Enablers and Barriers of Continuous Professional Development (CPD) Participation among Nurses and Midwives

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Abstract

Continuous Professional Development (CPD) is crucial in healthcare professions that facilitate and embrace life-long learning, ensuring knowledge and skills to be constantly progressive and responsive to dynamic health care demand. This study investigate the enablers and barriers of Continuing Professional Development participations among nurses and midwives in Brunei Darussalam. A cross-sectional study using self-administered online survey through Qualtrics software were conducted on all eligible nurses and midwives (N=604) working at all public hospitals and Health Centers in Brunei Darussalam. Availability of CPD sessions with attractive topics (90.6%); support from the nurse/midwife managers (87.9%) and ease of CPD registration (83.9%) was highly identified as enablers. Female and younger participants reported significantly higher support to undertake CPD. Barriers to CPD participation included last minutes changes to work schedules (89.4%); understaffing (83.1%); role as carer at home (78%); shift work (74.8%) and CPD affect time outside work (70%). The study results can be used for developing strategies and framework to improve CPD participation. Specific CPD hours was required for maintenance of registration as nurse, hence future study may consider the relationship of CPD and competency skills.

Keywords: *Continuous Professional Development, Nursing, Brunei, Midwifery.*

Introduction

Continuous Professional Development (CPD) is an important aspect of nursing and midwifery in its capacity to facilitate nurses and midwives to keep abreast with the current evidence-based practice. CPD is vital not merely for its contributions in the preservation, advancement and expansion of nursing knowledge and practices, but also the growth of personal and professional qualities essential to the nursing and midwifery professions[1]. There are several means to CPD such as self-initiatives by reading current research papers, informal sharing session with colleagues through case conferences and discussion, and formal session as seminars, workshops,

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and conferences[2]. The dynamic, rapidly challenging and changing developments in global nursing and midwifery require nurses and midwives to embrace CPD to enhance life-long learning. CPD, in addition to expertise and practice, is essential for sustaining practical competencies in every working career as it ensures quality and safety of service provision to the public[3]. CPD is a lifelong learning process in which employees continuously develop information, skills, and experience beyond what they already know[3]. In Brunei, nurses and midwives are obliged to comply with a minimum number of CPD points annually[4]. Nurses and midwives will use CPD to preserve, strengthen, and extend their skills and expertise, as well as build the personal and professional values they will need during their careers[4].

CPD within a nursing and midwifery context is the process by which ongoing activities and reflections were engaged that eventually result in complete control over an individual's personal learning and development[1]. It is also strongly associated with competency practice where; competency can be maintained and assessed through CPD, respectively. Nurses and midwives are an integral part of client care and play an essential role in improving the hospital's quality of care[5]. Globally, CPD structures have progressed to include a wide variety of training opportunities that represent the demands of today's healthcare practitioners employed in various and integrated healthcare institutions. In several nations, CPD has shifted from single-professional instructional designs and formal moralistic requisites to academic frameworks that are creative, diverse and student centered[2]. Others considered, CPD is an overlooked aspect of the health education spectrum. In which, organizational bodies are responsible in developing CPD in the form of accreditation standards points accumulated, even considering CPD as part of the mandatory obligations towards professional competencies. For example, in the United Kingdom, nurses and midwives are required to demonstrate their CPD in order to renew their registration. The requirement of 35 hours of CPD over a three-year cycle, as well as a link to the ethical code of nurses and midwives[6].

Methods

Objectives and significance

The objectives of this study were to examine the enablers and barriers which affect the participation in continuous professional development (CPD) among nurses and midwives in Brunei.

Research Design, setting and sample

This is a cross-sectional study conducted on nurses and midwives working in all four public hospitals and fourteen health centers in Brunei to examine enablers and barriers to continuous professional development (CPD). The inclusion/exclusion criteria are illustrated in Table 1.

Table 1. Inclusion/exclusion criteria

Inclusion Criteria	Exclusion Criteria
Registered nurses and midwives	Intern staff nurses
Working on shift-duty and office hours	Working in private clinics

Power calculation was employed to achieve precision (power) of 5% (d=0.05) on a population size of 2,300 nurses and midwives in Brunei Darussalam with an expected proportion of 50% at 95% confidence level. A total sample size of at least 500 is required for the study.

