

***Role of pharmacists in providing nutritional support
team (NST) in Makkah Hospitals***

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Abstract Summary : Total parenteral nutrition TPN preparation is an essential component of patient care in the clinical setting. Clinical pharmacists have a crucial role in the management of specialized nutritional support program and in the improvement of quality. However, the importance of their role in hospitals. Our aim is to investigate the role of clinical pharmacists in

TPN preparation in Makkah hospitals, in addition to their involvement in nutritional support team at hospitals. Data were collected from seven hospitals in Makkah. Only pharmacists implicated in the TPN process have been eligible to fulfill the questioner. Descriptive statistics have been used to describe the clinical site, pharmacists and TPN process characteristics. All questioner papers have been signed from the concerned pharmacist and stamped from the hospital. Our preliminary results showed that the number of TPN pharmacists is limited in each hospital. Their role is to perform technical tasks mainly with a minimal role in patient education process. Most of TPN pharmacists have received a training sessions to be well-prepared for working in this field. A large number of pharmacists reclaims that other health care providers don't help them providing direct patient care. Some of TPN pharmacists play an important role in monitoring the TPN administration process while others have not been implicated in this task. All of them would recommend the presence of nutritional support team (NST) in their hospitals although NST is not established in all hospitals included in this study. Our results have been compared to results from clinical studies done in other countries, Nevertheless, an emerging role for clinical pharmacists has been noticed through skills enhancement and removing barriers to pharmaceutical care practice.

Keywords: Role of pharmacist, nutrition, Makkah hospitals

BACKGROUND

Total parenteral nutrition (TPN) preparation is an essential component of patient care in the clinical setting. Clinical pharmacists have a crucial role in the management of specialized nutritional support program and in the improvement of quality. However, the importance of their role has never been studied in Saudi Arabia.

OBJECTIVE

Our aim in this current study is to investigate the role of clinical pharmacists in TPN preparation in Makkah hospitals, in addition to their involvement in nutritional support team at hospitals.

METHODS

- Data were collected from seven hospitals in Makkah (four governmental and three private hospitals).
- Only pharmacists implicated in the TPN process have been eligible to fulfill the questioner.
- Descriptive statistics have been used to describe the clinical site, pharmacists and TPN process characteristics.
- All questioner papers have been signed from the concerned pharmacist and stamped from the hospital.

Data collection focused on three aspects:

- Role of Clinical pharmacist in different steps of TPN procedure
 - Interaction between clinical pharmacist and patient
 - Clinical pharmacist competencies
- In each aspects the following points were covered:
1. Role of Clinical pharmacist in different steps of TPN procedure
 2. Interaction between clinical pharmacist and patient
 3. Clinical pharmacist competencies

1. Role of Clinical pharmacist in different steps of TPN procedure:

- A. Formulary selection
- B. Decision making
- C. TPN compounding
- D. Regimen design



2. Interaction between clinical pharmacist and patient:

- A. Patient education and counseling
- B. Patient monitoring
- C. Health care providers cooperation

3. Clinical pharmacist competencies

- A. Undergraduate training in TPN
- B. Continuous learning and workshops in TPN

RESULTS

Table 1.: General information about hospitals included in the study

	Government/Private	Number of pharmacist	Number of technicians	Number of beds	Number of TPN preparations /day
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H 1	Private	20	5	217	-
H 2	Government	65	80	600	15
H 3	Private	25	10	60	2
H 4	Government	40	15	280	25-10
H 5	Government	9	3	280	25
H 6	Private	19	15	500	4-13
H 7	Government	45	25	350	35

