

ORIGINAL ARTICLE

Effect of efficacy on nursing performance in Indira Gandhi Memorial Hospital, Maldives

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Abstract

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This cross sectional descriptive study was conducted in the government tertiary care hospital in Male', Maldives. The main objective of this study was to ascertain the relationship between independent variables and nursing performance and to identify the factors which may predict nursing performance. Data was collected using self-administered questionnaire and total of 238 registered nurses participated in this study. Descriptive statistics, Pearson correlation coefficient, and stepwise multiple regression were used for data analysis.

The results show that overall task performance as perceived by nurses were at higher level and overall contextual performance were at moderate level. There were correlations between nursing performance and self-efficacy ($p<.01$), collective efficacy ($p<.01$). The optimism and competency significantly predicted nurse job performance ($p<.01$), as did commitment ($p<.05$), Social support ($p<.01$) and job autonomy and decision making ($p<.05$).

It is recommended that hospital administration and nursing administration to formulate interventions to improve nurses' optimism and competency, commitment, social support, job autonomy and decision making.

Keywords: Contextual performance, Collective efficacy, Maldives, Self-efficacy, Task performance.

ผลของการรับรู้ความสามารถตนเองที่มีต่อผล การปฏิบัติงานของพยาบาล ในโรงพยาบาลอินธิราคานธี ประเทศไทยมีลีฟล์

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การให้บริการด้านการดูแลสุขภาพที่มีคุณภาพ เป็นสิ่งที่องค์กรด้านการดูแลสุขภาพต้องให้ความสำคัญ ซึ่งพยาบาลเป็นวิชาชีพกลุ่มใหญ่ที่สุดในการให้บริการด้านสุขภาพ ดังนั้นคุณภาพของการดูแลส่วนใหญ่ขึ้นอยู่ กับประสิทธิภาพการทำงานของพยาบาล ที่มีผลโดยตรงต่อสุขภาวะผู้ป่วย และส่งผลโดยตรงหรือโดยอ้อมต่อ ประสิทธิภาพขององค์กร การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างตัวแปรอิสระ และประสิทธิภาพ การทำงาน และปัจจัยที่ส่งผลต่อการทำงานของพยาบาล เก็บข้อมูลจากพยาบาล จำนวน 238 คน โดยใช้ แบบสอบถามที่สร้างขึ้น วิเคราะห์ข้อมูลโดยใช้ สถิติเชิงพรรณนา ค่าสัมประสิทธิ์สหสัมพันธ์เพียร์สัน และ การวิเคราะห์การถดถอยพหุคุณ ผลการศึกษาพบว่าผลการดำเนินงานโดยรวมตามการรับรู้ของพยาบาลอยู่ในระดับ ที่สูงและผลการดำเนินงานตามบริบทโดยรวมอยู่ในระดับปานกลาง มีความสัมพันธ์ระหว่างประสิทธิภาพการ ทำงานของพยาบาลและการรับรู้ความสามารถของตนเอง ($p < .01$) และประสิทธิภาพโดยรวม ($p < .01$) ปัจจัยที่มี ผลต่อการปฏิบัติงานของพยาบาล ได้แก่ การมองโลกในแง่ดี ($p < 0.01$) ความมุ่งมั่น ($p < 0.05$) การสนับสนุน ทางสังคม ($p < 0.01$) และความมีอิสระในการทำงานและการตัดสินใจ ($p < 0.05$)。

ผลการศึกษานี้ชี้ให้เห็นว่า ปัจจัยต่าง ๆ ที่มีผลต่อการบริหารโรงพยาบาลและการบริหารการพยาบาล ควรมี การกำหนดรูปแบบการสนับสนุนอย่างเป็นรูปธรรม

คำสำคัญ: ผลการดำเนินงานตามบริบท ประสิทธิภาพโดยรวม มีลีฟล์ การรับรู้ความสามารถของ ประสิทธิภาพการทำงาน

Introduction

Healthcare systems worldwide are undergoing significant structural changes in order to meet the scientific advancement demand of healthcare needs. Similarly remarkable changes are bought to the healthcare financing that limits service delivery, infrastructure and workforce to achieve the goal of healthcare system by providing cost effective and quality health care.¹ Change in health service delivery system makes the patient and quality of health care service as center focus for any health care organization.² Nevertheless in this challenging health care environment, nurses are the single largest serving group of health services.³ Nurses often work in high challenging environment and are faced with every day challenges, such as excessive workload, poor working environment, high staff turnover and shortage of staff.^{4, 5}

One of the highest promise and priority of the Maldivian government is to provide accessible and cost effective health care service to its citizens.⁶ However, Indira Gandhi Memorial hospital (IGMH) being the only government tertiary care hospital in the country is facing high level of challenges due to lack of health human resources,⁷ medical equipment, supplies and heavy workload.² Furthermore, the quality of care mainly depends on nursing performance as it directly affects the well-being of patient and outcome and contributes either directly or indirectly to the organizational performance.³ Therefore it's crucial to identify the factors influencing on nursing performance.

