Journal of Research in Nursing
2020, Vol. 25(1) 5–19

DOI: 10.1177/1744987119880237
journals.sagepub.com/home/jrn
SAGE

Comparison of managerial competence of Indonesian first-line nurse managers: a two-generational analysis

Joko Gunawan
Postdoctoral Researcher, Faculty of Nursing, Chulalongkorn University, Thailand

Yupin Aungsuroch
Associate Professor, Faculty of Nursing, Chulalongkorn University, Thailand

Mary L Fisher
Clinical Professor, College of Nursing, University of Florida and Professor Emeritus, Visiting Professor and Interim Director of the FINE Center Indiana University School of Nursing, Indianapolis, USA

Anna M McDaniel
Dean and the Linda Harman Aiken Professor, University of Florida College of Nursing, USA

Abstract

Background: Much research provides evidence that four age groups or generations of nurse managers exist, and it is assumed that they work and act differently according to each generation's characteristics and attitudes, which may influence their managerial competence.

Aims: To compare first-line nurse managers' managerial competence according to generational analysis across public hospitals in Indonesia.

Methods: This study employed a cross-sectional survey in 18 public hospitals in Indonesia with 254 first-line nurse managers selected using simple random sampling. The Indonesian First-Line Nurse Managers Managerial Competence Scale (IFLNMMCS) was used to measure managerial competence. Data were analysed using descriptive analyses using means, standard deviations and independent *t*-test.

Results: There was no significant difference in the total score of managerial competence of Generation X and Millennial first-line nurse managers ($p = 0.077$). Of five dimensions of managerial competence, only applying quality care improvement ($p = 0.028$) and financial management ($p = 0.013$) were significantly different, while leadership ($p = 0.142$), facilitating spiritual nursing care ($p = 0.353$), self-management ($p = 0.130$), staffing and professional development ($p = 0.068$) and utilizing informatics ($p = 0.304$) were not significantly different.

Corresponding author:
Yupin Aungsuroch, Borommaratchachonnani Srisataphat, Building, Rama 1 Road, Pathumwan, Bangkok 10330, Thailand.
Email: yaungsuroch@gmail.com

Conclusion: This study serves as a foundation for better human resource management, education and professional development for first-line nurse managers among public hospitals in Indonesia.

Keywords
age, first-line nurse managers, generation, Indonesia, managerial competence

Introduction

It is not surprising that first-line nurse managers (FLNMs) are a critical component of the complex and unpredictable healthcare system today (Chase, 2010). Thus, retaining their competence is essential to better healthcare performance in healthcare organizations (Trossman, 2011). The FLNM, as employed in this study, is a head nurse/nursing unit manager/ward head nurse who is working in the inpatient unit, outpatient unit, intensive care unit, emergency unit and operation room for at least one year in public hospitals (Gunawan et al., 2019). Currently, there are three generations (Baby Boomers, Generation Xers and Millennials) of the FLNMs in hospitals in Indonesia that are likely to encounter managerial and healthcare roles (Gunawan et al., 2018b). Each generation may bring different levels of shared traditions, cultures, experiences and perspectives that lead to differences in their managerial behaviour (Arsenault, 2004; Gursoy et al., 2013; Moore et al., 2016), which remain challenging for every healthcare organization to create a suitable work environment.

Although a discussion of generation in nursing is not a new topic as generational diversity can be found from the top to low level of every health organization (Hahn, 2011), there is a dearth of scientific evidence or research studies that explore generational differences specifically in managerial competence of FLNMs that can be found in both international and national literatures. The local studies in Indonesia that discussed generational analysis in nursing managers only appeared in two studies: Afrizal et al. (2016) found that Generation X nurse managers were more mature and therefore found it easier to understand any processes in improving healthcare quality for society, while Millennial nurse managers were less disciplined and lacked responsibility, but were more creative and dynamic; Parmin (2009) revealed that Baby Boomer nurse managers were hard working, highly responsible, more competent and less absent than younger generations. However, with these two studies it is too hard to draw the conclusion that generational differences significantly exist in FLNMs' managerial competence in hospitals in Indonesia. Besides, literature indicates that the competence of nurse managers is in line with increasing age (Karathanasi et al., 2014). Thus, this issue remains inconclusive.

The aim of this study was to compare differences in managerial competence of FLNMs according to generational analysis, and the goal to value and respect the unique contributions of each individual, since the literature states that addressing multigenerational differences ensures equity and fairness in an organization, improves retention and diminishes peer conflict (Barry, 2014). It is worth emphasizing that this study was not to determine that the Baby Boomer FLNMs are better than the other generations, nor to prove that the Millennials are much more competent than the others.

Managerial competence is the FLNMs' behaviour in applying attitudes, knowledge, skills in accordance with specific managerial functions, tasks and job responsibilities (Gunawan and Aungsuroch, 2017).

Concept of generation

A generation refers to a group of individuals of similar ages or birth years that experienced a noticeable event or incident within a set period of time (Frian and Mulyani, 2018). Literature states that, at the time of writing and collecting data for this study, the current nursing workforce consists of four generations, including the Veterans (Silent generation; born between 1939 and 1945; 73–79 years old), Baby Boomers (Sandwich generation; born between 1946 and 1964; 54–72 years old), Generation X ('Gen X'; born between 1965 and1980; 38–53 years old) and Generation Y ('Gen Y', Millennials; born between 1981 and 2000; 18–37 years old) (Helyer and Lee, 2012; Mensik, 2007; Moore et al., 2016). However, it is also important to note that Generation Z – 'Gen Z' (born after 1995) – are coming but only a few have entered the workforce since they are not yet adults. Gen Z is viewed as the first truly global, and digital generation (Eddy and Parry, 2016).