1. Role of pharmacist in different TPN preparation steps

A. Formulary selection for TPN products (Figure 1)

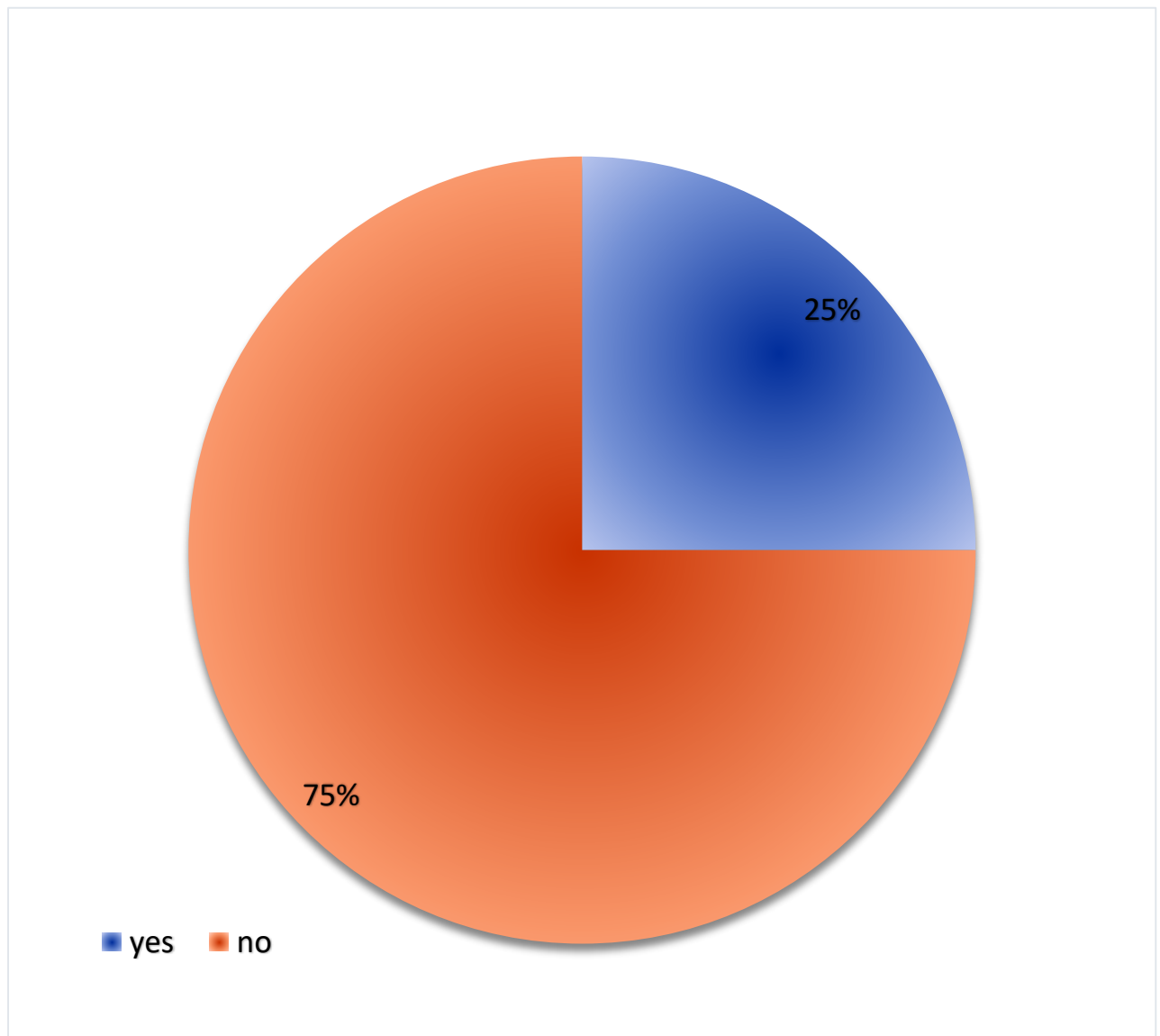


Figure 1

B. Decision making process for