test using Bonferroni correction showed that the job satisfaction levels of Indian nurses were higher than that of Chinese nurses (mean difference 0.269, 95% CI, 0.40 to 0.50, P < 0.05). Overall, Indian nurses reported higher levels of job satisfaction than other nationality groups of migrant nurses surveyed in this study.

**Relationship between job satisfaction and work environment**

A negative correlation was found between job satisfaction and each of the domains of the practice environment scale: nurse participation in hospital affairs (r = 0.539, n = 495, P < 0.01), quality of care (r = 0.472, n = 495, P < 0.01), nurse manager ability (r = 0.525, n = 495, P < 0.01), staffing adequacy (r = 0.538, n = 495, P < 0.01), nurse–physician relationship (r = 0.372, n = 495, P < 0.01) and nursing
information technology ($r = -0.329$, $n = 495$, $P < 0.01$) (see Table 3). These results suggest that lower job satisfaction levels were associated with lower reported perceptions of work environment among migrant nurses working in Singapore.

Mean difference between intention to leave and job satisfaction

Table 4 shows the mean difference for migrant nurses between intention to leave and the domains in JSQ. The mean difference was significant in relation to both pay and benefits (mean difference = $-0.255$, 95% CI $-0.381$ to $-0.129$, $P < 0.05$); support (mean difference = $-0.154$, 95% CI $-0.274$ to $-0.033$, $P < 0.05$); autonomy and professional (mean difference = $-0.190$, 95% CI $-0.325$ to $-0.054$, $P < 0.05$); scheduling (mean difference = $-0.250$, 95% CI $-0.397$ to $-0.102$, $P < 0.05$); and relationship and interaction (mean difference = $-0.212$, 95% CI $-0.329$ to $-0.094$, $P < 0.05$). The magnitude of the mean difference showed a small effect size (eta squared = 0.02).

Predictors of intention to leave

Table 5 shows the predictors of migrant nurses’ intentions to leave. A reduced model was presented containing the demographic variables (i.e. age, gender, citizenship, marital status, religion, nursing qualifications, work experience outside Singapore, years of nursing experience and nursing practice environments). Only two independent variables made a unique statistically significant contribution to the model. When demographic characteristics and other domains in the outcome variables of the model were controlled, the strongest predictor of nurses’ intention to leave was the ability of nurse managers (odds ratio = 1.152, $P < 0.05$) followed by nursing practice environments (odds ratio = 0.876, $P < 0.05$).

### Table 5

**Logistic regression analysis of intention to leave ($n = 495$)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds ratio</th>
<th>95% CI for odds ratio</th>
<th>Lower</th>
<th>Upper</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.764</td>
<td>0.489</td>
<td>1.192</td>
<td>0.236</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>3.751</td>
<td>0.746</td>
<td>18.86</td>
<td>0.109</td>
<td></td>
</tr>
<tr>
<td>Citizenship</td>
<td>0.834</td>
<td>0.656</td>
<td>1.061</td>
<td>0.140</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>0.711</td>
<td>0.596</td>
<td>1.213</td>
<td>0.190</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td>0.983</td>
<td>0.818</td>
<td>1.180</td>
<td>0.851</td>
<td></td>
</tr>
<tr>
<td>Nursing qualification</td>
<td>1.297</td>
<td>0.922</td>
<td>1.826</td>
<td>0.136</td>
<td></td>
</tr>
<tr>
<td>Work experience out of Singapore</td>
<td>0.779</td>
<td>0.431</td>
<td>1.408</td>
<td>0.408</td>
<td></td>
</tr>
<tr>
<td>Years of experience</td>
<td>1.133</td>
<td>0.789</td>
<td>1.625</td>
<td>0.499</td>
<td></td>
</tr>
<tr>
<td>Nursing practice environment</td>
<td>0.876</td>
<td>0.791</td>
<td>0.970</td>
<td>0.011**</td>
<td></td>
</tr>
<tr>
<td>PES2_quality care</td>
<td>1.095</td>
<td>0.976</td>
<td>1.229</td>
<td>0.123</td>
<td></td>
</tr>
<tr>
<td>PES3_nurse manager ability</td>
<td>1.152</td>
<td>1.008</td>
<td>1.316</td>
<td>0.037**</td>
<td></td>
</tr>
<tr>
<td>C3_Autonomy/professionalism</td>
<td>0.561</td>
<td>0.305</td>
<td>1.034</td>
<td>0.064</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.114</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**$P < 0.05$.**