It is believed that all four generations have unique characteristics, values, traits and goals as their attributes. For instance, the Veterans value discipline, hard work, loyalty to organizations and authority (Keepnews et al., 2010), but they are mostly labelled as conservative and unfamiliar with technology (Zemke et al., 1999), and mostly have retired (Moore et al., 2016). The Baby Boomers are optimistic, ambitious, workaholic and team players, although they also need to take care of their children (Apostolidis and Polifroni, 2006), and make up 32% of the nursing workforce (Moore et al., 2016). The Gen Xers are self-directed, task-oriented, value independence and are more likely to choose education and training as their motivation (Keepnews et al., 2010); they make up 39% of the nursing workforce (Moore et al., 2016). The Millennials are multitasking and confident with technology, and cannot live without the Internet and expect quick feedback (Gunawan, 2016; Mensik, 2007); they make up 26% of the nursing workforce (Moore et al., 2016). These differences often lead to interpersonal conflict without effective management. Thus, acknowledging differences among generations in the nursing workforce is crucial in an organization.

In Indonesia, the current FLNMs comprise the Millennials (33.75%), Gen Xers (25.74%) and Baby Boomers (11.27%) of the total population of Indonesia (Central Bureau of Statistics, 2018). A few Baby Boomers are still working in the hospitals because the retirement age limit is 58 years old. Each generation in Indonesia also has its unique characteristics. The Baby Boomer generation has high loyalty and dedication to their work, but is likely to find it hard to accept critiques (Saragih et al., 2016). Gen X generation is more mature because of the care from the previous generation thus they are very tolerant and flexible (Saragih et al., 2016). In addition, they also understand computers, thereby being innovative. For Millennials, they grow with fast technology such as the Internet, social media, video games, gadgets and smartphones. This generation is characterised as visionary, full of innovative ideas, open communication and appreciates freedom and work–life balance. However, they lack the experience when compared to the older generations (Frian and Mulyani, 2018).

On the other hand, it is also stated that in order to comprise a generation, generations should be conceptualised as being within a particular national context (Eddy and Parry, 2016).

Some research has suggested that generational characteristics are different according to the national context (Egri and Ralston, 2004; Parry, 2014). Therefore, it is worth identifying if there is a difference in managerial competence based on generational analysis of FLNMs within an Indonesian context.

Indonesia

Indonesia, officially the Republic of Indonesia, is the world's largest island country with 17,508 islands geographically located in Southeast Asia, between the Pacific and Indian oceans, with a current population of 260,580,739 with 0.95% population growth per year (Central Intelligence Agency, 2018). Indonesia consists of five major islands, namely Sumatra, Java, Sulawesi, Kalimantan and Irian Jaya Papua. The cultural history of Indonesia was influenced by Mainland China, the Indian subcontinent, Europe, the Middle East and Austronesia that resulted in a multilingual, multicultural and multi-ethnic society (Stone et al., 2016). Therefore, Indonesia is also called the Republic of Multiculturalism, which brings the motto 'strength in diversity' (Central Intelligence Agency, 2018). In fact, Indonesia is highly diverse with 700 local languages, 300 ethnics groups and multiple religions (BBC News, 2018; Central Intelligence Agency, 2018). Although Indonesia is considered as the world's largest Muslim country (by population), it strongly espouses freedom of religion (Gunawan and Aungsuroch, 2015): Buddhism, Hinduism and Christianity are the minority groups. All Indonesians are united by one language, *Bahasa Indonesia*, and *Pancasila* as the national philosophy that is based on belief in God, humanism, unity, democracy and justice (Gunawan and Aungsuroch, 2015).

Hospital and FLNMs in Indonesia

Currently, Indonesia consists of 1572 public hospitals and 1248 private hospitals (Ministry of Health, 2018a). Public hospitals are considered agents for carrying out community health programmes and meant to be the sources of revenue for governments (Hull, 2015; National Research Council, 2013). Unlike private hospitals, profit-based medical institutions, which are less likely considered agents aimed at implementing public health programmes. Thus, this study mainly focuses on public hospitals, as the main providers of health services and open 24 hours a day in Indonesia (National Research Council, 2013).

FLNMs in Indonesia are also called *Kepala Ruangan*. The required minimum educational background to be a FLNM is Diploma III and IV with five years clinical experience, or Bachelor level with three years clinical experience (Ministry of Health, 2017). According to the Indonesian Nursing Act No 38 (President of Indonesia, 2014), Diploma III and IV are considered technical degrees in nursing, and a Bachelor's and Master's degree in nursing are considered professional degrees.

To improve the competence of the FLNMs, public hospitals have been providing various management training opportunities, such as ward management, professional nursing practice model (or called *model praktek keperawatan professional* – MPKP or SP2KP), emergency training, etc (Dr Soetomo Hospital, 2019; Faculty of Nursing Universitas Indonesia, 2014; Indonesian Nurse Managers Association, 2016; Ministry of Health, 2018b; Sitorus, 2005) (Table 1). The management training provided by hospitals, depending on the training needs of the FLNMs, is both from inside the hospitals and from external training providers.

Table 1. Examples of management training for nurse managers in Indonesia.