TPN administration (Figure 2)

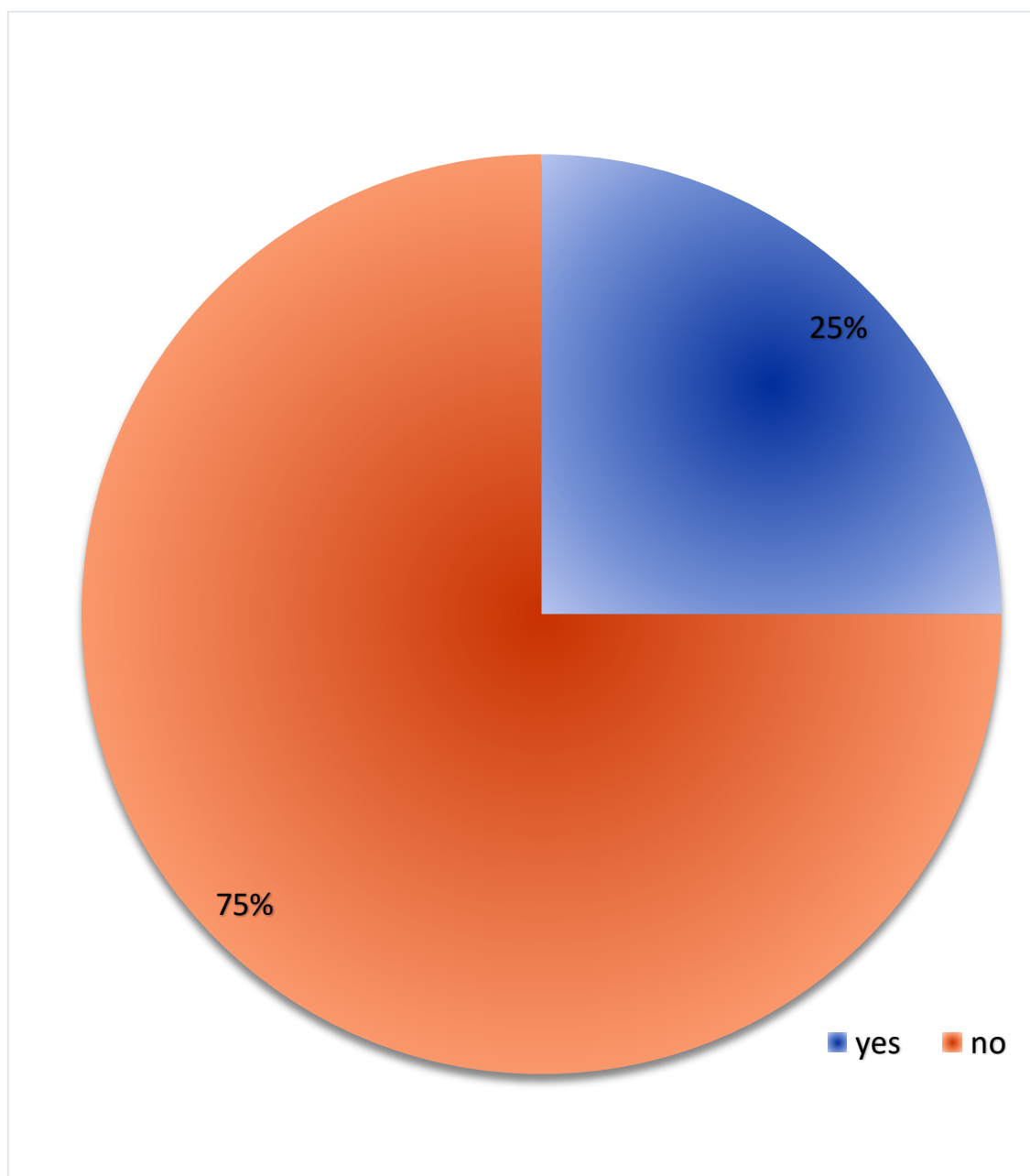


Figure ٢

C. Participation in TPN compounding (Figure 3)

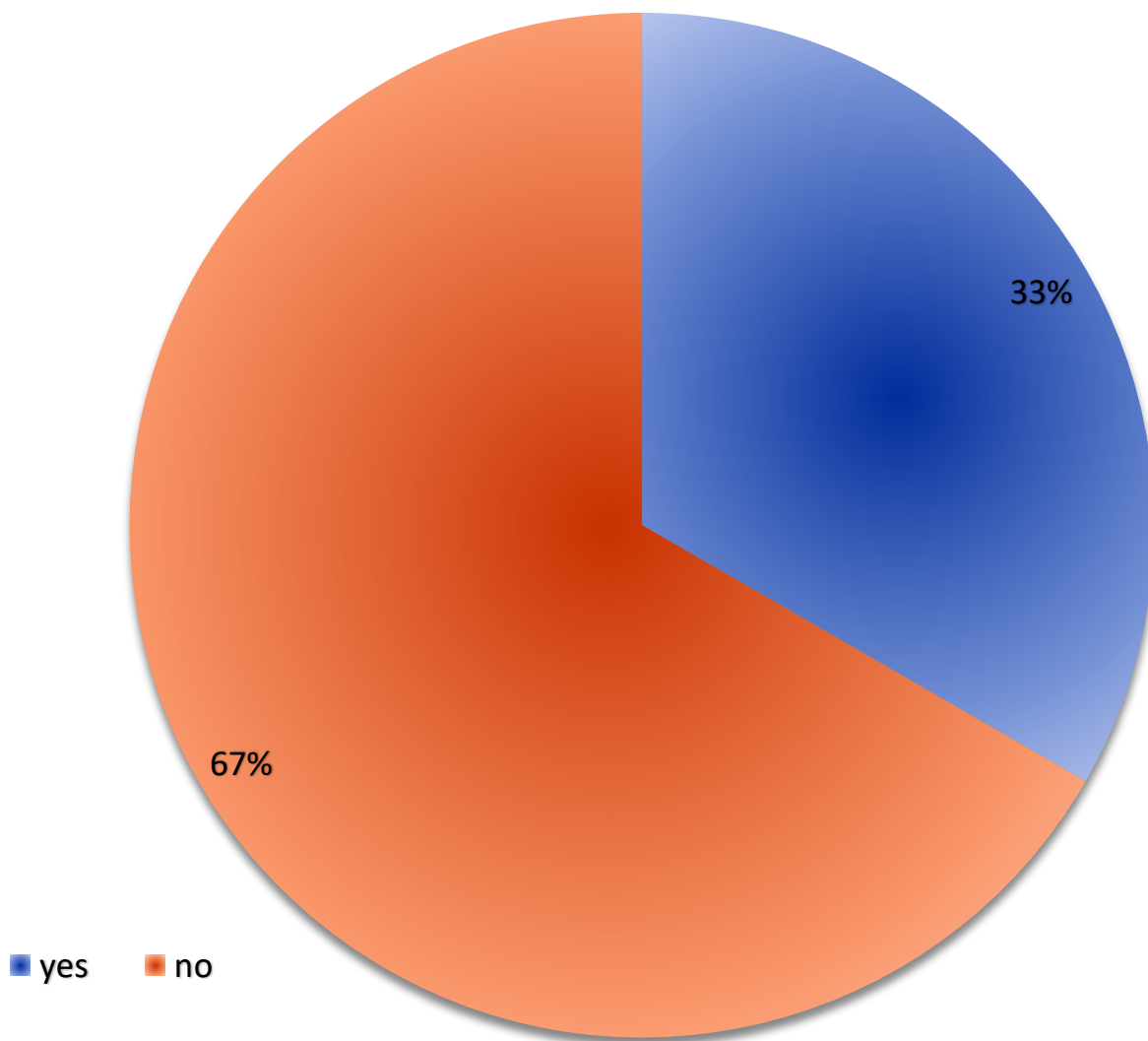


Figure 3

