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Original Article

Socio-demographic predictors of structural empowerment among newly qualified nurses: Findings from an international survey

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الملخص

أهداف البحث: دراسة المؤشرات الاجتماعية والديموغرافية للتمكين الهيكلي بين عينة دولية من الممرضات والممرضين المؤهلين حديثا.

طرق البحث: دراسة مقطعية اشترك فيها 367 ممرضا وممرضة مؤهلين حديثا مع ما يصل إلى 18 شهرا من الخبرة السريرية من 15 مستشفى في جميع أنحاء المملكة العربية السعودية والأردن والمملكة المتحدة. وقد تم استخدام اختبار أنوفا وتحليل الانحدار الهرمي في تحليل البيانات.

النتائج: تم العثور على فروق ذات دلالة إحصائية في مجموع درجات التمكين الهيكلي بين المشاركين بناء على أنواع الجامعات التي تخرجوا منها، وما إذا كانوا قد تلقوا تدريبا على التواصل أثناء تعليم التمريض الجامعي، وعدد الأشهر بعد التأهيل كممرضات وممرضين، وأنواع إعدادات الأجنحة السريرية التي كانوا يعملون فيها، والبلد الذي تم توظيفهم منه. علاوة على ذلك، أظهرت النتائج أن البلد وأنواع إعدادات الأجنحة السريرية التي كانوا يعملون فيها وأنواع الجامعات التي تخرج منها المشاركون هي مؤشرات مهمة لإجمالي درجات التمكين الهيكلي للمشاركين.

الاستنتاجات: تؤكد النتائج التأثير الفريد للسياقات الثقافية، ونوع إعداد الجناح السريري ونوع الإعداد التعليمي السابق على مستوى التمكين الهيكلي بين الممرضات المؤهلات حديثًا.

الكلمات المفتاحية: التركيبة السكانية والديموغرافية؛ التمكين الهيكلي؛ التعليم؛ التمريض؛ التواصل؛ مسح

Abstract

Objective: To examine the socio-demographic predictors of structural empowerment among an international sample of newly qualified nurses.

Methods: A cross-sectional survey was conducted on 367 newly qualified nurses with up to 18 months of clinical experience. The nurses were recruited from 15 acute care hospitals across KSA, Jordan, and the UK. Data analysis was conducted using the *t*-test, ANOVA, and hierarchical regression analysis.

Results: Significant differences in the total structural empowerment score were found among participants based on the type of universities where they graduated from ($t = 2.36$, $p < 0.05$), if they have received assertive communication training during undergraduate nursing education ($t = 3.53$, $p < 0.05$), number of months as qualified nurses ($F = 4.79$, $p < 0.05$), type of clinical ward settings they were working in ($F = 5.1$, $p < 0.05$), and the country where they were recruited from ($F = 14.66$) ($p < 0.05$). Furthermore, the country, type of clinical ward settings they were working in, and type of the university the participants graduated from were found to be significant predictors of the participants' total structural empowerment score ($F = 16.6$, $p < 0.05$).

Conclusions: The findings underscore the unique contributions of the cultural contexts, type of clinical ward setting, and type of former educational setting towards the level of structural empowerment among newly qualified nurses.

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Keywords: Communication; Education; Nursing; Socio-demographics; Structural empowerment; Survey

Introduction

Empowerment has been understood as enabling employees to make decisions.[1] Kanter's structured empowerment (SE) theory[2] argues that staff attitudes and behaviours within the organization, rather than their social relationships with others or personality traits, are the key to shaping their levels of empowerment within the organization. There are four components of the SE model: access to opportunity, information, support, and resources.[2] Having access to formal power (i.e. the flexibility and creativity associated with discretionary decision-making processes) and informal power (i.e. the existence of positive and constructive relationships among superiors, peers, and subordinates) are additional tools that enhance the level of SE within the organization. Collectively, these elements of support help to promote organization-wide recognition of the employees' contributions and expertise in the work environment, hence promoting the sense of belonging, worthiness, and value.