Training material	Time
Professional Nursing Practice Model training	
by Faculty of Nursing Universitas Indonesia (2014); (Sitorus, 2005)	
Nursing care planning and practice management	3 days
Strategy for activity-based planning	
Internal audit, communication	
Coordination and ward information system	
Primary care nursing, management of nurse staffing	
Professional value, nursing care delivery, reward	
Ward management training	
by Indonesian Nurse Managers Association (2016)	
Patient-centred care, nurse's roles in patient safety	3 days
Role, function and job responsibility of nursing unit manager	
Operational plan of nursing ward	
Nursing process concept	
Nursing diagnosis, intervention, and implementation	
Nurses career ladder, delegation and scheduling	
Nursing care management, nursing clinical indicator	
Monitoring evaluation, work plan program in inpatient ward	
Ward management training	
by Ministry of Health (2018b)	
Management and leadership	3 days
Conflict management and decision making	
Nursing care management, staffing management	
Professional Nursing Practice Model training	
by Dr Soetomo Hospital (2019)	
Leadership in nursing, head ward as manager	4 days
Problem solving and decision making	
Management of nursing care, nursing management function	
Managing staff	

Methods

Design

This was a descriptive quantitative study with a cross-sectional survey to compare differences in managerial competence of FLNMs according to generation at public hospitals in Indonesia.

Sample

The population of the study was FLNMs across public hospitals in Indonesia, which consisted of 31,920 nurse managers during the data collection (Ministry of Health of Indonesia, 2016). The inclusion criteria of the participants were head nurses, nursing unit managers, or ward head nurses working in public hospitals for at least one year in the inpatient and outpatient unit, intensive care unit, emergency unit and operation room. Ward sisters or charge nurses were excluded as they are not considered as FLNMs in Indonesia (National Research Council, 2013).

Participants were selected using multi-stage random sampling, which consisted of three stages: (a) identify the numbers of hospitals of the five big islands in Indonesia, which comprised of 795 hospitals on Java island, 321 hospitals on Sumatra island, 112 hospitals on Kalimantan island, 336 hospitals on Sulawesi island and 32 hospitals on Papua island, the total being 1596 hospitals (Ministry of Health of Indonesia, 2016); (b) divide each type of hospital on each island with equivalent ratio 60:1 to get the equal number of hospital on each island, that resulted in 11 hospitals on Java, six on Sumatra, three on Sulawesi, three on Kalimantan and 2 on Papua. The hospitals on each island were selected using simple random sampling. (c) Once the hospitals were completely selected, the researchers then recruited all participants, with a total of 369 FLNMs from 25 public hospitals in Indonesia.

Measures

For the aim of this study, managerial competence is operationally defined as the FLNMs' behaviours that reflect their knowledge, skill and attitude in applying quality care improvement, utilizing informatics, facilitating spiritual nursing care, performing leadership, managing self, staffing and professional development, and managing finance in public hospitals in Indonesia, measured by the Indonesian First-Line Nurse Managers Managerial Competence Scale (IFLNMMCS) (Gunawan et al., 2019).

The scale consists of 43 items grouped into seven dimensions, namely: (a) *Leadership* dimension (14 items) captures the abilities of FLNMs in influencing and guiding others, providing directions and motivating staff as well as fostering interprofessional collaboration with trust, respect and ethical manner; (b) *Facilitating spiritual nursing care* dimension (seven items) captures two aspects of the role of FLNMs to pay attention to not only the spiritual needs of nursing staff, but also the spiritual needs of patients; relieve their spiritual distress, enhance problem solving skills and explain and demonstrate spiritual nursing care practice to staff and patients; (c) *utilizing informatics* dimension (four items) captures two aspects of competence, which are related to the use of information technology in patient care management and delivery and nursing practice, and related to the integration of technology in nursing documentation; (d) *self-management* dimension (six items) captures the competence of FLNMs for self-evaluation, awareness and being engaged in professional development, being involved in developing policy briefs and being engaged in regular consultation with their supervisor; (e) *staffing and professional development* dimension (four items) captures the ability of FLNMs to manage the number and qualification of nursing staff based on the standard of the hospital, determine and evaluate their needs, match staff competency with patient acuity and set up continuing educational and professional development; (f) *applying quality care improvement* dimension (four items) captures the ability of FLNMs in understanding and measuring care quality, analysing workflow in the unit, participating in setting nursing standards and using evidence-based practice; and (g) *financial management* (four items) captures the budgeting process related to the arrangement and management of budget, communicating financial plans and coordinating with supervisors.

Cronbach's α in all dimensions of managerial competence ranged from 0.71 to 0.90, while item-level content validity index (I-CVI) ranged from 0.81 to 1 in each item, which showed acceptable validity (Davis, 1992). Participants were asked to choose one of five categories on the rating scale (1 none of the time, 2 once in a while, 3 sometimes, 4 quite often, 5 always). A higher mean score represents a better managerial competence of FLNMs in a total score as well as in each dimension of managerial competence. The interpretation of the mean score

consists of three levels: ≤1.99 (low), 2–3.99 (moderate) and 4–5 (high). The scale was available and open access in the Indonesian language (Gunawan et al., 2019).

Data collection

Data were collected from January to May 2018 by the researchers assisted by four research assistants. The research assistants were nurses or health-related professionals with research experience. The job description of the research assistants was: (a) to ensure that data collection in each hospital had been approved, (b) to disseminate the questionnaire and explain the procedures of data collection to participants, and to ask them to read and sign an informed consent form if they agreed to participate, (c) to ensure that all questions have been answered completely. The researchers confirmed that the objectives and procedures of the study had been explained to all research assistants and asked them to sign the contract for data collection.