Study Instrument

The questionnaire consists of two sections and a total of 14 items. Section A is on sociodemographic data (e.g., gender, age, marital status, education level, years in service and at the current workplace, place of work,

and designations). Section B assesses the knowledge of CPD using True, False, or Do not Know responses. The perception of the barriers for CPD and competency skills were explored on a 4- Likert points.

Data collection

The gatekeepers (nurse managers from each study settings) distributed the survey link to all eligible respondents to the study. Participants were given two weeks to complete the online survey. Reminder was sent twice to increase response rate: after one week and three days before the end of the second week.

Data Analysis

Data were analyzed using R Studio version 4.0.2. Descriptive statistics were computed for sociodemographic data and prevalence of enablers and barriers. Chi-Square test was performed to determine the association of sociodemographic data to the prevalence of enablers and barriers to CPD.

Ethics

Ethics clearance and approval was obtained from the joint committee of the Pengiran Anak Puteri Rashidah Sa'adatul Bolkiah (PAPRSB) Institute of Health Sciences Research Ethics Committee (IHSREC) and the Medical and Health Research and Ethics Committee (MHREC) of the Ministry of Health Research (ERN: UBD/PAPRSBIHSREC/2020/36).

Results

Sample characteristics

604 nurses and midwives from hospital and community settings participated in this study. Over 90% of the recruited were female and aged more than 30 years old. Three quarters of the respondents held a diploma or below. Over 80% had been working as a nurse for more than 10 years. 65% worked in shift duty, while 35% worked office hours. About 20% were assistant nurses and midwives. About 10% held managerial posts. Staff nurses made up the majority of the respondents (69%)

Table 1: List of Enablers and Barriers on promoting Continuous Professional Development among nurses and midwives (Response = "Agree" only) (n=604)

			Gender		
Enablers	**n**	**%**	**Female(n=548) n (%)**	**Male (n=56) n (%)**	**P-value a**
The CPD session available and topics are attractive.	547	90.6	500 (91.2)	47 (84.0)	0.075
I feel supported by my manager to undertake CPD.	531	87.9	488 (89.1)	43 (76.8)	0.023
The CPD registration system is easy.	507	83.9	460 (84.0)	47 (84.0)	0.950
I have adequate accessibility to my CPD sessions.	474	78.5	434 (79.2)	40 (71.4)	0.178
My facilities are adequate to provide CPD.	468	77.5	425 (77.6)	43 (76.8)	0.097
Barriers					
Last-minute changes to work schedules make it hard to participate in CPD.	540	89.4	487 (88.9)	53 (94.6)	0.181
Understaffing means it is too hard for me to participate in CPD.	491	81.3	446 (81.4)	45 (80.4)	0.097
My role as a carer at home (for a child or another family member) makes it difficult for me to participate in CPD.	471	78.0	431 (78.7)	40 (9.3)	0.214

Cont... **Table 1: List of Enablers and Barriers on promoting Continuous Professional Development among nurses and midwives (Response = "Agree" only) (n=604)**

Shift work makes it hard for me to attend CPD.	452	74.8	411 (75.0)	41 (73.2)	0.087
CPD affects my time outside of my nursing/ midwifery work.	423	70.0	381 (69.5)	42 (75.0)	0.394
I am too busy to attend CPD.	181	30.0	152 (27.7)	29 (51.8)	<0.001
It will be difficult to implement competency assessment skills for CPD.	172	28.5	146 (26.6)	26 (46.4)	0.008
I am not confident because I am not ready to be assessed on my competency skills.	128	21.2	115 (21.0)	13 (23.2)	0.007
My ward environment does not foster a culture of CPD learning.	115	19.0	97 (17.7)	18 (32.1)	0.002
I have a lack of motivation to attend CPD sessions.	108	17.9	90 (16.4)	18 (32.1)	0.003
I have difficulty translating CPD knowledge into practice.	87	14.4	72 (13.1)	15 (26.8)	0.006
I encounter language barrier in CPD sessions.	81	13.4	71 (13.0)	10 (17.9)	0.004
I do not participate in CPD because my employer does not pay for it.	73	12.1	55 (10.0)	18 (32.1)	<0.001
My CPD sessions are too expensive.	70	11.6	57(10.4)	13 (23.2)	0.005
I learned nothing new from CPD.	28	4.6	21 (3.83)	7 (12.5)	0.003