D. Participation in designing the regimen taken in TPN (Figure 4)

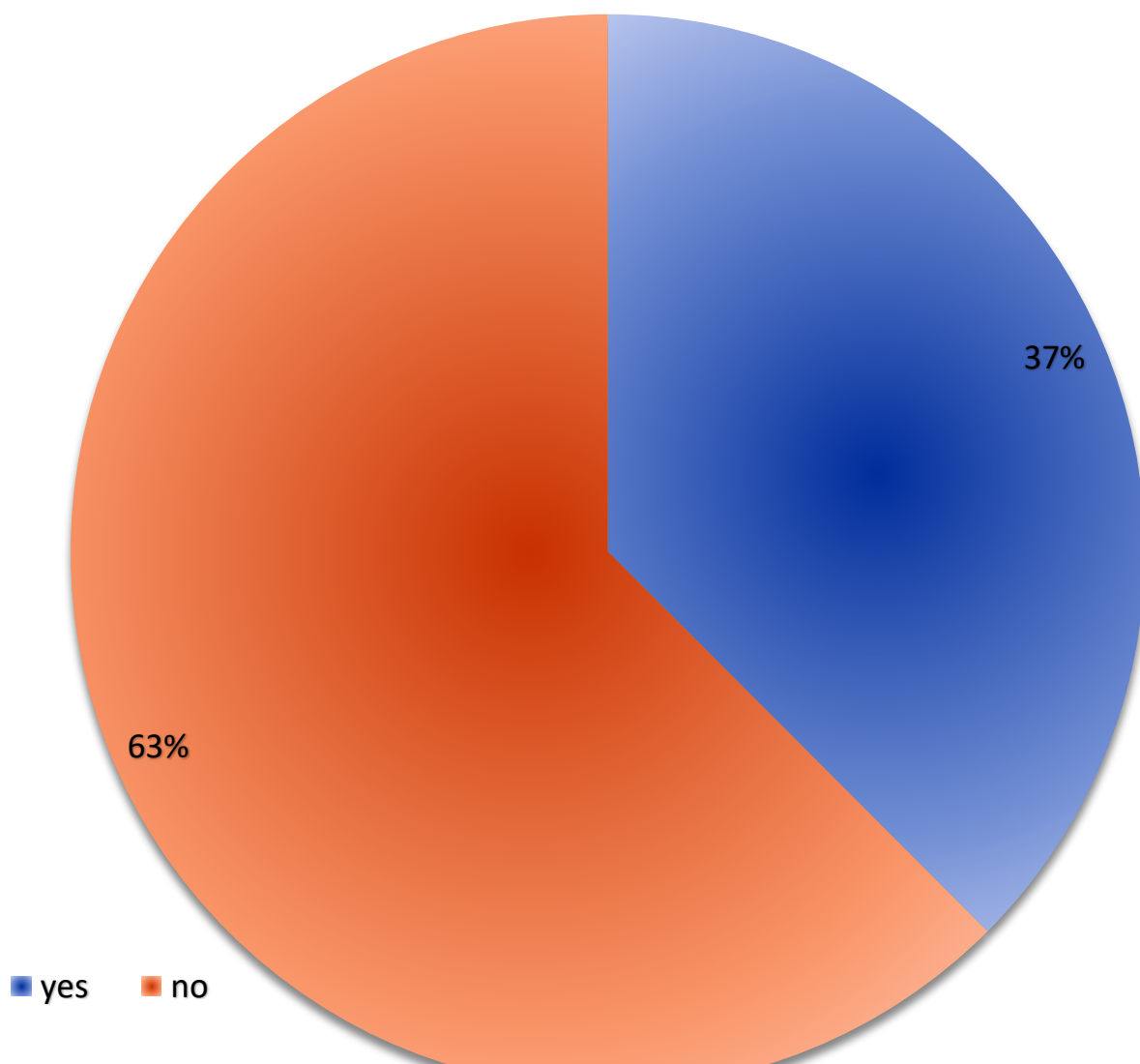


Figure 4

2. Role of clinical pharmacist in patient care

A. Percentage of hospital where the