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Clinical decision-making skills among nurses working in selected hospitals: Comparison between government and private sector

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Cover Page Footnote

Thanks to the nurses who had participated in the study

Original article

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Abstract

Introduction: Clinical decision making (CDM) is a vital component in the professional nursing care. The sound decisions made by the nurses have direct influence on patient's speedy recovery. **Objectives:** The objectives of the study were to assess the level of scores of CDM skills among nurses, assess the scores of CDM skills related to subscales and item analysis, compare the scores of CDM between government and private sector nurses and associate the level of CDM skills with selected demographic variables. **Method:** A comparative study was conducted among 94 nurses working at government and private sector hospitals. A convenience sampling technique was solicited. CDM skills were measured using Jenkin's Clinical Decision Making in Nursing Scale (CDMNS). **Results:** The findings revealed overall mean, standard deviation, and mean percentage of CDM to be 110.56, 39.85, and 55.3 respectively. It was found that 57.2 was the maximum mean percentage obtained by nurses in the third subscale of evaluation and re-evaluation of consequences. Item analysis revealed item 26 ranked first and first item ranked 40. Nurses working in government sector were reported to have more CDM than nurses in private sector (t = 4.936, p<.01). Regarding association, all variables were significant at p<.01 level except gender, qualification, and competence to function.

Key words: Clinical decision making, clinical decision making in nursing scale, government sector, private sector, nurses

Introduction

Situation awareness and nurses' insight on decision-making requires to be researched. If a nurse believes that her education or experience has not equipped her to arrive at a solution, then, is she wise enough to approach her senior on time needs to be explored. Nurse's Clinical Decision Making (CDM) greatly depends on their education and/or clinical experience (Moore, 1996).

Nurses remain with the patient round the clock. They are usually the first person to observe any change in a patient and her interpretation largely furthers clinical decision making. Moreover, nurses' decision in patient care influences patient's health. It is applicable to all nurses irrespective of the organization or country they work (O'Neill, Dluhy & Chin, 2005). However, when dealing with enormous volumes of swiftly changing clinical information, fortified with organizational imperatives, nurses require guide and support in decision-making processes (Degan, 2012).

Nineteen million nurses around the world make clinical decisions for patients everyday (World Health Organization, 2011). These patients have trust on the nurses' decision-making ability. Many studies have highlighted that nurses made different judgment and decisions based on similar information (Thompson, 2008; Thompson & Yang, 2009; Anders Ericsson, 2007). However, evidence so far does not point to cultivation of a unique strategy in spite of different decision-making abilities. New technology is challenging all professions especially health team that encompass nurses and nurse teachers (Ebright, Patterson, Chacko & Render, 2003).

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CDM is a significant component in professional nursing care in an uncertain health care environment demanding competent decision makers. Greater nurse participation in decision-making has resulted in better patient outcomes. However, participation depends on several organizational factors (Krairiksh & Anthony, 2001). Hence, the present study focusses on nurses CDM skills assessment in both government and private sector.

Materials and methods

A descriptive, comparative study of non-experimental type was adopted for the present study. The setting utilized was two government hospitals: Dr Sushila Tiwari Hospital and Female Base Hospital; and one private hospital: Sai Hospital, Haldwani, Nainital. The population of the study was all nurses working in hospital. The sampling technique used was convenience-sampling technique. All the nurses available during data collection were included. There were 94 nurses, of which 49 were from government sector and 45 from private sector. The tools used for data collection comprized of two sections. Section A- Background information was gathered using demographic proforma and Section B-Jenkin's Clinical Decision Making in Nursing Scale (CDMNS). It is a standardized tool containing 40 items. The scores for an individual item is one to five. There are four subscales: a) search for alternative options, b) canvassing of objectives and values, c) evaluation and re-evaluation of consequences; and d) search for information and unbiased assimilation of new information (Jenkins, 2001).

Ethical clearance was obtained from Institutional Ethics Committee. Data collection proceeded after taking permission from the hospital and after obtaining informed consent from participants. The tools were distributed to the nurses who were available during data collection and were informed to complete the self-reports and return. The study was conducted in September 2014. Data was analyzed with the help of Statistical Package for Social Sciences (SPSS) version 20.

Results

Table 1 shows the characteristics of the respondents. Majority 41.5% of the respondents belonged to the age group 26-30; 66% were females; 83% of nurses were qualified with GNM; 63.8% were staff nurses; 52.1% were from government and 47.9% were from private sector. Majority, 55.3% had 1-5 years of experience; 100% reported to be confident in their job; 95.7% reported to be competent in performing the responsibilities; 83% agreed that they get support from personnel and 67% reported that they involved entire team during decision making process.