[a] Chi-square test for independence

Table 1 illustrates based on the 'agreed' respond by participants on both enablers and barrier factors. (30%) of nurses and midwives perceived that too busy caused them unable to join CPD. The positive factor (90.6%) affirmed that CPD session was attractive topics, (87.9%) support from nurse/midwife managers and (83.9%) felt ease of CPD registration. Barrier factors that inhibit CPD participation include, (81.3%) lack of staff and (78.0%) family-work role conflict. The least inhibiting factors were due to cost and learning no new knowledge from the session. Notable factors that also addressed include (28.5%) difficulty to implement competency assessment skills for CPD and (14.4%) attended having difficulty translating acquired CPD knowledge into practice.

In terms of gender, Female participants (89.1%) had significantly higher support from manager to undergo CPD compared to male participants (76.8%) (p=0.023). Male participants reported significantly higher issue with being too busy (51.8%), difficulty to implement CPD assessment (46.4%), not confident to be assessed on competency skills (23.2%), ward environment do not foster CPD (32.1%), lack of motivation to attend CPD sessions (32.1%), difficulty translating CPD knowledge to practice (26.8%), language barrier (17.9%), employer did not pay for it (32.1%), and CPD session too expensive (23.2%)

Table 2: List of enablers and barriers affecting age in CPD engagement.

	Age				
Enablers	**20 to 29 (n = 37) N (%)**	**30 to 39 (n = 258) N (%)**	**40 to 49 (n = 93) N (%)**	**More than 50 (n = 216) N (%)**	**P-value a**
The CPD session available and topics are attractive.	37 (100)	244 (94.6)	80 (86.0)	186 (86.1)	<0.001
I feel supported by my manager to undertake CPD.	35 (94.6)	243 (94.2)	77 (82.8)	176 (81.5)	<0.001
The CPD registration system is easy.	28 (75.7)	228 (88.4)	66 (71.0)	185 (85.7)	0.003
I have adequate accessibility to my CPD sessions.	25 (67.6)	221 (85.7)	66 (71.0)	162 (75.0)	0.002
My facilities are adequate to provide CPD.	25 (67.6)	223 (86.4)	63 (67.7)	157 (72.7)	<0.001
Barriers					
Last-minute changes to work schedules make it hard to participate in CPD.	31 (6.1)	248 (96.1)	79 (85.0)	182 (84.3)	8.125
Understaffing means it is too hard for me to participate in CPD.	31 (83.8)	234 (90.7)	66 (71.0)	160 (74.1)	7.627
My role as a carer at home (for a child or another family member) makes it difficult for me to participate in CPD.	22 (59.5)	238 (92.3)	60 (64.5)	151 (69.9)	4.212
Shift work makes it hard for me to attend CPD.	31 (83.8)	230 (89.2)	55 (59.1)	136 (63.0)	1.376
CPD affects my time outside of my nursing/ midwifery work.	26 (70.3)	241 (83.0)	55 (59.1)	128 (59.3)	3.265
I am too busy to attend CPD.	13 (35.1)	52 (20.2)	32 (34.4)	84 (38.9)	8.806
It will be difficult to implement competency assessment skills for CPD.	13 (35.1)	44 (17.1)	31 (33.3)	84 (38.9)	2.574
I am not confident because I am not ready to be assessed on my competency skills.	10 (27.0)	37 (14.3)	22 (23.7)	59 (27.3)	0.005
My ward environment does not foster a culture of CPD learning.	7 (18.9)	33 (12.8)	19 (20.4)	56 (25.9)	0.004
I have a lack of motivation to attend CPD sessions.	10 (27.0)	30 (11.6)	22 (23.7)	46 (21.3)	0.005

Cont... **Table 2: List of enablers and barriers affecting age in CPD engagement.**

I have difficulty translating CPD knowledge into practice.	6 (16.2)	24 (9.3)	16 (17.2)	41 (19.0)	0.020
I encounter language barrier in CPD sessions.	2 (5.4)	23 (8.9)	16 (17.2)	40 (18.5)	0.006
I do not participate in CPD because my employer does not pay for it.	2 (5.4)	25 (9.5)	14 (15.1)	32 (14.8)	0.095
My CPD sessions are too expensive.	1 (2.7)	16 (6.2)	16 (17.2)	37 (17.1)	<0.001
I learned nothing new from CPD.	0 (0.00)	8 (3.1)	8 (8.6)	12 (5.6)	0.075

[a]Chi-square test for independence

In terms of age status, younger participants generally had significantly find CPD sessions attractive and supported by their managers to undertake CPD. They also noted that their ward environment does not foster a culture of CPD learning (25.9% vs. 20.4%) and (12.8% vs. 18.9%) (p=0.004).

