

## Functional Strategies Management for Problem Solving Facing Infection Control Teams at Hospitals

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### Abstract:

**Background:** Many problems facing of the infection control team, there was necessary to use a successful strategy to overcome these problems. Through using functional strategy management can be decreased the problems faced Infection Control Team (ICT) at Hospital. **Aim of the study:** Was to evaluate functional strategies management for problem solving facing infection control teams at Hospital. **Design:** A quasi-experimental study design was used. **Setting:** The study was conducted in 8 Governmental Hospitals at Benha City. **Sample:** A convenience sample of ICT members included 50 members. **Tools:** Structured interviewing questionnaire sheet: - consist of four parts: **I):** demographic characteristic of infection control team. **II):** problems can be faced infection control team. **III):** Infection control teams' knowledge regarding Functional Strategy Management (FSM). **IV):** Application of functional strategy to solve problem facing infection control team. **Results:** The study revealed that, 66.0 % of the studied ICT had poor total knowledge about Functional Strategy Management (FSM) pre application and then this percentage decreased to 6.0% post application. 30.0% of the studied ICT had applied FSM pre application and increased to 70.0% post application strategy. **Conclusion:** Utilization functional strategy application improved infection control team knowledge in solving ICT problems. Also, there was a positive correlation among ICT total knowledge and total FSM post application strategy. **Recommendations:** Continuous application of FSM to solve infection control team problems and improve knowledge and functional practices.

**Key word:** Infection Control Team, Functional Strategy Management in Problem Solving.

### Introduction:

Infection Control (IC) is a clinical and quality of care, as it is universally relevant to every health worker and patient, at every health care interaction. Reveals that good IC programs can reduce health care infections to 70% (**World Health Organization (WHO), 2022**). Infection control program consists of a selected group of trained health care worker who engage and educate staff in all areas and at all levels to play an active role in preventing the spread of infections among patients, fellow workers, and themselves. The composition and selection criteria for the infection control team.

should be decided by the infection control committee and department heads. Serve in a scientific and support role in attending to the day today functions of infection control, acting as consultants, educators, role models, researchers, and change agents (**Melanie et al., 2018**).

Infection control has many challenges especially. The common challenges such as resource constraints, lack of trained personnel, and lack of surveillance data have always remained a barrier. Additionally, despite strong evidence for the effectiveness of IC, further research is needed to

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identify and validate innovative technologies, cost effectiveness of interventions, feasible implementation approaches and local solutions for low resource settings (Sengupta, 2019).

The ICT now has a far more proactive approach, with a greater emphasis on clinical work and the direct management of patients with hospital associated infections. The enhanced presence of the ICT in the clinical environment has greatly increased their accessibility for guidance and advice and has improved the management of hospital associated infection (Jenks, 2016).

To overcome the challenge faced ICT that demand using a successful strategy to solve the problems. Functional strategy deals with the relationships between the project teams and the way the functional objectives are met. There should be specific goals for each department and the respective managers should have specific criteria through which the successes of the team are measured (Muhoro, 2019).

The importance of the functional strategy management in the ability to reduce problems in different institutions, including health problems and with regards infection control at hospitals that faces many problems. The functional strategy management can be used through the correct steps to reduce and avoid work problems through: Collect input from stakeholders, define crucial objectives, prepare for implementation, define key performance indicators and feedback (Janse, 2020).

An infection control nurse is a registered nurse who implements best practices for halting the spread of viruses and bacteria (University of St. Augustine for Health Sciences, 2020). The role of the IC Nurse is divided into 4 parts: Surveillance and analyzing of data; educating and training of healthcare staff and patients; managing outbreaks and developing Action Plans to manage outbreaks; Creating, Implementing, and

evaluating of IC guidance and policies (Amoah, 2021).

### **Significance of the study:**

Studies on Hospital-Acquired Infections (HAIs) show diverse results worldwide with a range of 3.5–12% in developed countries and 6–19% in developing countries, including Egypt, with the highest incidence in Intensive Care Units (ICUs), burn units, patients undergoing organ transplant, and neonates. The active surveillance system of HAIs in Menoufia University hospitals' ICUs was assessed based on center for disease control and prevention rules. revealed 36.7% of the patients with HAIs, where 33.1% were central line-associated bloodstream infections. 34.4% were ventilator-associated pneumonia. surgical site infections represented 19.1, and 13% were urinary tract infections (Hamam et al., 2021).