During data collection there was no constraint from FLNMs to answer each item in the questionnaire. However, we faced unpredictable situations with regards to the administration and research fee: both a memorandum of understanding between the hospitals and the researcher's institution and a high research fee for Doctoral level were required. Therefore, the hospitals with these conditions were noted and skipped.

Data analysis

To describe the findings, we used mean and standard deviation (SD) for descriptive analysis. As the data were normally distributed, independent *t*-test was used to compare differences in managerial competence of Gen X and the Millennials FLNMs. Statistical Package for the Social Sciences (SPSS) program version 22 was used to analyse the data with the level of significance of 0.05 for all statistical analyses.

RESULTS

Characteristics of participants

Of 369 participants from 25 hospitals calculated for this study, only 259 participants from 18 hospitals were able to be recruited (70.1% response rate). Of 259 participants, three participants were removed as detected as outliers during testing for normal data distribution. So, 256 participants were included in this study, and grouped into Millennials ($n = 118$), Gen Xers ($n = 136$) and Baby Boomers ($n = 2$). However, for data analysis, we excluded Baby Boomers, as the number of participants in this group was not comparable, which left 254 FLNMs for further analysis. Table 2 summarises the characteristics of the participants.

The participants consisted of 200 female respondents (78.75%) and 54 male respondents (21.25%). Both generations had an equal number of males (10.62%) but not females, where the number of females in the Millennial group (35.83%) was less than the number in the Gen X group (42.92%). In addition, more participants had a professional degree in nursing (Master's and Bachelor's degree) (71.59%) than a technical degree in nursing (Diploma III and IV degree) (25.59%). Gen X nurse managers (40.95%) had a greater number of professional degrees than Millennial nurse managers (33.46%), but only a slight difference in technical degrees in nursing.

Table 2. Characteristics of first-line nurse managers (FLNMs).

Characteristics	Millennials (18–37 years) *n* (%)	Gen Xers (38–53 years) *n* (%)	Total *n* (%)
Gender			
Male	27 (10.62)	27 (10.62)	54 (21.25)
Female	91 (35.83)	109 (42.92)	200 (78.75)
Total	118 (46.45)	136 (53.54)	254 (100)
Educational background			
Professional nursing degree (Bachelor's and Master's degree)	85 (33.46)	104 (40.95)	189 (71.59)
Technical nursing degree (Diploma III and Diploma IV)	33 (12.99)	32 (12.59)	65 (25.59)
Total	118 (46.45)	136 (53.54)	254 (100)
Management training attendance			
Yes	61 (24.0)	82 (32.28)	143 (56.29)
No	57 (22.45)	54 (21.26)	111 (43.71)
Total	118 (46.45)	136 (53.54)	254 (100)
Working experience as a nurse before becoming an FLNM, mean (SD)	9.89 (3.64)	15.07 (4.79)	12.78 (5.18)
Length of work in current workplace as an FLNM, mean (SD)	3.04 (1.26)	4.88 (1.66)	4.06 (1.79)

The average working experience as a nurse before becoming a FLNM in the Millennial group was 9.89 years (SD = 3.64), which was less than the Gen X group with the average of 15.07 years (SD = 4.79). The average length of work as an FLNM in the current workplace in the Millennial group was 3.04 years (SD = 1.26), lower than the average length of work in the Gen X group that was 4.88 years (SD = 1.66). In addition, 56.29% of total participants had attended management training and 43.71% had never attended management training. The number of participants that attended management training in the Gen X group (32.28%) was higher than those in the Millennial group (24.0%).

Differences in managerial competence of FLNMs

Table 3 shows that the number of the FLNMs from Gen X and the Millennial group did not differ greatly, which reflects that nurses in both generations can be FLNMs without being affected by seniority. The level of managerial competence of FLNMs in both generations was at the moderate level (mean = 3.66, SD = 0.634). However, managerial competence of FLNMs in the Millennial group (mean = 3.72, SD = 0.637) was slightly higher than managerial competence in the Gen X group (mean = 3.61, SD = 0.629). The independent *t*-test showed that there were significant differences in the dimension of applying quality care improvement ($p = 0.028$) and financial management ($p = 0.013$), but the other dimensions – leadership ($p = 0.142$), facilitating spiritual nursing care ($p = 0.353$), self-management ($p = 0.130$), staffing and professional development ($p = 0.068$) and utilizing informatics ($p = 0.304$) – were not statistically different. Overall, there was no significant difference in the total score of managerial competence between Gen X and Millennial FLNMs ($p = 0.077$).

Table 3. Differences in managerial competence of first-line nurse managers (FLNMs) by generational group.

Managerial competence	Millennials (18–37 years) ($n = 118$) Mean ± SD	Gen Xers (38–53 years) ($n = 136$) Mean ± SD	Total ($n = 254$) Mean ± SD	t	p	Level
Leadership	3.73 ± 0.676	3.63 ± 0.708	3.68 ± 0.691	1.076	0.142	Moderate
Facilitating spiritual nursing care	3.75 ± 0.814	3.72 ± 0.693	3.74 ± 0.749	0.377	0.353	Moderate
Self-management	3.73 ± 0.777	3.62 ± 0.747	3.68 ± 0.762	1.126	0.130	Moderate
Staffing and professional development	3.68 ± 1.01	3.49 ± 1.02	3.58 ± 1.02	1.492	0.068	Moderate
Utilizing informatics	3.84 ± 0.745	3.79 ± 0.772	3.82 ± 0.759	0.512	0.304	Moderate
Financial management	3.28 ± 0.774	3.05 ± 0.885	3.16 ± 0.843	2.219	0.013[a]	Moderate
Applying quality care improvement	3.98 ± 0.747	3.79 ± 0.877	3.88 ± 0.823	1.909	0.028[a]	Moderate
Total dimension	3.72 ± 0.637	3.61 ± 0.629	3.66 ± 0.634	1.425	0.077	Moderate