Kanter' Theory of SE has been used extensively in the nursing literature. For instance, SE was found to be positively correlated with the nurses' perception of quality of care,[3,4] and negatively correlated with burnout.[5] A study conducted by Barry and his colleagues[6] examined the extent to which one feels included as a team member by other health care professionals (including nurses) in long-term care facilities. The study found that inclusion and teamwork are significant predictors of staff empowerment. Moreover, Travis and Oliver[7] examined the association between the cardiology nurse practitioners' perceived level of SE and their job satisfaction and found a strong correlation between the two variables.

The contributions of socio-demographic characteristics towards shaping the nurses' perceived level of SE have elicited mixed results in the literature. In most of these studies, socio-demographic variables were measured as additional outcomes to the studies' main outcome measures. For example, Ellefsen and Hamilton[8] compared the level of SE using Laschinger's model of empowerment between two Norwegian hospitals and an American hospital. In total, 590 Norwegian and 135 American nurses were surveyed. The study found significant differences between the participants' SE scores in relation to their level of education, managerial level, age, and length of their work experience. The leadership position was a considerable predictor of overall empowerment among nurses in both countries. Furthermore, Yassin[9] surveyed 200 nurses in the US to examine the level of SE among nurses in Magnet and non-Magnet hospitals. She reported that the country of birth (the US vs non-US) and the country where the nurses obtained their highest nursing degree (the US vs non-US) were significant predictors of the nurses' reported level of SE. Other demographic variables (i.e. age, gender, race, and length of experience) were not found to be significant predictors. Also, Ning et al.[10] investigated the relationship among demographic features, SE, and job satisfaction among Chinese nurses using kanter's SE theory. Five hundred ninety eight nurses working in six Chinese hospitals were surveyed. Stepwise multiple regression revealed that a combination of age and work objectives (i.e. younger nurses who loved their profession) were significant predictors of the nurses' perceived level of SE, explaining 12% of the total variance. On the other hand, Faulkner and Laschinger[11] conducted a secondary analysis of data collected from a large study of 500 randomly selected Canadian hospital nurses. A predictive, non-experimental design was utilized to examine the impact of structural and psychological empowerment on the perceived level of respect among acute care nurses. The result suggested that none of the demographic variables included in the study (i.e. age, gender, level of education, work status, type of hospital, or nursing experience) was found to be significant predictors of the nurses' reported level of SE.

Newly qualified nurses are said to be future nursing leaders and must be supported and empowered in their work environment. Usually, newly qualified nurses undergo a period of preceptorship during their transition to practice, when they are supervised by senior peers to help them acquire the necessary skills to practice safely. Several studies have examined the level of SE among newly qualified nurses using kanter's theory of SE. The vast majority of these studies have reported moderate levels of SE.[12–14] Furthermore, many of these studies have examined the links between the newly qualified nurses' level of SE and other social constructs that are mainly measured using the Likert-scale, such as authentic leadership, burnout[15], workplace incivility and intentions to leave.[16] Laschinger et al.[15] (2013) used Structured Equation Modeling to examine the impact of authentic leadership and SE on several social constructs (such as cynicism) among 342 newly qualified nurses with less than two years of experience and 273 experienced nurses with more than two years of experience in Ontario, Canada. The findings suggest that overall, newly qualified nurses reported a higher level of SE compared with more experienced nurses. Little research has investigated the socio-demographic predictors of SE among newly qualified nurses. Investigating the contributions of socio-demographic factors towards empowering newly qualified nurses will provide the nurse managers and policymakers with a platform from which they can develop relevant policies to manage and accommodate these contributions to empower newly qualified nurses.

This study examines the socio-demographic predictors of SE among an international sample of newly qualified nurses.

Materials and Methods

A cross-sectional survey was conducted on a sample of newly qualified nurses from 15 hospitals across three

countries: KSA, Jordan, and the UK. Data was originally collected as a part of a larger project that examined the correlation between perceived SE and the reported level of assertive communication among newly qualified nurses in the selected hospitals. In this paper, we investigated the socio-demographic predictors of SE among the newly qualified nurses recruited across the three countries.