Social cognitive theory and its central variable, self-efficacy theory is one of the commonly used model to evaluate performance.^{8, 9, 10} Bandura's self-efficacy belief has extended conception of human agency to collective efficacy,^{11, 12} and stated that

collective efficacy is not only sum of efficacy belief of individual but rather it is the group level effort.¹³ Numerous studies used self-efficacy belief focus to task specific performance.¹⁴ Moreover it is evident from literature that nurses work both in task and contextual performance.^{15, 16} There are several studies that focuses on self-efficacy and nurse job performance. However there is limited number of studies that have focused on both self-efficacy and collective efficacy on nursing performance.¹⁷ In the literature review conducted, it is not identified that such a study is done in Maldives. Overall in the Maldives there are few published studies on nursing performance. Hence in order to better understand nurses' professional development and how psychological aspect of human behavior effects the nursing performance, there is need to study the effect self-efficacy and collective efficacy on nursing performance.

Methods

This cross-sectional descriptive study was conducted among registered nurses working in tertiary care hospital, IGMH, Maldives. This study was approved by ethics committees of Mahidol University Institutional Review Board of Social Science, Thailand (MU-SSIRB No. 2015/110.1803), and the National Health Research Committee in the Maldives. Additionally permission to conduct data collection was obtain from IGMH. The sample estimated for this study using formula: $n = \frac{Z^2 N \sigma^2}{Z^2 \sigma^2 + (N-1) E^2}$, was at least 198 nurses, and with an attrition of 20% sample size for this study was 238 nurses. By using stratified random sampling data was collected from registered nurses working currently in 14 different wards/units.

This study used the self-efficacy theory and extension of collective efficacy agency perspective of social cognitive theory and model to developing its conceptual framework.^{11, 12} In addition, this study also used Greenslade (2008) six dimension of job performance framework model to assess the job performance of nurses.¹⁶

The research instrument used in this study is in English language because majority of the participants are expatriate nurses and most commonly used language by both permanent (local) and temporary (expatriate) nurses in their working environment. The research instrument consists of four parts; the first part, socio demographic factors consists of basic information about the nurses', including gender, age, marital status, employment status and number of children.

Table 1: Socio-demographic data of respondents

Socio-demographic factors	Frequency (%)
Gender	
Male	33 (14.4)
Female	196 (85.6)
Age (Year)	
20 - 30	137 (59.9)
31 - 40	82 (35.8)
41 - 50	9 (3.9)
>51	1 (0.4)
Educational Level	
Diploma	200 (87.3)
Associate degree	4 (1.8)
Bachelor degree	25 (10.9)
Marital status	
Single	35 (15.3)
Married	188 (82.1)
Divorce	6 (2.6)
Year of working as a nurse (year)	
< 1 year	19 (8.3)
1– 5 years	72 (31.4)
6 – 10 years	74 (32.3)
11– 15 years	46 (20.1)
16 – 20 years	11 (4.8)
> 20 years	7 (3.1)
Employment status	
Permanent nurse (Local nurse)	114 (49.8)
Temporary nurse (expatriate nurse)	115 (50.2)
Being assigned to following position	
Team leader	20 (8.7)
Shift In-charge nurse	93 (40.6)
Never	116 (50.7)
Number of children	
No children	92 (40.2)
1 child	81 (35.4)
2 children	47 (20.5)
3 children	9 (3.9)

Table 2: Task performance and contextual performance as previewed by respondents (n = 229)

	Actual range	Mean	SD	Level
Task performance				
<i>Overall task performance</i>	77 – 11	59.02	11.97	High
Social support	28 – 4	19.68	5.00	Moderate
Information provision	28 – 4	21.43	5.11	High
Technical care	21 – 3	17.89	3.33	High
Contextual performance				
<i>Overall Contextual performance</i>	98 – 14	64.62	14.67	Moderate
Interpersonal support	53 – 5	23.32	6.1	Moderate
Job-task performance	28 – 4	18.75	4.67	Moderate
Organizational support	35 – 5	22.53	6.06	Moderate