Discussion and implications for nursing management

This study explored job satisfaction, practice environments and the intentions of migrant nurses in Singapore to leave their jobs. Overall, the study found that the job satisfaction level of migrant nurses was high. This may be because the availability of stable jobs fulfilled migrant nurses’ initial intentions to migrate (Atri et al. 2006, Kingma 2008, Djkic et al. 2010). Compared with Filipino, Malaysian and Indian migrant nurses, Chinese migrant nurses had the lowest levels of job satisfaction. There is a large population of Chinese migrants in Singapore (Suryadinata, 2009); however, it should be noted that this did not translate to higher levels of job satisfaction among Chinese migrant nurses. This may be because Chinese migrant nurses view themselves as members of an ancient civilisation with a rich historical and cultural background and thus wish to maintain their own cultural perspective (Yan & Berliner 2011). Further, given the large number of Chinese migrant nurses present in the current workforce, the new Chinese migrant nurses may have the impression that they can retain their own cultural perspective in Singapore (Lu et al. 2011, Taras et al. 2012). Another plausible explanation could relate to the language issues faced by Chinese migrant nurses in their work environment (Goh & Lopez 2016). Further, differences in their socio-cultural life expectations may have affected their perspectives of working in a new environment (Ea et al. 2010). Finally, these nurses may have experienced difficulties in having their Chinese nursing qualifications recognised in Singapore and this may have resulted in a deskilling or downgrading of their roles and, consequently, led to lower levels of job satisfaction (Kingma 2007).

In this study, Indian migrant nurses reported the highest levels of job satisfaction compared with other nationality groups. This could be attributed to the use of English as a teaching medium in India nursing schools (Khadria 2007). Many Indian migrant nurses in Singapore migrated from Kerala (are Malayalam speaking) and have one religious faith (i.e. Christianity) (Thomas 2006). Thus, a strong support system
may already be in place that provides new Indian
migrant nurses with the necessary social support
(Royal College of Nursing 2003, Kingma 2008).
Another study showed that the majority of Indian
migrant nurses were unhappy and held low societal
attitudes towards nursing in India which prompted
them to consider migration (Thomas 2006) Further, in
countries such as the Philippines and India (where
excess numbers of nurses are being trained) many
nurses migrate so that they can send money home to
support their impoverished homelands (Afram 2012).
Thus, many migrant nurses may hold goals related to
successfully assimilating into their new work
environments.

Compared with Chinese migrant nurses, Filipino
and Malaysian migrant nurses were more satisfied
with their jobs. This may be because Filipino nurses
are more resilient and have a strong commitment to
working in another country as their salaries enable
them to send remittances to their families back home
(Ball 2004). Further, it has become normal for Filipino
nurses to migrate following graduation. Thus, many
Filipino nurses will have prepared themselves to perse-
vere in spite of any obstacles that they may face in
their new environment (Brush & Sochalski 2007,
Enrile & Agbayani 2007). Presently, there is already a
large number of Filipino nurse working in Singapore
and thus Filipino nurses have a large network of social
support upon migrating (Beechinhor & Fitzpatrick
2008). Singapore’s geographical proximity with
Malaysia, its similarity in population diversity and
shared cultural heritage could also explain the higher
job satisfaction levels of Malaysian migrant nurses
conducted by Koh (2010) showed that while
Malaysian migrants prefer their Malaysian identity,
some like to perceive themselves as Singaporeans
and are willing to adopt Singaporean values and
characteristics.