Table 3: List of enablers and barriers affecting marital status

	Marital Status		
Enablers	**Married (n=506) n (%)**	**Single (n=98) n (%)**	**P-value a**
The CPD session available and topics are attractive.	462 (91.3)	85 (86.7)	0.157
I feel supported by my manager to undertake CPD.	443 (87.6)	88 (89.8)	0.767
The CPD registration system is easy.	426 (84.2)	81 (82.7)	0.830
I have adequate accessibility to my CPD sessions.	402 (79.5)	72 (73.5)	0.188
My facilities are adequate to provide CPD.	396 (78.3)	72 (73.4)	0.052
Barriers			
Last-minute changes to work schedules make it hard to participate in CPD.	451 (89.1)	89 (90.8)	0.162
Understaffing means it is too hard for me to participate in CPD.	420 (83.0)	71 (72.5)	0.006
My role as a carer at home (for a child or another family member) makes it difficult for me to participate in CPD.	407 (80.4)	64 (65.3)	<0.001
Shift work makes it hard for me to attend CPD.	385 (76.1)	67 (68.4)	0.026
CPD affects my time outside of my nursing/midwifery work.	364 (71.9)	59 (60.2)	0.020
I am too busy to attend CPD.	144 (28.5)	37 (37.8)	0.066
It will be difficult to implement competency assessment skills for CPD.	142 (28.1)	30 (30.6)	0.368

Cont... **Table 3: List of enablers and barriers affecting marital status**

I am not confident because I am not ready to be assessed on my competency skills.	101 (20.0)	27 (27.6)	0.017
My ward environment does not foster a culture of CPD learning.	90 (17.8)	25 (25.5)	0.014
I have a lack of motivation to attend CPD sessions.	81 (16.0)	27 (27.6)	0.006
I have difficulty translating CPD knowledge into practice.	68 (13.4)	19 (19.4)	0.125
I encounter language barrier in CPD sessions.	72 (14.2)	9 (9.2)	0.032
I do not participate in CPD because my employer does not pay for it.	63 (12.5)	10 (10.2)	0.063
My CPD sessions are too expensive.	64 (12.7)	6 (6.1)	0.136
I learned nothing new from CPD.	22 (4.4)	6 (6.1)	0.444

[a] Chi-square test for independence

In marital status, single and married staffs had notably (65.3%) and (80%) ($p<0.001$) respectively more challenges in role of a career at home. In education levels barriers mentioned (61%) in certificate level showed more problems related to shift work, followed by (70.3%) from diploma levels, (80.8%) respondents from post basic level and (63.8%) by bachelor and master levels. About 31.3% participants from bachelor and master levels issued feel not confident to be assessed on competency, then (17.3%) from post basic level, followed by (35.5%) diploma level and certificate level (10.9%). No significant finding notified respondents according to their years of services.

Table 4 List of enablers and barriers to the respondent's settings in CPD.

	Settings		
Enablers	**Hospital Based (n=276) N (%)**	**Health Care Based (n=328) N (%)**	**P-value a**
The CPD session available and topics are attractive.	255 (92.4)	292 (89.0)	0.159
I feel supported by my manager to undertake CPD.	6 (2.2)	22 (6.7)	0.008
The CPD registration system is easy.	242 (87.7)	265 (80.8)	0.056
I have adequate accessibility to my CPD sessions.	242 (87.7)	232 (70.7	4.441
My facilities are adequate to provide CPD.	231 (83.7)	237 (72.3)	<0.001

Cont... **Table 4 List of enablers and barriers to the respondent's settings in CPD.**