Instrument

The newly qualified nurses' level of SE was measured in this survey using the Condition of Work Effectiveness Questionnaire II (CWEQ II). The CWEQ II was developed by Laschinger, Finegan, Shamian, & Wilk[17] and has been widely used to examine the correlation between the nurses' reported level of SE and other nursing practice parameters.[15,18,19] The tool consisted of 19 semantic scale items and examines the nurses' perceived level of SE in four subscales (domains), which collectively underpin the level of empowerment according to kanter's theory of SE.[17] These domains are opportunity, information, support, and resources. Each of these domains (subscales) has several semantic scale items with a score ranging from 1 to 5, with higher scores representing stronger access to the relevant domain. To calculate the Total Empowerment Score (TES) for each participant, the mean average score for each of the four subscales was calculated. These scores were then summed up to yield the TES. Higher scores indicate a higher level of empowerment (Low: 4–9, Moderate: 10–14, High: 15–20).[12] Evidence of face and content validity for the CWEQ II in the three countries included in this research was reported elsewhere,[13,14,20] with Cronbach alpha measures also reported to range from 0.67 to 0.86, suggesting an acceptable to an very good level of reliability.

The survey included eight demographic items: age, gender, number of months of experience as a qualified nurse, type of clinical ward setting, type of hospital setting, the country where the participating nurses worked, and type of university/college where they graduated from (i.e. public vs private). In addition, the survey included a question on whether the participants had received any training related to assertive communication skills during their undergraduate nursing education. This question was the main outcome measure for the first stage of the research, but we aimed to examine if this had any implications on the level of SE among the newly qualified nurses. The participants were asked to select the type of hospital they worked in from four hospital categories (i.e. governmental, military, teaching, and private). However, their answers had to be recoded into binary variables (i.e. public vs private) to provide a more meaningful comparison among the participants' responses across the three countries. The selection of the demographic variables in our study was mainly based on selecting those variables that are most relevant and specific to the context of newly qualified nurses. Other demographic variables, such as the managerial level, were not included. This was because if newly qualified nurses had been asked to provide their leadership or managerial level, it was very likely that they would have provided one typical answer that conferred to the context of a newly qualified nurse (i.e. junior nurse). The lack of such diversity in their answers would have made this demographic variable redundant. To ensure consistency in administering the survey, the instrument was administered in its original English language form across all research sites. Whilst the English language is the mother tongue in the UK, nurses in KSA and Jordan are expected to communicate in the English language, both during their undergraduate nursing education and in clinical practice after graduation. The instrument was piloted on a sample of 10–12 newly qualified nurses in each research site and no major modifications were needed.

Sample, setting, and data collection

A convenient sampling technique was used. A total of 507 newly qualified nurses from 15 acute care hospitals in the East of England in the UK ($n = 110$), the Eastern Province in KSA ($n = 84$), and the Middle region in Jordan ($n = 280$) were surveyed. All clinical wards in the selected hospitals were eligible to participate in the study. To calculate the required sample size, the G-Power program was used,[21] with eight socio-demographic predictors being tested; the Alpha level of 0.05, a small effect size of 0.1, and a power of 0.95 were applied. The required sample size was 236 nurses. This estimate was still larger than the most commonly used rule of thumb for calculating the minimal sample size required to conduct multiple regression analysis where $N = 104 + K$ (K = number of predictors), which in this case would be 112.[22] To recruit the participants, research assistants (RA) attended each ward in the selected hospitals and handed over the questionnaires to the eligible nurses who were present, with extra copies left for those nurses who were eligible but not present at the time. The RA collected the completed questionnaires from the participants toward the end of the shift, or via a designated letterbox set up for the purpose of collecting the completed questionnaires thereafter. There is no universally accepted definition of a newly-qualified nurse; thus, this study adopted certain stringent inclusion criteria which ensured that those eligible participants are likely to be classified as newly qualified nurses in their home country, but also in the other participating countries in this study. To be eligible to participate, the participants were required to have a BSc degree in nursing and 18 months or less of actual clinical hands-on experience regardless of the date of completing their undergraduate nursing education. The participants were also required to be a graduate of a university/college in the country where they worked and have a full license to practice nursing from the relevant national nursing regulatory body. Data collection across the three countries lasted between June 2015 and June 2017.