[a]Significant level < 0.05 (one-tailed)
≤1.99 (low), 2–3.99 (moderate) and 4–5 (high)

Leadership. Of the 14 items in the leadership dimension, there were only two activities that had significant differences: advocating for staff in an assertive and confident manner ($p = 0.002$) that Millennial nurse managers (mean = 4.25, SD = 0.84) reported higher than Gen X nurse managers (mean = 3.93, SD = 0.94), and in giving safe and proper legal and ethical care ($p = 0.026$), which was also more highly reported by the Millennial nurse managers (mean = 3.42, SD = 1.34) than the Gen X nurse managers (mean = 3.09, SD = 1.41). Similarities between them were also identified in terms of facilitating staff collaboration, assigning task responsibility, establishing mutual trust, being a role model, leading staff to pray, communicating with other professions, providing positive feedback, dealing with anger, evaluating staff performance, identifying strengths of staff, supporting flexible self-scheduling and shared decision-making ($p = > 0.05$).

Self-management. Only one activity was statistically different, specifically engaging in regular supervision with superordinates ($p = 0.008$), which the Millennial managers (mean = 2.81, SD = 1.29) reported higher than Gen X managers (mean = 2.39, SD = 1.45). The activities relating to the attendance in the self-evaluation programme, certification achievement, the involvement in policy-brief development and in professional associations and development programmes remained the same ($p = > 0.05$).

Staffing and professional development. Of the four activities, only one activity differed in both generations, specifically in determining and evaluating staffing needs ($p = 0.023$), which the Millennials (mean = 3.75, SD = 1.12) reported higher than Gen X managers (mean = 3.46, SD = 1.20). Activities related to the management of the number and qualification of staff based on standard, matching staff competence with patient acuity, determining staff needs and providing more training opportunities for staff had no difference between both generations ($p = > 0.05$).

Utilizing informatics. Two activities were significantly different, namely in the evaluation of the effect of information technology on patient care and delivery system ($p = 0.011$) the Gen X managers (mean = 4.54, SD = 0.64) reported higher than Millennial managers (mean = 4.31, SD = 1.90), and using information to support nursing practice ($p = 0.018$) the Gen X managers (mean = 3.84, SD = 1.08) reported lower than Millennial managers (mean = 4.10, SD = 0.89). Activities related to the integration of technology in nursing documentation and patient management were not statistically different ($p = > 0.05$).

Applying quality care improvement. Two activities were significantly different in both generations, namely in understanding and measuring quality of care ($p = 0.001$), which the Millennials (mean = 3.95, SD = 1.04) reported higher than Gen X managers (mean = 3.69, SD = 1.09), and in participating in the development of nursing standards, which was also reported higher by the Millennial managers (mean = 3.83, SD = 1.02) than Gen X managers (mean = 3.57, SD = 1.22). Activities related to evidence-based practice and analysis of unit workflow remained the same ($p = > 0.05$).

Financial management. Only two activities were significantly different, namely in communicating fiscal management expectations and outcomes ($p = 0.001$), which the Millennials (mean = 2.75, SD = 2.19) reported higher than Gen X managers (mean = 2.19, SD = 1.47), and in participating in the arrangement of the annual budget that was also reported higher by the Millennials (mean = 3.78, SD = 1.10) than Gen X managers (mean = 3.34, SD = 1.46). Financial activities related to cost benefit analysis and coordination with supervisors among departments were not significantly different ($p = > 0.05$).

Facilitating spiritual nursing care. All activities related to the review and identification of the influence of cultural beliefs, values and spirituality on nursing care, the demonstration of spiritual care practice, the attention to spiritual needs of staff, the staff coaching in developing problem solving skills, and facilitation of staff for spiritual care practice and referring process were not statistically different ($p = > 0.05$).

Discussions

The results of this study revealed that there was no significant difference in managerial competence of FLNMs according to age or generation, which provided the contrary results from the previous studies that found differences in managerial behaviours, attitudes and characteristics among the Millennials and Gen Xers (Afrizal et al., 2016; Parmin, 2009).

Our findings have provided new knowledge that the age of the FLNMs or generational effect has nothing to do with managerial competence, which was not in line with Karathanasi et al. (2014) who found that the competence of nurse managers increased in line with age. However, it was probably only in the Indonesian context, which might be different from the other national contexts although the American definitions of generations are stated to be globally applicable (Parry, 2014). However, the findings of this study were in line with Eddy and Parry (2016) who said that generational characteristics are different according to the national context.

Among five dimensions of managerial competence of FLNMs in this study, only financial management and applying quality care improvement were significantly different between

both generations. Surprisingly, the Millennial managers were more likely to rate higher than Gen X managers in all financial activities. This was not in line with the perspective which said that the Millennials are not so competent with finance and lack basic financial knowledge more than previous generations (Landrum, 2017). In fact, our study showed that the Millennial managers had higher self-reported competence in financial communication and annual budget arrangements for the unit. However, the Millennial managers rated lower in coordinating with supervisors, which contradicted the previous study which stated that the Millennials are more likely to have open and frequent communication with supervisors (Society for Human Resource Management, 2009). Additionally, applying quality care improvement, all of the FLNMs rated higher in the use of evidence-based practice in nursing care, which is good news for public hospitals in Indonesia since all FLNMs use valid, reliable and updated research in their practices, and evidence-based practice is an approach for decision making for best practice (Partridge and Hallam, 2006). In addition, the Millennial managers rated higher than Gen X managers in all quality care activities, which was in line with Zenger and Folkman (2015) who said that the Millennials are dedicated to continuous improvement.