On the other hand 35 to 55% of HAIs can be reduced by applying multimodal infection control measures. Many barriers affect best practice of infection Prevention and control measures, but the lack of knowledge on implementing IC strategies and low compliance with best practice guidelines are among the most important (Arainpoor et al., 2020).

### **Aim of the study:**

This study aimed to evaluate functional strategies management for problem solving facing infection control teams at hospitals.

### **Research hypotheses:**

1. Knowledge regarding application of functional strategy management for problem solving facing infection control teams will be improved after application of the functional strategy management.
2. The problems facing infection control teams at Benha hospitals will be decreased.

### **Subject and Methods:**

#### **Research design:**

Quasi-experimental design was utilized in this study.

**Setting:**

The study was conducted at governmental hospitals it included 8 hospitals in Benha city namely: Educational Benha Hospital- Ophthalmology Hospital - University Benha Hospital -Health Insurance Hospital - Fever Hospital - Children Specialized Hospital – Psychiatric Hospital - Chest Hospital.

**Subjects:**

Convenient sample of all infection control team members in the previous mentioned setting which included 50 members. That included all infection control team in these hospitals.

**Tools of data collection:**

Structured interviewing questionnaire was developed by the researcher to collect data based on review of pertinent literature and it was consisted of four parts:

**Part (1):** It was designed to assess demographic characteristic of infection control team involved in this study. It included (6 questions) such as: age, sex, marital status, occupation, years of experience and training courses.

**Part (2):** It was concerned with problems can be faced by infection control team. It included (4 items): (a) problems related administration. It included (11 questions). (b) problems related facilities, supplies and financial. It included (13questions). (c) problems related infection control team. It included (11questions) and (d) problems related working with health team. It included (9questions).

**Part (3):** It includes an interviewing questionnaire to assess infection control teams' knowledge regarding functional strategy management. It included (10question).

**Scoring system:**

The scoring system for infection control team knowledge regarding functional strategy management was calculated as follows (2) score for complete correct answer, while (1) score for

incomplete correct answer, and (0) for don't know answer. The total knowledge score = 20, it was considered good if the score of the total knowledge >75% (>15), while considered average if it equals 50- 75%(10-15), and considered poor if it is < 50 % equal or less (< 10).

**Part (4):** It was concerned with the application of functional strategies to solve problem facing infection control team in hospital. It included (five items) such as: (a) Gather input from stakeholders through the following steps from the infection control team on. It included (10 questions). (b) Setting goals to face problems. It included (5 questions). (c) Preparing for the implementation of the objectives to meet the problems. It included (5questions). (d) Defining the main performance indicators. It included (5questions).(e) Feedback: It included (4 questions).

**Scoring system:**

The scoring system of functional strategy was calculated as follows (1) score for done, while (0) score for not done. For each question of application, the score of the items was summed-up and the total divided by the number of items, giving a mean score for the part. These scores were converted into a percent score. The total application score >16. It was considered applied if the score > 60% (>16), while considered not applied if the score < 60% (<16).

**Content validity of the tool:**

Content validity of the tool was done by five of Faculty's staff Nursing experts from the Community Health Nursing specialties who reviewed the tool for clarity, relevance, comprehensive, and applicability and give their opinion.

**Reliability of tools:**

Reliability of tools was applied by researcher for testing the internal consistency of the tool, by administration of the same tools to the same subjects under similar condition on one

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or more occasion. Answers from repeated testing were compared (test - re-test reliability). The reliability was done by Cronach's alpha coefficient test which revealed that each of the tools consisted of relatively homogenous items as indicated by the moderate to high reliability of each tool. The internal consistency equal 0.805 for problems and 0.896 for infection control team knowledge regarding functional strategy management and 0.945 for theory application.