Data analysis

The data was analysed using Statistical Package for Social Sciences software (SPSS; Chicago, IL, USA) (version 24). Descriptive and inferential statistical analysis of demographics and major variables was conducted. The close examination of the Shapiro Wilk's test ($p > 0.05$), and the visual inspection of its histograms showed that the Total

Empowerment Score (TES) were approximately normally distributed for the relevant independent variables. Therefore, ANOVA and the *t*-test were used to compare the differences in the means.[23] The dependent variable was a continuous variable (i.e. TES), so the hierarchical regression analysis was used to examine the socio-demographic predictors for the level of SE among the newly qualified nurses.

Results

Descriptive statistics

In total, 367 newly qualified nurses completed the questionnaire (72% response rate). Most of the participants were Jordanians (64%, $n = 233$), female (80%, $n = 292$) and younger than 26 years old (57%, $n = 210$). Almost half of the participants had 12–18 months of post-registration clinical experience (48%, $n = 176$), and 40% of them ($n = 148$) were working in an area classified as critical care setting (i.e. Intensive Care Unit (ICU), High Dependency Unit (HDU), Coronary Care Unit (CCU), Accident &Emergency (A&E)). Further, the majority of the participants were working in either publicly or privately funded hospitals (39.2%, $n = 144$, 31.1%, $n = 114$) respectively, and most of them have graduated from publicly funded educational institutions (66%, $n = 242$), and have received some type of training on speaking up against unsafe practice during their undergraduate nursing education (58%, $n = 217$). The CWEQ II reliability score was very good (Cronbach's Alpha: 0.86), which is consistent with previously reported reliability measures of the scale.[17] The participants' demographic data is presented in Table 1.

Comparing the differences in the Total Empowerment Score (TES) for the socio-demographic variables

The result of the *t*-test for the binary variables indicated that there were significant differences in the TES for nurses who completed their nursing training in publicly funded universities compared with those who completed their training in privately funded universities ($t = 2.36$; $p = 0.019$). Significant differences in the TES were also found between

Table 1: The Participants demographics data.

Demographics		*n*	%
Gender	Male	67	(18.3)
	Female	292	(79.6)
	Missing	8	(2.2)
Age	20–25 years	210	(57.2)
	26–30 years	113	(30.8)
	31–35 years	15	(4.1)
	36–40 years	10	(2.7)
	more than 40 years	11	(3.0)
	Missing	8	(2.2)
Length of experience as a qualified nurse	0–6 months	88	(24.0)
	7–12 months	91	(24.8)
	12–18 months	176	(48.0)
	Missing	12	(3.3)
Type of clinical ward settings	Medical Ward	50	(13.6)
	Surgical Ward	78	(21.3)
	Intensive Care Unit (ICU)	63	(17.2)
	High Dependency Unit (HDU)	4	(1.1)
	Coronary Care Unit (CCU)	35	(9.5)
	Accident and Emergency Unit (A&E)	46	(12.5)
	Other	83	(22.6)
	Missing	8	(2.2)
Type of Hospital setting	Governmental	144	(39.2)
	Private	114	(31.1)
	Military	47	(12.8)
	Teaching Hospital	60	(16.3)
	Missing	2	(0.5)
Type of University/College from which they qualified	Public	242	
	(65.9)		
	Private	54	(14.7)
	Missing	71	(19.3)
If undergraduate nursing education provided training on speaking up	Yes	217	(58)
	No	130	(36)
	Missing	21	(6)
Country	UK	51	(13.9)
	KSA	83	(22.6)
	Jordan	233	(63.5)

Table 2: Mean Total Empowerment Score according to socio-demographic variables.