Barriers			
Last-minute changes to work schedules make it hard to participate in CPD.	252 (91.3)	288 (87.8)	0.164
Understaffing means it is too hard for me to participate in CPD.	237 (85.9)	254 (77.4)	0.013
My role as a carer at home (for a child or another family member) makes it difficult for me to participate in CPD.	230 (83.3)	241 (73.5)	0.004
Shift work makes it hard for me to attend CPD.	218 (79.0)	234 (71.3)	0.045
CPD affects my time outside of my nursing/midwifery work.	213 (77.2)	210 (64.0)	<0.001
I am too busy to attend CPD.	47 (17.0)	134 (40.9)	1.929
It will be difficult to implement competency assessment skills for CPD.	48 (17.4)	124 (37.8)	2.187
I am not confident because I am not ready to be assessed on my competency skills.	35 (12.7)	93 (28.4)	9.991
My ward environment does not foster a culture of CPD learning.	40 (14.5)	75 (22.9)	0.019
I have a lack of motivation to attend CPD sessions.	27 (9.8)	81 (24.7)	1.894
I have difficulty translating CPD knowledge into practice.	28 (10.1)	59 (18.0)	0.006
I encounter language barrier in CPD sessions.	37 (13.4)	44 (13.4)	0.551
I do not participate in CPD because my employer does not pay for it.	32 (11.6)	41 (12.5)	0.523
My CPD sessions are too expensive.	26 (9.4)	44 (13.4)	0.279
I learned nothing new from CPD.	6 (2.2)	22 (6.7)	0.008

a Chi-square test for independence

Table 5 determine participants' hospital settings. Nurses in hospital based (77.2%) considered that CPD affected their time after work more than nurses in health care (64.0%) ($p<0.001$). In contrast, staffs in hospital area (83.7%) motivated that facilities provided are adequate more than staffs in clinical area (72.3%) ($p<0.001$). In addition, nurses working office hours (27.6%) perceived that their ward environment does not foster a culture of CPD learning more than nurses working shift (14.4%) ($p<0.001$). They also perceived that CPD sessions were too costly compared to shift nurses (17.8% vs. 8.2%) ($p<0.001$).

Discussions

Our study revealed that the most common barriers for CPD were last minute changes to work scheduled, staffs shortage and shiftwork. Despite Brunei is considerably a small country, there was still substantial numbers of nurses and midwives who reported understaffing. Worldwide, understaffing has been repeatedly echoed as the common barriers which impede nurses and midwives to engage with CPD. This is similar to a study conducted in Kenya that nurses reported staff shortage (n=199, 85.8%) and lack of time due to heavy workload (n=179, 77.2%) (Priscah et al., 2017). Another supported study in Nigeria where 163 nurses (N=220) also mentioned workload[7]. Further study in Australia involved sixteen midwives via focus group discussion where experienced of persistent understaffing also highlighted[8].

This study also affirmed that another barrier for nurses and midwives to engage in CPD is due to too busy. Related study in Kenya where 179 nurses (N=232) reported on lack of time due to heavy workload mentioned[9]. Other study in Africa where 42.7% nurses (N=129) reported time is the most important barrier[10].

Another highlighted barriers by participants where ward environment does not foster a culture of CPD learning and lack of confident due to unreadiness to be assessed on the competency skills. A study in India where 6 nurses (N=60) also addressed on lack of confidence in learning[11]. However, study on nurses in South Africa concluded that they were treated unsupportively which causing them to feel demotivated[3].

In this study nurses and midwives encountered language barriers and learned nothing new in CPD sessions also another hindrance. Similarly, study in Nigeria where 185 nurses (N=584) also mentioned on learned nothing new on CPD[12]. In addition, study in India where 10 nurses (N=60) noted on language barrier also added[11].

In this study, it was found that significant barriers related to gender. Similar study conducted in Kenya where 177 nurses (N=232) recruited are female in comparison to 55 male nurses[13]. Other supported study in Africa where out of 108 nurses (N=129) were found to be female also confirmed[10]. In addition, there are significant association between CPD and age. These findings indicated the nurses and midwives productive age actively in CPD at 30-39 years and over 50 years old. Yet, there are still no specific indications on what are the exact reason that lead them being not actively participate in CPD. In which future qualitative study could beneficial to identify the true outcome. Supported study in South Africa where 61 nurses (N=129) were age more than 50 years old compared to 29 nurses aged at 30 - 39 years old[10].