The second and third parts consists of self-efficacy and collective efficacy scale, which was developed based Bandura's guide to construct a efficacy scale,¹⁸ and personal efficacy belief Scale by Riggs and Knight (1994).¹⁹ Self-efficacy scale consists of total 24 statements. Collective efficacy scale consists of 27 statements. Both scale were scored using a 6-point Likert scale ranging from 1= strongly agree; 2= agree somewhat; 3= agree, 4 = disagree somewhat, 5 = disagree; and 6 = Strongly disagree. Fourth part was nursing performance scale, consists of 25 items; 11 items in three dimension of task performance; 14 items in three dimension of contextual performance, a 7 point Likert scale (1= poor; 2=below good; 3= Fairley good; 4= good; 5=somewhat above good; 6= very good; 7= excellent) was used. The research instru-

ment was sent to the experts to examine for content validity and was pretested for internal consistency reliability using Cronbach Alpha,; self-efficacy, collective efficacy, task performance, contextual performance were .65, .75, .96, .94 respectively.

Descriptive analysis was used to measure the performance level of registered nurses working at IGMH and each independent variable such as socio-demographic factors, self-efficacy and collective efficacy. Pearson's correlation was used to determine association between each independent variable and the nurse job performance. After adjusting for nurse's age, year of working as a nurse and number of children, multiple regressions analysis were performed to determine the factors predicting nurse job performance.

Results

Table 1 shows the score of socio-demographic information of nurses. Majority of the nurses (85.6%) were female, with an average mean age of 31.10 years old ($SD = 5.65$), (59.8%) of the nurses were between 20-30 years old. Most of the nurses were married (82.1%). (35.4%) of nurses had one child, however most of the nurses (40.2%) have no children. Majority of the nursing staff (87.3%) have diploma level education and while (10.9%) nurses had bachelor level education. Most of the nurses were working in inpatient departments/wards. Local nurses forms less than half (49.8%) of the workforce and more than half (52.2%) of the nurses were temporary nurses. (32.3%) nurses had working experience as a nurse between 6 – 10 years and (42.8%) nurses had 1- 5 years working experience in their present working area. Moreover (46.6%) of the nurses were doing shift in-charge duties, however 57.8% of nurses. had never taken any such role and responsibilities.

Table 2 shows the overall mean score of task performance were (mean= 59.02, $SD= 11.97$). Overall task performance as perceived by the nurses were at high level. Similarly information provision and technical care dimension were at high level. However social support were at a moderate level. Additionally the overall mean score of contextual performance were (mean= 64.62, $SD= 14.67$). Table 2 also shows overall contextual performance with all the three dimensions of contextual performance as perceived by the nurses were at moderate level.

Table 3 shows the association between overall self-efficacy, collective efficacy, each variables and task performance and contextual performance. A significant positive correlation was revealed between both overall self-efficacy and task performance (.327, $p<0.01$), and contextual performance (.314, $p<0.01$). And also a significant positive correlation between overall collective efficacy and task performance (.404, $p<0.01$) and overall collective efficacy and contextual performance (.392, $p<0.01$) was revealed.

Table 3 Association between overall self-efficacy, collective efficacy and each variables with task performance and contextual performance (n = 229).

	Task performance		Contextual performance	
	r	P- value	r	P- value
Overall self-efficacy	.327	0.001**	.314	0.001**
Education and continuity of training	.172	0.009**	.138	0.037*
Workload	.133	0.045*	.144	0.029*
Optimism and competency	.279	0.001**	.287	0.001**
Working shift and availability of resources	.174	0.008**	.176	0.008**
Overall collective efficacy	.404	0.001**	.392	0.001**
Communication	.197	0.003**	.262	0.001**
Commitment	.284	0.001**	.244	0.001**
Supervision, feedback, in-service, meetings and leadership patterns	.254	0.001**	.197	0.003**
Social support	.305	0.001**	.428	0.001**
Job autonomy and decision making	.186	0.005**	.110	0.097

**p<0.01, *p<0.05

Socio-demographic factors had no significant association between overall nurse job performances. Table 4 shows the significant predictors for overall nurse job performance. All the significant independent variables was included in the model of multiple regressions analysis. In order to address confounding factors, age of the nurses, number of children and years

of working as a nurse, was included in the model, even thought it had no significant relation found. The results suggested that optimism and competency; commitment; social support and job autonomy and decision making were the factors which strongly predicts overall nurse job performance (p-value < 0.05).