Many studies have shown that job satisfaction is
directly related to the work environments in which the
jobs are being performed (Emerson et al. 2008, Probst
et al. 2010). This study identified a negative correla-
tion between job satisfaction and work environment.
These results reflected the findings of previous studies
in which the primary reasons for lower levels of job
satisfaction related to low promotional opportunities,
poor job fit, management and bureaucracy (van der
This study also identified a relationship between lower
levels of job satisfaction and the use of nursing infor-
matics in the clinical area. This may have contributed
to nurses’ levels of dissatisfaction, as nurses reported
having to learn how to use the new technology while
trying to adapt to a new work environment (Emerson

Finally, this study identified two predictors of
migrant nurses’ intentions to leave; that is, the ability
of nurse managers to lead a ward and the practice
environments. Under the social exchange theory
(Cropanzano & Mitchell 2005) and the leader–mem-
ber exchange theory (Dulebohn et al. 2012, Mattal
et al. 2015), it is beneficial for both supervisors and
employees to have healthy interactions when sharing
resources and information and providing support, as
such interactions reduce workplace stress and employ-
ees’ intentions to leave (Rodwell et al. 2009, Thomas
& Lankau 2009). Further, according to Herzberg’s
two-factor theory, providing adequate supervision also
helps to prevent job dissatisfaction and thus reduces
employees’ intentions to leave (Maidani 1991, Collins
et al. 2000). A recent study showed that a lack of sup-
port from management and a lack of communication
with managers were the main reasons employees chose
to leave an organisation (Wilson 2015). High quality
working relationships between nurse managers and
migrant nurses could result in better group cohesion
and create positive social climates, resulting in team-
work, resolving problems in the workplace and ulti-
mately benefit both individuals and the organisation
(Rodwell et al. 2009, Duffield et al. 2010).

Nursing practice environments were a predictor of
the intentions of migrant nurses to leave their jobs.
Prior to migrating, migrant nurses may assume that
they will be able to work in a specialty similar to
that in which they had worked previously; however,
when they migrate, these nurses may find that they
cannot choose the specialty areas in which they work
(Allan & Larsen 2003, Smith et al. 2006). Migrant
nurses are usually not given the opportunity to work
in their area of specialisation or interest. This may
contribute to their intention to leave (Wilson 2015).
Many studies have shown that practice environments
are important in relation to job satisfaction and
retention and having a positive work experience is
most favourable for migrant nurses (Laschinger
Boyle 2014).

Limitations of the study
The use of a cross-sectional questionnaire limited the
ability of this study to establish cause–effect relation-
ships. However, this limitation was reduced by a high
response rate of 82.5% that allowed all the factors under investigation to be measured (Polit & Beck 2011). Allowing participants a 2-week period to return their self-report questionnaires may have reduced participants’ recall bias and minimised the possibility of obtaining social desirability response biases (Burns et al. 2008, Polit & Beck 2011). Finally, generalising the results of this study to all migrant nurses may be an issue, as the target population were primarily hospital nurses. Future studies should be undertaken in different settings to address this issue.

**Conclusion**

The study found a significant relationship between the intrinsic and extrinsic factors affecting job satisfaction and the intention of migrant nurses to leave their jobs. A supportive work environment is critical to ensure that migrant nurses are given the opportunity to participate in the decision-making processes that affect their professional development. The results showed that nurse managers play an important role in migrant nurses’ acculturation to their new environment and affect migrant nurses’ levels of job satisfaction and their intentions to stay.

**Implications for policy, education, practice and research**

Health-care institutions should adopt recruitment policies that provide information on nursing practice environments to potential applicants who wish to migrate to enable them to make more informed choices. This could be particularly important for migrant nurses who wish to work in a particular specialty. Health-care institutions should also adopt a workplace policy that provides an orientation programme to migrant nurses and offers support systems (similar to the ‘buddy’ approaches that have been found to be effective in other countries) (Smith & Ho 2014). Further, nurse managers need be cognisant of the needs of migrant nurses and maximise the knowledge and skills related to their specialties to ensure that migrant nurses feel needed and valued (Wilkes & Bartley 2007). Continuing education programmes should be tailored to address the knowledge and skills that migrant nurses’ need to learn and develop when working in new environments such as the use of new technologies and to decrease migrant nurses’ anxieties and uncertainties. Future qualitative research should be conducted among migrant nurses to further explore the problems that migrant nurses face as a new migrant and determine their views as to any appropriate strategies that could be implemented to assist and support migrant nurses settling into their adopted workplaces.

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**Ethical approval**


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**References**


Migrant nurses, job satisfaction, work environment, intention to leave