Demographics		Mean	SD	*t*	*F*
Gender	Male	12.44	2.90	0.222	
	Female	12.519	2.64		
Type of University setting	Public	12.75	2.65	2.359*	
	Private	11.80	2.74		
If assertive communication skills were taught during undergraduate nursing education	Yes	12.92	2.56	3.532**	
	No	11.88	2.81		
Age Group (years)	20–25	12.57	2.67		0.980
	26–30	12.43	2.64		
	31–35	11.51	3.57		
	36–40	13.367	1.48		
	>40	13.15	2.86		
Number of months as qualified nurse (Months)	0–6	13.05	2.46		
	7–12	12.86	2.84		4.789**
	13–18	12.09	2.67		
Type of clinical ward settings	Medical Ward	12.32	2.16		5.100**
	Surgical Ward	12.05	2.80		
	Intensive Therapy Unit (ITU)	12.02	2.46		
	High Dependency Unit (HDU)	15.33	3.57		
	Coronary Care Unit (CCU)	11.97	2.48		
	Accident & Emergency (A&E)	12.15	2.67		
	Others	13.75	2.74		
Type of Hospital settings	Public	12.63	2.76		1.687
	Private	12.25	2.72		
	Military	12.00	2.28		
	Educational	13.00	2.58		
Country	UK	13.66	2.35		14.666**
	KSA	13.34	2.69		
	Jordan	11.95	2.59		

*p < 0.05.
**p < 0.01.

those nurses who received training on assertive communication skills during undergraduate nursing education compared with those who did not ($t = 3.53$; $p < 0.001$). No significant differences, however, were found on the TES between male and female nurses ($t = 0.22$; $p = 0.82$). The results of one-way ANOVA indicated significant differences in the TES among participants based on their length of experience as qualified nurses ($F = 4.79$; $p = 0.009$), the type of their current clinical ward setting ($F = 5.10$; $p < 0.001$), and the country from which they were recruited ($F = 14.66$; $p < 0.001$). Tukey's post hoc analysis of these differences found that those nurses who worked in Medical, Surgical, ICU, CCU, and A&E wards reported lower TES compared with nurses from other clinical ward settings ($p < 0.05$) (The results of the Tukey *post hoc* test are not presented in Table 2). Interestingly, junior nurses with less than seven months of clinical experience were more likely to score higher TES compared with more experienced nurses (i.e. with 7–18 months of experience) ($p < 0.05$). Finally, there was a significant difference in TES between those nurses who work in British and Jordanian hospitals ($p < 0.05$), and those nurses who work in Saudi and Jordanian hospitals ($p < 0.05$), but not between nurses from the British and Saudi hospitals ($p > 0.05$) (Table 2).

Socio-demographic predictors of structural empowerment among newly qualified nurses

The main objective of this research was to examine the socio-demographic predictors of newly qualified nurses' level of SE. Therefore, hierarchical regression analysis was utilised to examine the contributions of eight socio-demographic variables (independent variables) towards predicting the participants' TES (dependent variable). The results of the regression analysis are presented in Table 3 and they revealed that the country from where the nurses were recruited from was a statistically significant predictor for the TES (Model 1) ($F = 25.97$, $p < 0.001$) accounting for almost 9% of the variance. The type of clinical ward setting was then added in Model 2, resulting in a better model fit ($F = 19.53$, $p = 0.001$) accounting for almost 13% of the variance in TES. When the type of university they graduated from was added, the resulting Model 3 predicted almost 15% of the variance of TES ($F = 15.6$, $p = 0.009$). The test of multicollinearity showed that Tolerance values were less than 0.10 and Various Inflation Factor (VIF) values were above 10 for all three variables in the regression, all demonstrating none-multicollinearity assumption[24] (Table 3).

Table 3: Socio-demographic Predictors of Structural Empowerment among Newly Qualified Nurses.