### **Ethical consideration:**

All ethical issues were assured, oral consent has been obtained from each member of infection control team before conducting the interview and given them a brief orientation to the purpose of the study, there were also reassured that all information gathered would be confidentially and used only for the purpose of the study. The infection control member had right to withdraw from the study at any time without giving any reasons.

### **Pilot study:**

A pilot study was conducted on a sample of 5 of infection control team of total number which represented 10% of the studied sample. The pilot study was aimed to test the content, clarity, applicability and simplicity of the tool using the interviewing questionnaire. The estimation of the time needed to fill questionnaire time consumed about 30 minutes. According to results obtained from the data analysis, No modification was done so the sample was included in the study.

### **Functional strategy management application included four phases:**

#### **I. Assessment phase:**

Preparation of the study design and data collection tools was based on extensive review of the current and available national and international references related literature about functional strategy management for solving infection control team problem by using a

journal, textbooks and internet. This as necessary for the researcher to be acquainted with and oriented about aspects research problem as well as to assist in the development of data collection tools. Also prepared handout for studied sample which included all items about functional strategy management and infection control problem., this takes time for preparing the tools about two months.

In this phase assess functional strategy, infection control team problems, knowledge of infection control team regarding functional strategy management through collection and analysis of baseline data from the filed tools, in this phase the pre – test was implemented by the researcher.

#### **II: Implementation phase**

Application implementation based on conducting session plans using different educational methods and media in addition to the use of guiding booklet. Time was opened for infection control team to ask questions and to receive the corresponding answers as well as to express their feedback toward the teaching session. Educational media was used the poster, laptop, guidance booklet which includes instruction and information for mothers as a reference during and after strategy application. Teaching material was used Arabic booklet and audiovisual materials.

The actual field work was carried out over a period of 8 months from the beginning of April 2021 to the end of November 2021. Infection consent was obtained from infection control team before collection of data. The researcher visited the infection control team at Benha hospitals as hospital every month from 9 am to 1.00 pm. The first week and last week once. The second and third week twice. The needed time for each sheet was around 30 minutes. The researcher applied functional strategy management through six sessions (2 theoretical sessions and 4 practical sessions; 1.5 hours theoretical and 3 hours practical), each session lasted 45-60 minutes

including periods of discussion and the average number application of the functional strategy were 4-5 infection control member /session, and immediately did the post test.

**Frist session :** at the beginning of the first session , the researcher welcomes and introduce herself to the infection control team , an orientation to the implementation and its process were presented , identify importance of infection control , members of infection control team, problems of infection control , effect of problem at work.

**Second session:** Identify functional strategy management definition, types, steps of application.

**Third session:** Application of functional strategy management solving the problem related to lack adequate support from hospital director to infection control team.

**Fourth session:** Application of functional strategy management in solving problem : There are not periodic maintenance of full automatic washing machines .

**Fifth session:** Application of functional strategy management in solving problem : An administrative technician are not available to carry out the administrative work of the infection control team .

**Six session:** Application of functional strategy management in solving problem : lack adherence of stranded precaution by health worker.

### **III: Evaluation phase:**

Evaluation of this program was done by using the post- test questionnaire which was the same format of pre- test questionnaire to compare the change of infection control team problems and their knowledge and their application immediately after application of functional strategy management.

### **Statistical analysis:**

All data collected were organized, tabulated and analyzed using appropriate statistical test.

The data were analyzed by using statistical Package for Social Science (SPSS) version 21 which was applied to calculate frequencies and associations by using Chi – square test  $\chi^2$ , and matix correlation to detect the relation between the variables (p value).

Significance levels were considered as follows:

Highly statistically significant  $p < 0.001$

Statistically significant  $p < 0.05$

Not significant  $p > 0.05$

### **Results:**

**Table (1):** Shows that; 40% of the studied infection control team aged  $35 < 45$  years old. 86.0 % of them were female and 44.0% of them had years of experience between 3to 5 years.

**Figure (1):** illustrates that, 96% of the studied infection control team had internal training courses, While 32.0% of them had infection control diploma and 20% of them had infection control fellowship.

**Table (2):** The table showed that 58% of studied infection control team faced challenges when dealing with department manager in pre application some recommendations compared by 32% post application.