According to the descriptive results, the managerial competence of FLNMs in both generations was at a moderate level, which reflects the need for top managers to continuously improve the competence of FLNMs in public hospitals in Indonesia. The peak of the mean score of managerial competence was in the Millennial managers, which was higher than Gen X managers in all dimensions, although Gen X managers had a greater number of professional degrees, management training attendance, longer experience as a nurse and had worked in their current workplace longer than the Millennial managers. These results provided the assumption that the educational background, management training and working experience may not be correlated with the managerial competence of FLNMs in the Indonesian context. However, this speculation can only be answered in future studies, especially the educational-level issue, as the literature states that the competence of FLNMs increased in line with a higher educational degree (Karathanasi et al., 2014; Lorber and Savič, 2011; Yang et al., 2014). Thus, both the identification of the relationships of these factors with managerial competence and the exploration of why Gen X nurse managers rated lower in their competence than Millennial nurse managers are needed, as indicated in this study. Besides, the availability of resources and facilities, human resource management, technology, role requirements, seniority and policy could be considered as the other factors that may affect the managerial competence of FLNMs (Eddy and Parry, 2016; Gunawan et al., 2018a, 2018b). Thus, in order to improve the competence of FLNMs, a comprehensive approach is required.

On the other hand, one can assume that since, in both generations in this study, the majority of the FLNMs were female and so were more likely to bring the same communal qualities that are characterised with collaborative, participative and transformative behaviour (Eagly and Karau, 2002), which might also affect their managerial competence in the same way in both generations. Thus, it could be there is no significant difference between them. However, the correlation between gender and managerial competence in both generations also needs further investigation.

Overall, with the insignificant results of the independent *t*-test within the realms of managerial competence, this study provides positive news for Indonesia, indicating that the Millennial FLNMs are capable of stepping into key leadership roles and are ready to take over the positions of previous generations, even though they are considered as having

less experience. In addition, the characteristics and personality traits of the Millennials – motivated, optimistic, cooperative, multitasking (Bell, 2013) – might be the reason why they rated higher in their competence than Gen Xers in this study.

The strength of this study was the comparison of differences in managerial competence among the Millennial and Gen X FLNMs in public hospitals in Indonesia. But, without a stratified sampling based on the number of samples, this study might not represent each generation as a whole. Thus, future research with stratified samples is needed. It is also interesting to note that every human being is unique with his or her own personality, characteristics and experiences, which need further analysis in order to generalise the findings. In addition, factors related to managerial competence between Gen X and Millennial FLNMs warrant further investigation.

On the other hand, the self-report assessment in this study has its limitation, which is that the participants may have answered the questions in a way that could be socially accepted by their hospitals. Therefore, the assessment of the FLNMs should be done by the top managers or their staff to test or extend the findings from different perspectives.

Conclusion

Our study seeks to compare differences in managerial competence of the FLNMs based on age or generational analysis. The major findings showed that there was no significant difference between the Gen X and the Millennial FLNMs in the total score of managerial competence. But there were statistically significant differences in the dimensions of financial management and applying quality care improvement, which indicated that the younger FLNMs among public hospitals in Indonesia are ready to step into the upper leadership roles and take over the positions of the Baby Boomers. With the range of groups within the organizational workforce, this study serves as a basis for human resource management in the public hospitals in Indonesia with regards to the leadership and development, education and training for FLNMs.

Key points for policy, practice and/or research

- Addressing multigenerational differences among FLNMs with regards to their competence is very important to ensure equity and fairness in a hospital as well as to create a stable environment.
- This study provides a new insight that the managerial competence of FLNMs was not significantly different according to age groups or generational analysis. Thus, they should be treated the same, particularly for leadership, continuous professional development and education.
- The Millennial FLNMs tend to have higher scores in the dimensions of managerial competence than the Gen X FLNMs, especially in financial management and applying quality care improvement, according to their self-report. However, further studies are needed to explore both generations with regards to their competence associated with generational characteristics, attitudes, personalities and beliefs, as well as influencing factors of their managerial competence.

Acknowledgements

The authors acknowledge the Indonesian first-line nurse managers who have participated in this study, Research Assistants (Ms Gracea Petricka, Mr Abd Rizal, Mrs Putu Irma Pratiwi, Mr Tommy Juliandi Sutoyo, Mr Edi Zuhardi, Mrs Noerpiyanti, Mr Aswin Hardi Saragih, Mrs Indah, Mrs Yeni Puspitasari, Mrs Ersida and Mr Haerul Imam), Research Associates (Dr Ferry Efendi, Dr Muhammad Hadi, Dr Desmawati, Colonel Didin Syaefudin, Lieutenant Laurentia Dewi, Mr Fauzan Saputra, Mr Kusuma Wijaya Ridi Putra and Mrs Ethie Hastuti) for valuable contributions.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Ethics

The study obtained ethical approval from the Medical and Health Research Ethics Committee (MHREC) of the Faculty of Medicine, Gadjah Mada University,17 May 2017 (No. KE/FK/0565/EC/2017). Written informed consent was obtained from all of the participants. Although we got permission from each hospital not all hospitals, however, agreed to put the name of the hospital into the publication. Therefore, we do not publish the hospitals' names in this study.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study is a part of dissertation project entitled 'Factors influencing managerial competence of first-line nurse managers in public hospitals in Indonesia', which was granted and supported by the 90th Anniversary of Chulalongkorn University Scholarship (Ratchadaphiseksomphot Endowment Fund) and the 100th Anniversary Chulalongkorn University Fund for Doctoral Scholarship, as well as supported by Graduate School of Chulalongkorn University and Faculty of Nursing, Chulalongkorn University, Bangkok, Thailand.