Lastly, there are significant association between CPD and those nurses and midwives who worked in hospital settings and health care based. These finding suggested nurses and midwives in both settings need to acknowledge their role and manage their time effectively. Though a study in Philippines did not involve health care setting, yet the finding reported that there is significant barrier associated in private setting compared to public hospital ($p<0.001$) are commented[14].

Limitations

The study results should be used within the limitation of questionnaire which is inclined to reporting and recall bias. Though the minimum sample was, however, this does not reflect for the whole nurses which included private hospitals.

Recommendation and Conclusions

Further study recommended on the involvement of assessment skill in CPD mainly to enrich the nurses and midwives' confident level in their daily task. Future qualitative research on nurses and midwives perceptions in CPD engagement may value. Other recommendation address maybe to provide "study day" which enable them to be well prepared before delivering CPD and to acknowledge their performance by means token of appreciation such as provide them with "certificates" in additions to the CPD points that they earned. Encouragement from managerial site may potentially influence their sub-ordinates by creating equal and structured plans in scheduling their activities towards CPD. Please refer to figure 2 and 3 indicating on mind-mapping CPD framework and proposal revised in related

to promote CPD engagement in the future.

Conflict of Interest: None

References

1. Hussain Alshahrani H. Evaluating the Impact of Continuing Professional Development within Intensive Care Unit Nurses in the UK. *Am J Nurs Res*. 2020;8(2):227-244. http://pubs.sciepub.com/ajnr/8/2/12.
2. Sherman LT, Chappell KB. Global perspective on continuing professional development. *Asia Pacific Sch*. 2018;3(2):1-5.
3. Suliman Z, Kruger W, Pienaar JA. Continuing professional development (CPD): a necessary component in the workplace or not? *J Med Lab Sci Technol South Africa*. 2020:41-45.
4. Nursing Board of Brunei (NBB). Nursing Training and Development Centre CPD Document. 2018. Continuous professional development: Guideline for nurses and midwives.
5. Muhadi M, Wahyuni T. Participation Level of Continuing Professional Development (CPD) Program Nurses RSI Surabaya. *J Keperawatan*. 2021;12(1):68-75.
6. Casagrande J. Nursing and Midwifery Council revalidation. *Nurs Stand (Royal Coll Nurs (Great Britain) 1987)*. 2016;30(49):64-65.
7. Ingwu JA, Efekalam J, Nwaneri A, et al. Perception towards mandatory continuing professional development programme among nurses working at University of Nigeria Teaching Hospital, Enugu-Nigeria. *Int J Africa Nurs Sci*. 2019;11:100169.
8. Jones B, Michael R, Butt J, Hauck Y. Tanzanian midwives' perception of their professional role and implications for continuing professional development education. *Nurse Educ Pract*. 2016;17:116-122.
9. Mosol P, Kei R, Obwoge RO, Ng'eno A. Challenges facing nurses while participating in continuing professional development: A case of Western Kenya. 2017.
10. Frances S, Annatjie P. Professional Nurses' Perception of Compulsory Continuing Professional Development. Nur Primary Care. 2019; 3 (6): 1-4. *Found Prof Dev Pretoria, South Africa*.
11. Selvaraj K, Jayaseelan J. A Study To Assess The Impeding Factors For Nurses ' Participation In A Study To Assess The Impeding Factors For Nurses ' Participation In Continuous Professional Development Activities. 2019;(July):1-9.
12. Awoke MS, Baptiste DL, Davidson P, Roberts A, Dennison-Himmelfarb C. A quasi-experimental study examining a nurse-led education program to improve knowledge, self-care, and reduce readmission for individuals with heart failure. *Contemp Nurse*. 2019;55(1):15-26. doi:10.1080/10376178.2019.1568198
13. MOSOL PJ. Factors Influencing Continuing Professional Development for Nurses in Western Kenya. *Kenyan J Nurs Midwifery*. 2018;3(1):9-22.
14. Palma JAFS, Oducado RMF, Palma BS. Continuing professional development: Awareness, attitude, facilitators, and barriers among nurses in the Philippines. *Nurs Pract Today*. 2020.