**Figure (2):** Illustrates that, 14.0 % of the studied infection control team had good total knowledge level about functional strategy management pre application of strategy compared by 72.0 % post application.

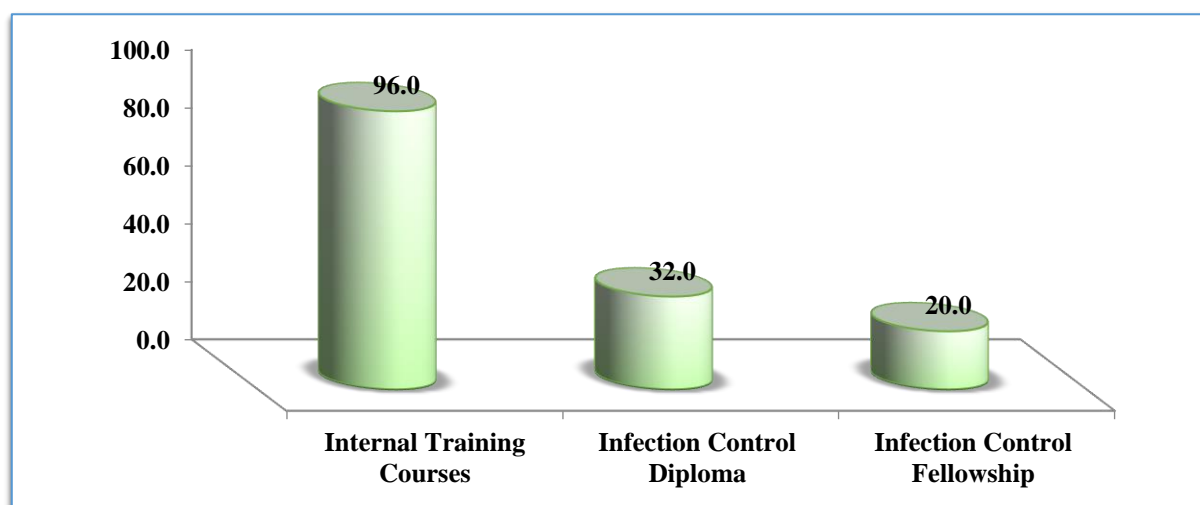
**Figure (3):** Illustrates that, 30.0 % of the studied infection control team had applied functional strategy pre application and increased to 70.0 % post application.

**Table (3):** There was positive correlation among infection control team total knowledge and total functional strategy management post application.

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**Table (1): Frequency distribution of studied infection control team their demographic characteristics (n=50).**

Demographic characteristics	N	%
<b>Age</b>		
25- < 35	18	36.0
35- < 45	20	40.0
45-55	12	24.0
Min –Max	26-57	
Mean ±SD	40.52±4.25	
<b>Sex</b>		
Male	7	14.0
Female	43	86.0
<b>Marital status</b>		
Married	47	94.0
Single	3	6.0
<b>Occupation</b>		
Doctor	8	16.0
Pharmacist	9	18.0
Nursing specialist	33	66.0
<b>Years of experience</b>		
Less than 3 years	12	24.0
3-5 years	22	44.0
More than 5 years	16	32.0
<b>Min –Max</b>	2-15	
Mean ±SD	6.62±4.71	
<b>Training courses</b>		
Yes	50	100.0