Contribution

J.G. designed the study, searched literature, collected and analysed the data, and prepared the manuscript. Y.A. designed the study, analysed the data, drafted and edited the manuscript. M.F. analysed the data, reviewed and edited the manuscript. A.M. analysed, reviewed and revised the manuscript. All authors approved the final version for submission.

ORCID iD

Joko Gunawan https://orcid.org/0000-0001-6694-8679

References

Afrizal A, Pratiwi ASK and Yulian V (2016) *Analyses of Function of Head Nurses According to the Perspectives of Staff Nurses in Surakarta Hospital*. Surakarta, Indonesia: Universitas Muhammadiyah Surakarta.

Apostolidis BM and Polifroni EC (2006) Nurse work satisfaction and generational differences. *Journal of Nursing Administration* 36(11): 506–509.

Arsenault PM (2004) Validating generational differences: A legitimate diversity and leadership issue. *Leadership & Organization Development Journal* 25(2): 124–141.

Barry M (2014) Creating a practice environment that supports multigenerational workforce collaboration. *The American Nurse* 46(1): 13–13.

BBC News (2018) *Indonesia country profile*. Available at: https://www.bbc.com/news/world-asia-pacific-14921238 (accessed 9 June 2019).

Bell JA (2013) Five generations in the nursing workforce: Implications for nursing professional development. *Journal for Nurses in Professional Development* 29(4): 205–210.

Central Bureau of Statistics (2018) *Thematic Gender Statistic: Profile of Millennial generation in Indonesia*. Jakarta: The Ministry of Women Empowerment and Child Protection.

Central Intelligence Agency (2018) *The world factbook of Indonesia population*. Available at: https://www.indexmundi.com/indonesia/population.html (accessed 9 June 2019).

Chase (2010) *Nurse Manager Competencies*. Iowa, IA: University of Iowa.

Davis LL (1992) Instrument review: Getting the most from a panel of experts. *Applied Nursing Research* 5(4): 194–197.

Dr Soetomo Hospital (2019) *Nursing ward management and MPKP*. Available at: http://rsudrsoetomo.jatimprov.go.id/pelatihan-manajemen-bangsal-keperawatan/ (accessed 9 June 2019).

Eagly AH and Karau SJ (2002) Role congruity theory of prejudice toward female leaders. *Psychological Review* 109(3): 573.

Eddy SN and Parry E (2016) Multigenerational research in human resource management. In: Buckley MR, Halbesleben JRB and Wheeler AR (eds) *Research in Personnel and Human Resources Management*. Bingley: Emerald Group Publishing Limited, pp. 1–41.

Egri CP and Ralston DA (2004) Generation cohorts and personal values: A comparison of China and the United States. *Organization Science* 15(2): 210–220.

Faculty of Nursing Universitas Indonesia (2014) *Professional nursing practice model training*. Available at: http://nursing.ui.ac.id/pelatihan-model-praktik-keperawatan-profesional-jiwa/ (accessed 9 June 2019).

Frian A and Mulyani F (2018) Millenials employee turnover intention in Indonesia. *Innovative Issues and Approaches in Social Sciences* 11(3): 90–111.

Gunawan J (2016) Generation Y: What do I need in the workplace? *Belitung Nursing Journal* 2(3): 44–46.

Gunawan J and Aungsuroch Y (2015) Indonesia health care system and Asean economic community. *International Journal of Research in Medical Sciences* 3(7): 1571–1577.

Gunawan J and Aungsuroch Y (2017) Managerial competence of first-line nurse managers: A concept analysis. *International Journal of Nursing Practice* 23(1): e12502.

Gunawan J, Aungsuroch Y and Fisher ML (2018a) Factors contributing to managerial competence of first-line nurse managers: A systematic review. *International Journal of Nursing Practice* 24(1): e12611.

Gunawan J, Aungsuroch Y, Fisher ML, et al. (2019) Development and psychometric properties of managerial competence scale for first-line nurse managers in Indonesia. *Sage Open Nursing* 5(1–12): 2377960819831468.

Gunawan J, Aungsuroch Y, Nazliansyah, et al. (2018b) The lived experiences of becoming first-line nurse managers: A phenomenological study. *Iranian Journal of Nursing and Midwifery Research* 23(1): 66.

Gursoy D, Chi CGQ and Karadag E (2013) Generational differences in work values and attitudes among frontline and service contact employees. *International Journal of Hospitality Management* 3: 40–48.

Hahn JA (2011) Managing multiple generations: Scenarios from the workplace. *Nursing Forum* 46(3): 119–127.

Helyer R and Lee D (2012) The twenty-first century multiple generation workforce: Overlaps and differences but also challenges and benefits. *Education + Training* 54(7): 565–578.

Hull TH (2015) Reducing maternal and neonatal mortality in Indonesia: Saving lives, saving the future. *Bulletin of Indonesian Economic Studies* 51(1): 154–155.