Variables	Predictors	Adjusted R Square	*F*	P	Beta	*t*	*Tolerance*	VIF
Model 1	Country	0.083	25.97	<0.001	−0.3	−5.096**		
Model 2	Country	0.118	19.53	0.001	−0.308	−5.430**		
	Types of clinical ward settings				0.197	3.471**		
Model 3	Country	0.137	15.61	0.009	−0.353	−6.018**	0.904	1.106
	Types of clinical ward settings				0.182	3.223**	0.991	1.009
	Type of University they graduated from				0.155	2.632*	0.901	1.110

*p < 0.05.
**p < 0.01.

Discussion

To our knowledge, this is the first study that examines the link between newly qualified nurses' reported level of SE and selected socio-demographic variables from an international perspective. Our results suggest that some of these variables are significantly associated with the nurses' reported level of SE. For example, *t*-test results showed that those newly qualified nurses who worked in publicly funded hospitals and those who received some form of assertive communication training during their undergraduate nursing education were more likely to report higher levels of SE.

These findings can be understood in the context of existing organizational culture. Particularly, how the work empowerment and organizational commitment[25] and also job security[26] shape the nurses' perceived level of SE. It is noteworthy that most of the Jordanian newly qualified nurses who participated in this study were working in private hospitals.[14] Findings from two previously published Jordanian studies reported that newly qualified nurses who work in privately funded hospitals have lower level of job security compared with those working in publicly funded hospitals[27,28] Given the well-documented relationship between nurses reported level of SE, job turnover, and intent to leave among newly qualified nurses,[29–31] this may have affected, one way or another, the Jordanian nurses' reported level of SE in this study and the overall TES. Moreover, nurses who received assertive communication training were likely to feel more empowered. Previous evidence suggests that when nurses feel empowered, respected, and valued, they are more likely to speak up to promote a supportive patient safety climate.[15] One can presume that such training may have an influence on the newly qualified nurses' assertive communication skills in the actual work setting although the impact and magnitude of this training on the nurses' actual level of SE is unclear as it was not examined in the current study. Other binary demographic variables such as age and gender were not found to be significantly associated with reported levels of SE.

As for the number of months qualified as a registered nurse, the ANOVA test shows that nurses seem to retain a higher level of SE in the initial period of their employment (i.e. 1st six months), but this tends to decline during the subsequent months (i.e. until the 18th month of employment). While newly qualified nurses are generally reported to have a higher level of SE compared with more experienced nurses,[15] it is interesting that less experienced newly qualified nurses felt more empowered than their more experienced peers. Upon starting their employment, newly qualified nurses receive an orientation program and are often enrolled in a period of preceptorship, which is considered a valuable opportunity to access structured support and acquire new skills,[32] hence, the nurses may feel more valued and empowered during this period.

The findings suggest that newly qualified nurses who work in ward settings other than Medical, Surgical, ICU, CCU, A&E are more likely to report higher levels of SE. Given the culturally diverse sample included in this study, it is difficult to anticipate whether other ward settings were likely to render the newly qualified nurses feel more empowered. Two previous studies reported a moderate level of SE among critical care nurses,[33,34] although both studies examined more senior critical care nurses, with formal and informal powers subscales added to calculate the TES, which means their findings cannot be compared with those from the current study.

The results show that British and Saudi newly qualified nurses are more likely to report a higher level of SE compared with the Jordanian ones. While there is no previous empirical evidence to make a meaningful cross-country comparison of SE among other newly qualified nurses, attention must be paid to unexamined cultural and work setting differences that shape the newly qualified nurses' reported level of SE in each country. Thus, the direct impact of these differences in the participants' SE remains unclear. Most of the health care services provided across the three countries are offered by publicly funded organizations, but unlike the British and Saudi newly qualified nurses, the majority of the Jordanian newly qualified nurses who participated in this research were working in privately funded hospitals. Referring to earlier evidence cited in this paper, which links working in privately funded hospitals to lower job security and empowerment,[27,28] this evidence may explain the discrepancies in the reported SE between Jordanian newly qualified nurses from one side, and British and Saudi ones from the other. Further, more recent studies have shown that Jordanian nurses had a comparable moderate level of SE, which had a significant positive correlation with work attitudes towards computer use[35] and the quality of job performance.[36] Even though both studies include more experienced nurses, it can be argued that nurse managers in Jordanian hospitals need to promote nurses' work environment through structurally empowering them.