Table 1:
Frequency and Percentage Distribution of Respondents According to Their Demographic Characteristics

N=94

Variable	Frequency	Percentage
Age Group		
21 - 25 Years	37	39.4
26 - 30 Years	39	41.5
31 - 35 Years	13	13.8
Above 35 Years	5	5.3
Gender		
Male	32	34.0
Female	62	66.0
Qualification		
GNM	78	83.0
BSc	14	14.9
PBBSc	2	2.1
Position		
Staff Nurse	60	63.8
Ward In-charge	15	16.0
Head Nurse	15	16.0
Nursing Supervisor	4	4.3
Sector		
Government	49	52.1
Private	45	47.9
Years of Experience		
1 - 5 Years	52	55.3
6 - 10 Years	32	34.0
Above 10 Years	10	10.6
Confidence in Job		
Yes	94	100
No	0	0.0
Competent to Function the Responsibilities		
Yes	90	95.7
No	4	4.3
Support from Personnel		
Yes	78	83.0
No	16	17.0
Involve with Entire Team		
Yes	63	67.0
No	31	33.0

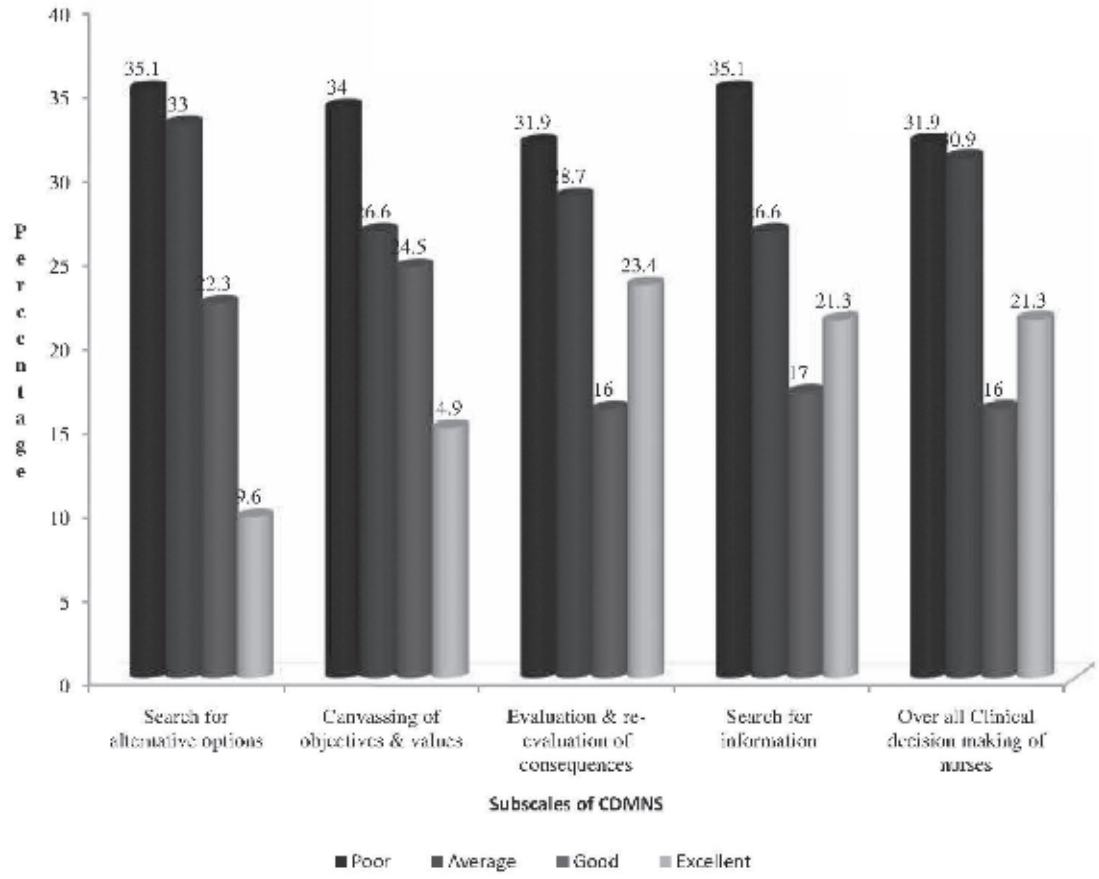

Figure 1: Percentage distribution on level of CDMNS based on subscales

Figure 1 data demonstrates the percentage distribution in the level of each subscale of CDMNS. The self-reports of majority of the nurses revealed that they had poor level in all the four subscales with overall 31.9%. However, 30.9% of nurses in over-all scores displayed to have average level in the CDM.