Table 4 Multiple regression analysis model for nurse job performance

	b	β	t	p-value
Workload	-.008	-.022	-.349	.727
Optimism and competency	.053	.239	3.492	0.001**
Working shift and availability of resources	.021	.083	1.244	.215
Communication	-.014	-.035	-.431	.667
Commitment	.050	.144	2.316	0.02*
Supervision, feedback, in-service meetings and leadership patterns	.009	.048	.714	.476
Autonomy and decision making	.060	.150	2.405	0.017*
Education and continuity of training	-.016	-.046	-.658	.511
Social support	.087	.310	4.123	0.001**
Nurses age	-.115	-.069	-.737	.462
Number of children	-.111	-.097	-1.321	.188
Years of working as a nurse	.075	.086	.884	.378
Adjusted R² = .292	SE = .860			

**p<0.01, *p<0.05

Discussion

The result of this study have found a significant positive correlation between self-efficacy and task performance. Similar result was revealed in the study of Lee (2010), it was found that self-efficacy were positively related with nursing performance.¹⁹ Another study done by Sun (2011) stated that self-efficacy as one of the positive psychological element and furthermore the study found a strong relation between positive psychological state and nurse performance.²⁰ This study result supports self-efficacy theory perspective of SCT. According to Bandura, high level of efficacy promotes positive thinking and increase performance.²¹ Bandura defines self-efficacy as the individual's believe about their ability to produce preferred levels of performance and is able to perform

a given task.^{10,11,22} Meta-Analytic Investigation by Sitzmann (2013), stated that 93% of the study had found positive relationship between self-efficacy and performance at personal level analysis.²³ Possible explanation for this study finding can be that, in IGMH mostly nurses involve in task performances, and in order to maintain better work floor, workload and nurse patient ratio, hospital administration had given priority to increase number of nurses. In 2014, a total of 100 nurse was newly recruited and at present there are 542 registered nurses working in IGMH.²⁴ This study also revealed a significant positive correlation between overall self-efficacy and contextual performance.

This result indicated that nurses perceived level of self-efficacy not only influence task performance,

indeed it influences contextual performance as well. Nurses obey organizational rules and regulation and work as a team to improve performance. According to Bell and Mengue (2002) nurses behavior that supports the team and hospital have an impact on clinical outcome and positive work environment motivate employee in doing both in-role (task) and extra role (contextual).²⁵

Additionally this study had found a significant positive correlation between overall collective efficacy and both task performance contextual performance. Finding of this study were similar with the study of Lee (2010).¹⁹ Similarly a study by Mulvey and Klein (1998) had shown that collective efficacy directly influence job performance.²⁶ According to Bandura (1997) Bandura stated that individual's share their belief in order to produce collective effort to achieve desired goal.¹² Sun (2011) noted that nurses with high positive psychology have better relationship with their coworkers and improve their performance.²⁰ Also, previous studies have noted that nurses were motivated to perform when their leaders express their confidence in their subordinates' ability to perform.^{27,28}

According to this study results, task performance as perceived by nurses were at high level. This result is that of the previous study conducted at IGMH. The study also found that nurse perceived high level of task performance.⁴ One of the possible explanation to this finding can be the high level of self-efficacy as perceived by nurses. According to literature self-efficacy is a state of positive psychology and high level of self-efficacy may effectively improve nurse's performance.²⁰

Contextual performance as perceived by nurses were at moderate. Similar result was revealed by a

previous study done at IGMH.⁴ As mentioned before, a possible explanation for this result can be that nurses working in IGMH mainly involved in patient centered work or task performance. According to Borman and Motowidlo (1997), employee need to engaged in activities that may enhance the social environment in which the technical core must function.²⁹

The results suggested that optimism and competency; commitment; social support and Job autonomy, and decision making were the factors which strongly predicts overall nurse job performance. Previous studies are in line with this findings, nurses who can practice autonomously and participate in decision making, feels they are a valued part of the organization and as a result they are motivated to perform.^{30,31,32} Similarly Competency in work is an important factor leading to commitment and better performance.³³

Recommendations

The result of this study supports self-efficacy theory and extension of collective efficacy agency perspective of social cognitive theory. Behavior of each individual influence the performance of group and similarly group behavior effect the performance of each individual in group social cognitive theory makes it possible to improve nursing performance of individual and group as well.

As IGMH is the only tertiary care hospital in Maldives this study result can be generalized to all the nurse working at tertiary level. Therefore with regards to identified factors that strongly predicts overall nurse job performance. It is recommended hospital administration and nursing administration formulate policy and interventions to improve nurse

optimism and competency, commitment, social support, job autonomy and decision making and in addition nursing administration should take intervention to improve individual and group level efficacy especially take collective efficacy into consideration in improving overall nursing and organizational performance.

Subsequently, further research on organizational level factors and nurse job performance will facilitate hospital administration more on improving nursing care quality and performance. Additionally hospital can explore the nurse job performance appraisal system in order to evaluate if the system is effective in evaluating nursing performance. Further research on qualitative study can add more clarity to current study.

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