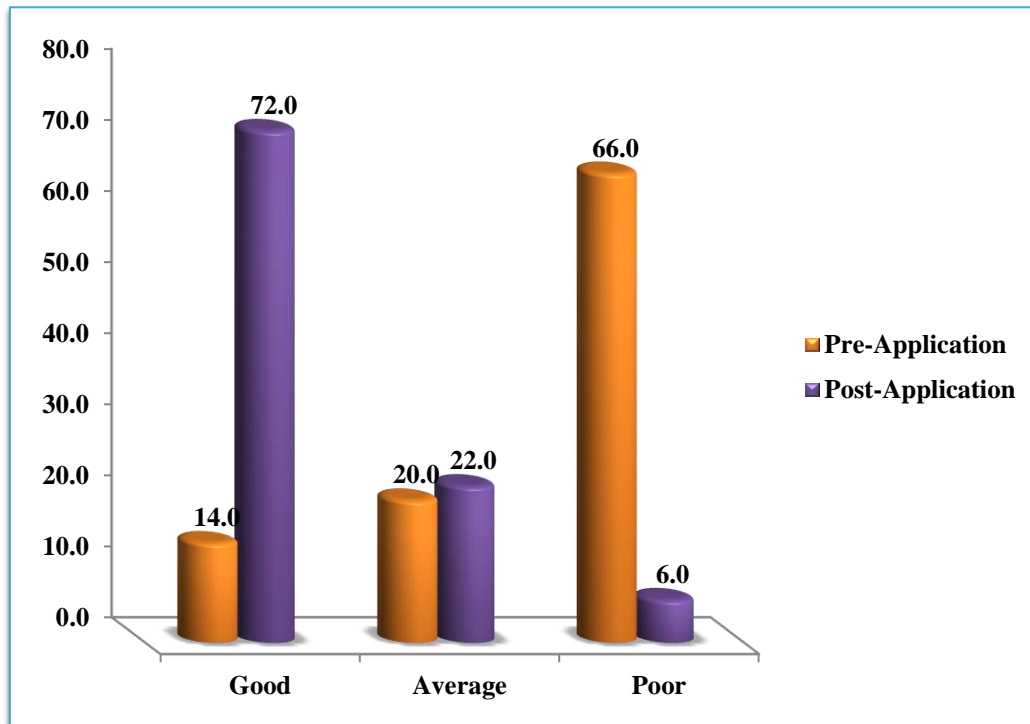


**Figure (1): Percentage distribution of studied infection control team regarding type of infection control training (n=50).**

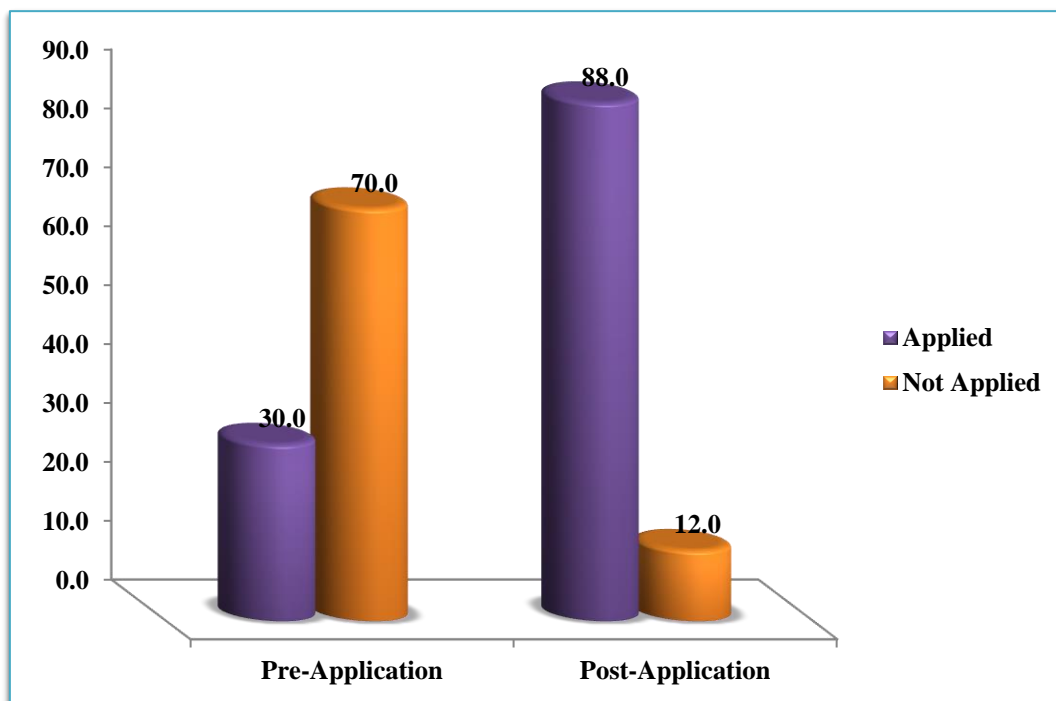
**Table (2): Frequency distribution of studied infection control team regarding their problems related to administration (n=50).**