Indonesian Nurse Managers Association (2016) *Nursing ward management in H. Adam Malik hospital*. Jakarta: Indonesian Nurse Managers Association. Available at: http://rsham.co.id/wp-content/uploads/2016/02/Manajemen-Ruang-Rawat-_agustus_-2016.pdf (accessed 9 June 2019).

Karathanasi K, Prezerakos P, Maria M, et al. (2014) Operating room nurse manager competencies in Greek hospitals. *Clinical Nursing Studies* 2(2): 16–29.

Keepnews DM, Brewer CS, Kovner CT, et al. (2010) Generational differences among newly licensed registered nurses. *Nursing Outlook* 58(3): 155–163.

Landrum S (2017) *Millennials, technology and the challenge of financial literacy*. Available at: https://www.forbes.com/sites/sarahlandrum/2017/08/04/millennials-technology-and-the-challenge-of-financial-literacy/ - 25fe720428e6 (accessed 9 June 2019).

Lorber M and Savič BS (2011) Perceptions of managerial competencies, style, and characteristics among professionals in nursing. *Croatian Medical Journal* 52(2): 198–204.

Mensik JS (2007) A view on generational differences from a generation X leader. *Journal of Nursing Administration* 37(11): 483–484.

Ministry of Health (2017) *Regulation of the Ministry of Health of the Republic of Indonesia no 40 year 2017 about development of professional career ladder of clinical nurses*. Jakarta: Ministry of Health, the Republic of Indonesia.

Ministry of Health (2018a) *Hospital online report*. Available at: http://sirs.yankes.kemkes.go.id/rsonline/report/ (accessed 7 June 2019).

Ministry of Health (2018b) *Nursing ward management training: Forming a strong nursing team*. Available at: http://yankes.kemkes.go.id/read-pelatihan-manajemen-bangsal-membentuk-tim-keperawatan-yang-tangguh-6002.html (accessed 8 June 2019).

Ministry of Health of Indonesia. (2016) *Hospital data online*. Available at: http://sirs.buk.depkes.go.id/rsonline/report/report_by_catrs.php (accessed 8 June 2019).

Moore JM, Everly M and Bauer R (2016) Multigenerational challenges: Team-building for positive clinical workforce outcomes. *Online Journal of Issues in Nursing* 21(2): 3.

National Research Council (2013) *Reducing Maternal and Neonatal Mortality in Indonesia: Saving lives, saving the future*. Washington, DC: National Academies Press.

Parmin (2009) *The relationship of the implementation of managerial function of head nurses with staff nurses motivation in inpatient wards of RSUP Undata Palu*. Jakarta: Universitas Indonesia.

Parry E (2014) *Generational Diversity at Work*. Abingdon: Routledge, pp. 222–247.

Partridge H and Hallam G (2006) Educating the millennial generation for evidence based information practice. *Library Hi Tech* 24(3): 400–419.

President of Indonesia (2014) *Nursing act no 38 year 2014*. Jakarta: President of the Republic of Indonesia.

Saragih E, Widodo A and Prasetyo B (2016) Big city millenial workers in Indonesia and factors affecting their commitment to the organisation. *Pertanika Journal of Social Science and Humanities* 24: 47–58.

Sitorus R (2005) *Professional Nursing Practice Model in Hospital*. Jakarta: Penerbit Buku Kedokteran EGC.

Society for Human Resource Management (2009) *The multigenerational workforce: Opportunity for competitive success*. Virginia: Society for Human Resource Management. ?Available at: http://www.shrm.org/Research/Articles/Articles/Documents/09-0027_RQ_March_2009_FINAL_noad.pdf (accessed 9 June 2019).

Stone J, Dennis RM, Rizova PS, et al. (2016) *The Wiley Blackwell Encyclopedia of Race, Ethnicity, and Nationalism*. Hoboken, NJ: John Wiley & Sons.

Trossman S (2011) Complex role in complex times: Programs take aim at helping nurse managers lead nurses. *American Nurse* 43(4): 1–6.

Yang L, Cui D, Zhu X, et al. (2014) Perspectives from nurse managers on informatics competencies. *Scientific World Journal* 2014: 391714.

Zemke R, Raines C and Filipczak B (1999) *Generations at work: Managing the clash of Veterans, Boomers, Xers, and Nexters in your workplace*. New York, NY: Amacom.

Zenger J and Folkman J (2015) What younger managers should know about how they're perceived. Available at: https://hbr.org/2015/09/what-younger-managers-should-know-about-how-theyre-perceived (accessed 10 June 2019).

Joko Gunawan, BNS, PhD is Postdoctoral Researcher at the Faculty of Nursing, Chulalongkorn University, Bangkok, Thailand.

Yupin Aungsuroch, PhD, RN is Associate Professor at the Faculty of Nursing Chulalongkorn University. Currently she is the Director of PhD in Nursing Science Program (International Program) at the Faculty of Nursing Chulalongkorn University, and the Director of International Networking and Collaborative Research supported by ASEAN Studies Center of Chulalongkorn University, Bangkok Thailand.

Mary L. Fisher, PhD, RN is Clinical Professor at the College of Nursing University of Florida, Gainesville Florida and Visiting Professor and Interim Director of the FINE Center Indiana University School of Nursing, Indianapolis, USA.

Anna M. McDaniel, PhD RN FAAN is the Dean and the Linda Harman Aiken Professor at the College of Nursing University of Florida, Gainesville, USA.