Table 2:

Descriptive Statistics of Subscales and Overall CDMNS

N=94

Subscales of CDMNS	Mean	SD	Mean %	Range
Search for alternative options	26.38	9.75	52.8	12 - 48
Canvassing of objectives and values	27.48	10.32	55.0	10 - 45
Evaluation and re-evaluation of consequences	28.59	10.72	57.2	12 - 48
Search for information and unbiased assimilation of new information	28.12	11.12	56.2	11 - 47
Overall CDMNS	110.56	39.85	55.3	55 - 184

Table 2 describes the mean percentage of four subscales ranged from 52.8 to 56.2. And overall CDMNS mean percentage was 55.3.

Further, item analysis of 40 items was computed as an extension of second objective of the study. The findings revealed item 26 (when examining consequences of options, I might choose, I am aware of the positive outcomes for my client) was ranked first and item 1 (if clinical decision is vital and there is time, I conduct a thorough search for alternatives) ranked 40.

Table 3:
Comparison of CDMNS between Government and Private Sector

(N=94)

CDMN Scale	Sector	Mean	SD	Mean %	Mean Difference	't' value
Search for alternative options	Government	30.67	9.772	61.3	8.218	4.479**
	Private	22.45	7.987	44.9		
Canvassing of objectives and values	Government	22.92	10.159	64.9	9.526	5.020**
	Private	32.44	8.203	45.8		
Evaluation and re-evaluation of consequences	Government	33.20	10.700	66.4	8.853	4.373**
	Private	24.35	8.906	48.7		
Search for information and unbiased assimilation of new information	Government	33.18	11.302	66.4	9.708	4.679**
	Private	23.47	8.747	46.9		
Over all CDMNS	Government	129.49	40.150	64.7	36.305	4.936**
	Private	93.18	30.893	46.6		

*** Significant at .01 level*

Table 4:

Association between CDMNS and Demographic Variables

N=94

Variables	CDMN Scale				*p* - value
	Poor	Average	Good	Excellent	
Age Group					
21 - 25 Years	4 (10.8)	7 (18.9)	8 (21.6)	18 (48.6)	.000**
26 - 30 Years	18 (46.2)	12 (30.8)	7 (17.9)	2 (5.1)	
31 - 35 Years	5 (38.5)	8 (61.5)	0 (0.0)	0 (0.0)	
Above 35 Years	3 (60.0)	2 (40.0)	0 (0.0)	0 (0.0)	
Gender					
Male	11 (34.4)	10 (31.3)	6 (18.8)	5 (15.6)	.785^{NS}
Female	19 (30.6)	19 (30.6)	9 (14.5)	15 (24.2)	
Qualification					
GNM	24 (30.8)	24 (30.8)	12 (15.4)	18 (23.1)	.979^{NS}
BSc	5 (35.7)	4 (28.6)	3 (21.4)	2 (14.3)	
PBBSc	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)	
Position					
Staff Nurse	8 (13.3)	17 (28.3)	15 (25.0)	20 (33.3)	.000**
Ward In-charge	7 (46.7)	8 (53.3)	0 (0.0)	0 (0.0)	
Head Nurse	12 (80.0)	3 (20.0)	0 (0.0)	0 (0.0)	
Nursing Supervisor	3 (75.0)	1 (25.0)	0 (0.0)	0 (0.0)	

Variables	CDMN Scale				*p* - value
	Poor	Average	Good	Excellent	
Sector					
Government	22 (44.9)	20 (40.8)	2 (4.1)	5 (10.2)	.000**
Private	8 (17.8)	9 (20.0)	13 (28.9)	15 (33.3)	
Level of Experience					
1 - 5 Years	3 (5.8)	15 (28.8)	14 (26.9)	20 (38.5)	.000**
6 - 10 Years	21 (65.6)	10 (31.3)	1 (3.1)	0 (0.0)	
Above 10 Years	6 (60.0)	4 (40.0)	0 (0.0)	0 (0.0)	
Confidence in Job					
Yes	30 (31.9)	29 (30.9)	15 (16.0)	20 (21.3)	--
No	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Competent to Function the Responsibilities					
Yes	30 (33.3)	28 (31.1)	15 (16.7)	17 (18.9)	.054^{NS}
No	0 (0.0)	1 (25.0)	0 (0.0)	3 (75.0)	
Support from Personnel					
Yes	29 (37.2)	29 (37.2)	11 (14.1)	9 (11.5)	.000**
No	1 (6.3)	0 (0.0)	4 (25.0)	11 (68.8)	
Involve with Entire Team					
Yes	30 (47.6)	27 (42.9)	5 (7.9)	1 (1.6)	.000**
No	0 (0.0)	2 (6.5)	10 (32.3)	19 (61.3)	

*** Association is significant at .01 level*

NS – Not significant

Table 3 depicts the comparison been made between government and private sectors by independent 't' test and it showed nurses working in government sector had better CDM skills than nurses working in private sector with the calculated '*t*' value of 4.936 significant at $p<.01$ level. In addition, the findings with each subscale were similar.