Problems related administration	Pre				Post				X <sup>2</sup>	P-value
	Yes		No		Yes		No			
	No	%	No	%	No	%	No	%		
The number of the team does not match the capacity of the hospital and the number of beds	0	0.0	50	100.0	0	0.0	50	100.0	-	-
The number of the team is not proportional to the capacity of the infection control office	7	14.0	43	86.0	3	6.0	47	94.0	1.778	.182
There is no suitable room for infection control training	13	26.0	37	74.0	10	20.0	40	80.0	.508	.476
There is no annual or semi-annual training plan	0	0.0	50	100.0	0	0.0	50	100.0	-	-
There's not support from the hospital manager for the team's requirements	22	44.0	28	56.0	13	26.0	37	74.0	3.560	.059
There's not a plan for the team's work during the epidemics	2	4.0	48	96.0	1	2.0	49	98.0	.344	.558
A monthly meeting of the infection control Committee is not held	4	8.0	46	92.0	3	6.0	47	94.0	.154	.695
The recommendations of the infection control Committee aren't implemented	19	38.0	31	62.0	8	16.0	42	84.0	6.139	.013*
Many problems are not solved during the infection control committee meeting	20	40.0	30	60.0	10	20.0	40	80.0	4.762	.029*
It is not possible to make some modifications to the hospital building in proportion to the infection control policies	20	40.0	30	60.0	9	18.0	41	82.0	5.877	.015*
There are challenges when dealing with department managers in implementing some recommendations	29	58.0	21	42.0	16	32.0	34	68.0	6.828	.009*

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**Figure (2): Percentage distribution of studied infection control team regarding their total knowledge level (n=50).**



**Figure (3): Percentage distribution of the studied infection control team regarding their total application of functional strategies level (n=50).**



**Table (3): Correlation between total knowledge and strategies application among studied infection control team pre and post application the strategies**

Correlation between total knowledge and strategies application	Total knowledge			
	Pre		Post	
	r	p-value	r	p-value
Total strategies application	0.246	0.064	0.733	0.000**

**Discussion:**

Infection control poses a challenge to hospitals and healthcare worldwide. The common challenges such as resource constraints, lack of trained personnel, and lack of surveillance data have always remained a barrier. Additionally, despite strong evidence for the effectiveness of infection control further research is needed to identify and validate innovative technologies, cost effectiveness of interventions, feasible implementation approaches and local solutions for low resource settings (Sengupta, 2019).

To overcome the challenge faced infection control team that demand using a successful strategy to solve the problems. Functional strategy deals with the relationships between the project teams and the way the functional objectives are met. There should be specific goals for each department and the respective managers should have specific criteria through which the successes of the team are measured (Muhoro, 2019).

Regarding demographic characteristics of the studied infection control team, the finding of the present study revealed that less than half of studied infection control team were aged from 35 < 45 years old, study revealed that nearly two third of them were nursing specialist, less than one quarter were doctor, More than one third of

the studied infection control team had years of experience from 3to 5 years.

In relation to training courses illustrates that, three third nearly of the studied infection control team had high score of internal training courses, while less than half of the studied infection control team had infection control diploma and low score and less than of quarter were infection control fellowship.

According to problems of infection control team related facilities, supplies and financial. The result of the present study revealed that: more than two quarter of the studied infection control team were not good financial available return during epidemic pre application and the percentage decreased to less than two third post application. Also the study showed that had less on third of the studied infection control team had problem related to periodic maintenance of sterilization devices pre application and decreased to less of one third post application. This finding was in agreement with Barnett & Mehrotra (2020), who studied " Covid-19 and the upcoming financial crisis in health care, United States " who found that many hospitals lack a financial cushion. While \$100 billion is less than 5% of the \$2.2 trillion in national health expenditures paid to hospitals and physicians in 2018.