This research found that the country, types of clinical ward setting, and type of university from which the

participants graduated were significant predictors of their level of SE, with the country as the strongest predictor of all. A previous study that compared the SE among Norwegian and American nurses found that the position of employees on the managerial ladder was the most important demographic predictor for SE, although the nurses had more than nine years of clinical experience.[8] This suggests that as the nurses gain more experience, the influence of sociocultural differences in the nurses' reported level of SE may become less noticeable. The findings, however, do not illuminate on the impact of other factors (demographics or others), which may still contribute to shaping the level of SE among newly qualified nurses across the three countries. More research is needed to examine these factors.

Limitations

Whilst there are similarities in the characteristics of the newly qualified nurses recruited from each country (i.e. all had 18 months or less of clinical experience and a BSc degree), there are, however, markedly different demographic factors that are untested in this study and might have potentially influenced the study findings. For example, the salary gap between the British and Saudi newly qualified nurses from one side and the Jordanian ones on the other side may have been reflected in the perceived job satisfaction among the participants, with subsequent differences on the level of reported SE. Moreover, the Saudi and Jordanian newly qualified nurses came from more diverse demographic backgrounds, unlike the British nurses who were relatively smaller in number and all come from more homogeneous backgrounds (i.e. all were working in publicly funded hospitals and studied in publicly funded universities). This is likely to make them less comparable with the newly qualified nurses from other participating countries. Nonetheless, the findings provide a unique international insight into sociodemographic contributions towards SE among newly qualified nurses, which future research can build upon.

Conclusion and recommendations

The findings from this research suggest that the country, type of clinical work setting, and type of educational institution where the nurses completed their undergraduate nursing education are significant predictors of the newly qualified nurses' level of SE. Given the international dimension of this study and the findings that suggest that the country where the nurses were recruited from was found to be the strongest predictor of their level of SE, it is imperative that future research investigates more thoroughly the unique cultural contributions towards empowering newly qualified nurses. The findings also highlighted fluctuating levels of newly qualified nurses' SE during their initial period of employment, which warrants more research to explore both the underlying causes and the implications for nursing practice.

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Conflict of interest

The authors have no conflict of interest to declare.

Ethical approval

Ethical clearances were secured from six IRB committees (Four from KSA, one from the UK, and one from Jordan). These were:

- Anglia Ruskin University. Faculty of Health, Social Care and Education, Department Research Ethics Panel (DREP) ethical approval: Ref No: SNM/DREP/14-011 (2014)
- University of Dammam Institute Review Board (IRB) Committee. IRB No: IRB-2016-158 (2016)
- Institutional Review Board Office - King Faisal Specialist Hospital. IRB No: EXT0330 (2017)
- Institutional Review Board Office – Al Qateef Central Hospital. IRB No: QCH-SREC0070 (2017)
- Institutional Review Board Office – King Fahd Hufof Hospital. IRB No: H-05-HS-065 (2017)
- Deanship of Academic Research – University of Jordan. IRB No: PF.16.3 (2017)

Authors contributions

MM Research idea conception, Research design, Fund acquisition (in the relevant research sites), Oversaw the overall research conduct, IRB application (in the relevant research sites). Provision of research materials. Data collection, organization, and analysis. Drafting and reviewing the paper manuscript for submission. MD Fund acquisition (in the relevant research sites), IRB application (in the relevant research sites), data collection, and reviewing the paper manuscript for submission. RM IRB application (in the relevant research sites), data collection, and reviewing the paper manuscript for submission. AA IRB application (in the relevant research sites), data collection, drafting, and reviewing manuscript or publication. MA IRB application (in the relevant research sites), data collection, and reviewing the paper manuscript for submission. AJ IRB application (in the relevant research sites), data collection, and reviewing the paper manuscript for submission. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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