Table 4 indicates the association with the level of decision making skills among nurses and demographic variables. It was found significant with all variables at $p<.01$ level except gender, qualification and competent to function the responsibilities. The findings state that CDM is significantly higher in the age group above 35 years; in the head nurse position; in the years of experience above 10. It also reveals nurses who sought support from personnel and involved entire team for decision making had significantly higher CDM skills.

Discussion

The overall mean and mean percentage for CDMNS was 110.56 and 55.3, respectively. It was observed that the highest mean and mean percentage was obtained in the subscale of evaluation and re-evaluation of consequences 28.59 and 57.2; and lowest was obtained in the subscale of search for alternatives options 26.53 and 52.8, respectively. The present study findings were consistent with a study done at Mexico revealed the mean score of CDM skills was 110 (Laura, Quezada & Yarisbeth, 2016). At the same time, there are studies that demonstrated findings with higher and lower mean scores when compared to the present findings. A study

was conducted at United States by Stinson (2013), showed a mean score of 152.61 and highest mean 39.19 in the subscale was on canvassing of objectives and values and lowest mean 36.85 in evaluation and re-evaluation of consequences, which is in contrast to present study results.

However, the mean scores obtained in the present study remain less in all aspects. Another study performed at United States by Krumwiede (2010) also shows the mean score of accelerated students were 152.64 and basic nursing students were 147.99 which reflect the scores are on the higher side. A cross sectional study displayed the mean score 102.3 that is less than the present study findings. The highest mean belonged to canvassing of objectives and values and lowest mean to search for information and unbiased assimilation of new information (Arzani, Lotfi & Abedi, 2016). Yet, another study depicted that highest scores obtained from senior nursing students were corresponding to search for alternatives options and lowest to canvassing of objectives and values (Ramazani & Shaban, 2010). The aforementioned studies have shown discrepancies in the mean scores and the scores of the subscales also which may be due to various factors such as different area of work and work experience of nurses. However, all studies including the present study reveals that a satisfactory level of CDM was not found. The findings suggest that basic and continuing nursing education programs are required to focus on helping the nurses to attain proficient level of CDM that would enhance efficient plan of patient care.

The current study proceeded to compare between government and private sector of nurses that revealed government nurses had better CDM skills than private sector. Perhaps, the situations could be more complex where government nurses exercise CDM very frequently than private sector nurses. Although better, the mean percentage obtained among government nurses were 65% only. It has to be thought that the findings may not be accurate as the measurement of CDM skills among nurses were measured by CDMNS which was completed by the nurses based on the knowledge they possess on the same and not measured based on their practice. Similar comparative studies do not exist to compare the findings. But it is apparent from the present findings that the level of CDM is average and suggests enveloping strategies to build up these skills among nurses without doubt. However, an additional research is required. Also, a study demonstrated that some dissonance between perceived abilities and the actual abilities reported in clinical reasoning literature and frequently observed in practice measured by CDMNS (Byrnes & West, 2000). Thus, it is recommended that when CDMNS is measured by the practice of nurses, it paves way for precision of data.

The association of CDMNS scores and demographic variables showed that it was found to be significant with all variables at $p<0.01$ level except gender, qualification and competent to function the responsibilities. Similar findings were elicited related to experience of nurses and support from personnel. In a study conducted at Greece by Smith (2005) projected that new graduate nurses had lower CDM skills scores compared to those with at least two years of working experience. Another study corroborates a preference for information from colleagues to support clinical decisions. It was considered most useful and accessible to obtain information from people in the clinical setting (Andrea, Sandra & Leanne, 2011).

Conclusion

The vital significance of CDM for nurses has been emphasized in several literatures and the need had been highlighted in research studies as well. However, the present study findings demonstrated only average level of CDM skills. The findings suggest that nurses should be specially trained for making sound clinical decisions utilizing various methodologies. This can be achieved by providing practice drills from the student period.

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