Also this finding was agree to Jamshid et al., (2014), who studied " Medical devices inspection and maintenance; a literature review,

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Canada" that revealed high score nearly of two third of repair are due to random, nearly of one third of repair are due to equipment management issues. This finding revealed the incomplete role of maintenance companies in repairing equipment at hospital.

According to the studied infection control team regarding their total knowledge level. Illustrated that the studied infection control team had less of quarter of total knowledge related to functional strategy management application and improved to nearly three quarter post application. While two third of studied infection control team poor total knowledge about functional strategy management pre application and then this percentage decreased to less than quarter post application. This finding agree with

**Dabic & Kiessling, (2019)** who studied. The performance implications of knowledge management and strategic alignment of multinational corporation subsidiaries, Croatia" who revealed that the results suggest discriminant validity for knowledge management capabilities across strategic orientations. This might be due to decreased awareness of studied infection control team related functional strategy management knowledge pre application.

According to distribution of studied sample regarding their total application of functional strategies level. The current study illustrated that nearly one third of the studied infection control team had implemented functional strategy management pre application and increased to nearly of three quarter post application strategy and nearly of three third of the studied infection control team had not applied functional strategy management pre application and decreased to less than one quarter post application. This might due to lack knowledge of infection control team related functional strategy management pre application strategy.

Concerning to correlation between total knowledge and strategies application among the studied infection control team pre and post application the strategies pre and post application the strategies. The present study revealed that there was positive correlation among studied on infection control team total knowledge and total functional strategy application These finding contrast with **Hamid et al., (2019)**, who studied" Assessment of Hospital Staff Knowledge, Attitudes and Practices (KAPS) on activities related to prevention and control of hospital acquired infections, Medina Monawara" and found that there was a wide range between knowledge and practice, despite the good level of knowledge among the majority of the respondents, there was a least level of practice which means knowledge was not translated into practice. This might be due to the program has good impact on infection control team application of functional strategy management.

### **Conclusion:**

There were high statistically significant difference for all items related to the studied infection control team knowledge about functional strategies pre and post application of strategy. Additionally, the application of studied ICT of functional strategies management items were high statistically significant difference for all items related to their application of functional strategies items pre and post application. Positive correlation among infection control team total knowledge and total functional strategy management post application was found.

### **Recommendations:**

- Continuous application of functional strategy management to solve infection control team problems and improve knowledge and functional practices.

- Encouragement infection control team to working with other section in problem strategy management solving.
- Emphasizing the importance of the role of the hospital director in supporting the requirements of the infection control team.
- Emphasizing the importance of the cooperation of department heads with the infection control team.

**References:**

**Amoah, J. (2021).** What Is An Infection Prevention and Control Nurse?. Available at: <https://www.nurses.co.uk/blog/what-is-an-infection-prevention-and-control-nurse/> accessed on 6 Augusts 2022.

**Arianpoor, A., Zarifian, A., Askari, E., Rezayat, A., Mojtaba Dayyani, M., Rahimian, A., et al. (2020).** Infection prevention and control idea challenge" contest: a fresh view on medical education and problem solving, *Antimicrob Resist Infect Control.*; 9(1):26.doi: 10.1186/s 13756-020-0688-y.

**Barnett, M. and Mehrotra, A. (2020).** Covid-19 and the Upcoming Financial Crisis in Health Care, *The New England Journal of Medicine*, Vol. 3 No. 9.

**Dabic, M. and Kiessling, T. (2019).** Citation "The performance implications of knowledge management and strategic alignment of Multinational corporation (MNC) subsidiaries", *Journal of Knowledge Management*, Vol. 23 No. 8, pp. 1477-1501. Located at: <https://doi.org/10.1108/JKM-03-2019-0129>.

**Hamid ,A., Mustafa ,M., Al-Rasheedi ,M., Balkhi ,B., Suliman ,N., Alshaafee,W., and Mohammed, S.(2019).** Assessment of Hospital Staff Knowledge, Attitudes and Practices (KAPS) on Activities Related to Prevention and Control of Hospital Acquired Infections. *International Journal of Prevention and Treatment*, 8(1): 1-7.

**Hamam, S., Sakr, A., Zahra, A., et al., (2021).** Health care-associated infections at an Egyptian tertiary care hospital: a 2-year prospective study,

*menofyia medical journal*, Volume: 34 | Issue: 2 Page: 514-520.

**Jamshid, A., Rahimi, S., Kadi, D., and Ruiz, A. (2014).** Medical devices inspection and maintenance; a literature review. *Engineering Research Conference*. Available at: [https://www.researchgate.net/publication/287176949\\_Medical\\_devices\\_inspection\\_and\\_maintenance\\_a\\_literature\\_review](https://www.researchgate.net/publication/287176949_Medical_devices_inspection_and_maintenance_a_literature_review) accessed on 5 January 2021.

**Janse, B. (2020).** Functional Strategy. Retrieved from toolshero: <https://www.toolshero.com/strategy/functional-strategy/> accessed on 9 May 2021.

**Jenks, P. (2016).** Infection Prevention and Control Team. Annual Report, *Journal of Hospital Infection*, 92:S1-S44.

**Melanie, S., Meredith, A., and Lisa, S. (2018).** Infection Prevention and Control Program Management, Baltimore, Jhpiego Corporation, P(3).

**Muhoro, N. (2019).** Operational Versus Functional Level Strategy. Available at: <https://smallbusiness.chron.com/operational-versus-functional-level-strategy-61306.html> Accessed On 15 February 2021.

**Sengupta, S., Barmsan, P., and Lo, j.(2019).** Opportunities to overcome implementation challenges of infection prevention and control in low-middle income countries. *Current Treatment Options in Infectious Diseases*, volume 11, pages267–280.

**University of St. Augustine for Health Sciences (USAHS), (2020).** What is the Role of an Infection Control Nurse? Available at: <https://www.usa.edu/blog/infection-control-nurse>.

**World Health Organization (WHO), (2022).** WHO launches first ever global report on infection prevention and control, available at : <https://www.who.int/news/item/06-05-2022-who-launches-first-ever-global-report-on-infection-prevention-and-control> accessed on 15 September 2022.

## إدارة الإستراتيجية الوظيفية لحل المشكلات التي تواجه فرق مكافحة العدوى في المستشفيات

حنان توفيق حسين الرشيدى- ابتسام محمد عبد العال- دعاء محمد صبحي السيد- هدي مرسي عفيفي

العديد من المشاكل التي تواجه فريق مكافحة العدوى، لذا كان من الضروري استخدام استراتيجية ناجحة للتغلب على هذه المشاكل. من خلال استخدام إدارة الإستراتيجية الوظيفية يمكن تقليل المشاكل التي يواجهها فريق مكافحة العدوى في المستشفى. لذا هدفت هذه الدراسة إلى تقييم إدارة الاستراتيجية الوظيفية لحل المشكلات التي تواجه فرق مكافحة العدوى في المستشفيات. تم استخدام تصميم دراسة شبه تجريبي. وقد أجريت الدراسة في 8 مستشفيات حكومية بمدينة بنها. وقد استخدمت عينة ملائمة من أعضاء فرق مكافحة العدوى تضمنت 50 عضوًا. وقد أوضحت الدراسة أن 66% من فرق مكافحة العدوى التي تم دراستها لديهم معرفة إجمالية ضعيفة عن إدارة الاستراتيجية الوظيفية قبل تطبيق الاستراتيجية، ثم انخفضت هذه النسبة إلى 6% بعد التطبيق، 30% من فرق مكافحة العدوى التي تم دراستها قد استخدمت إدارة الاستراتيجية الوظيفية قبل تطبيق الاستراتيجية وزادت إلى 70% ما بعد تطبيق الاستراتيجية. وكانت هناك علاقات ذات دلالة إحصائية بين تطبيق الاستراتيجية الوظيفية والخصائص الديموغرافية بين فرق مكافحة العدوى والعمر، أيضًا مع سنوات من الخبرة قبل تطبيق الاستراتيجية. كما اوصت الدراسة الي التطبيق المستمر للاستراتيجية الوظيفية لحل مشكلات فرق مكافحة العدوى وتحسين المعلومات وممارسات الاستراتيجية الوظيفية.