pharmacist do patient education and counseling for patient receiving TPN (Figure 5)

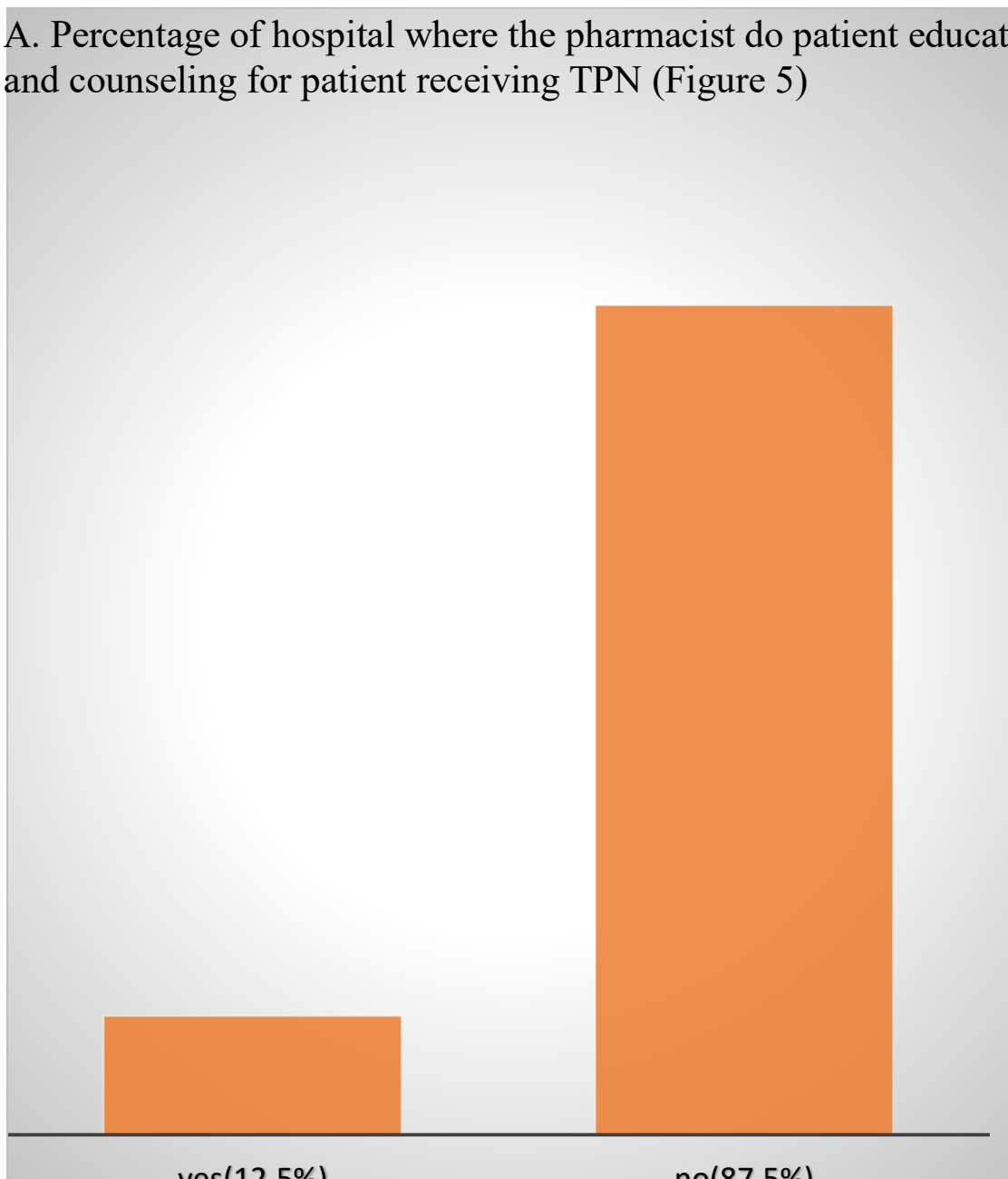


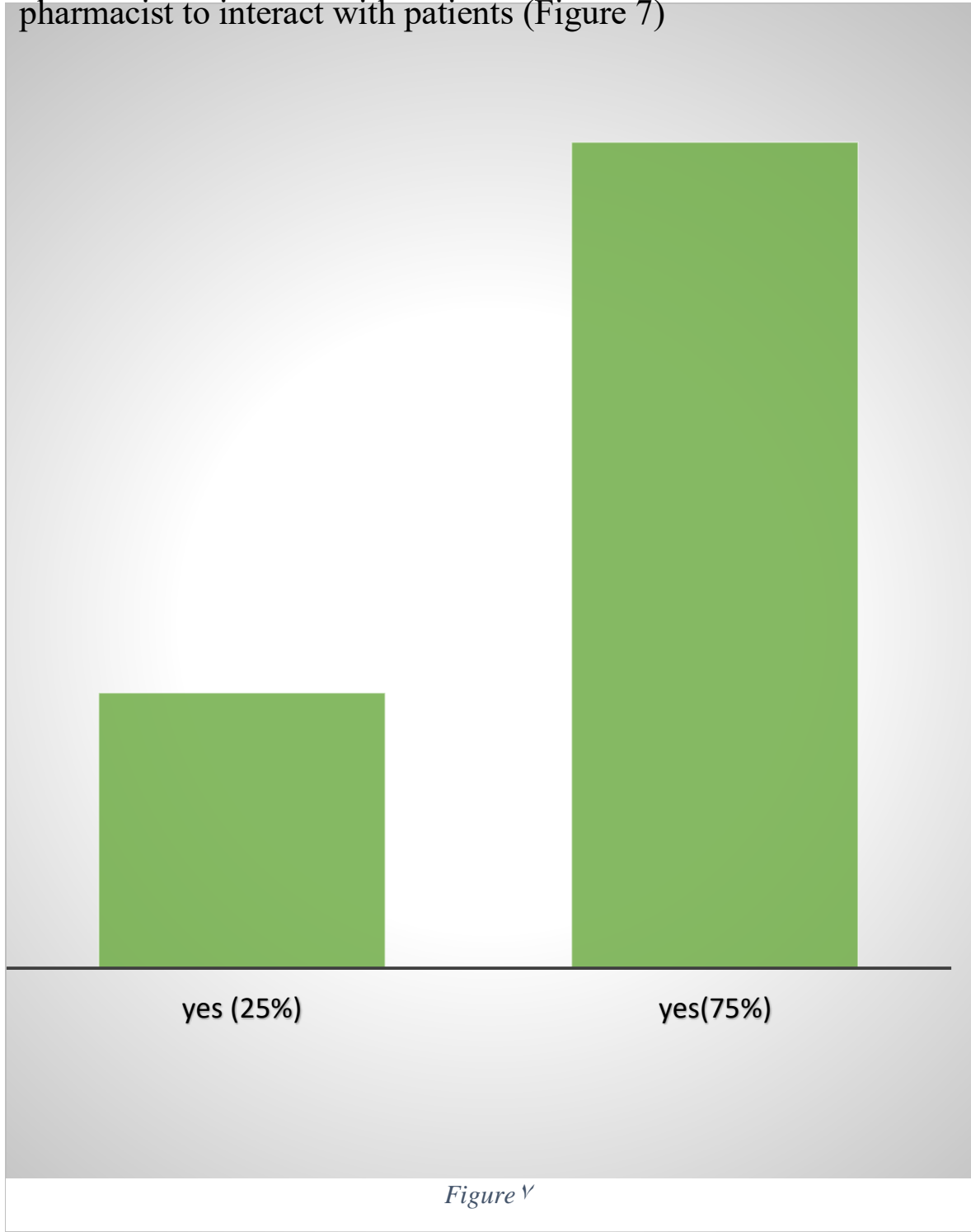
Figure 5

B. Percentage of hospital where the pharmacist monitor the TPN administration process (Figure 6)



Figure ٦

C. Percentage of hospitals where health care providers help the pharmacist to interact with patients (Figure 7)



3. Clinical pharmacists background and lifelong learning about TPN preparation

A. Percentage of pharmacists who received an undergraduate training in TPN preparation (Figure 8)

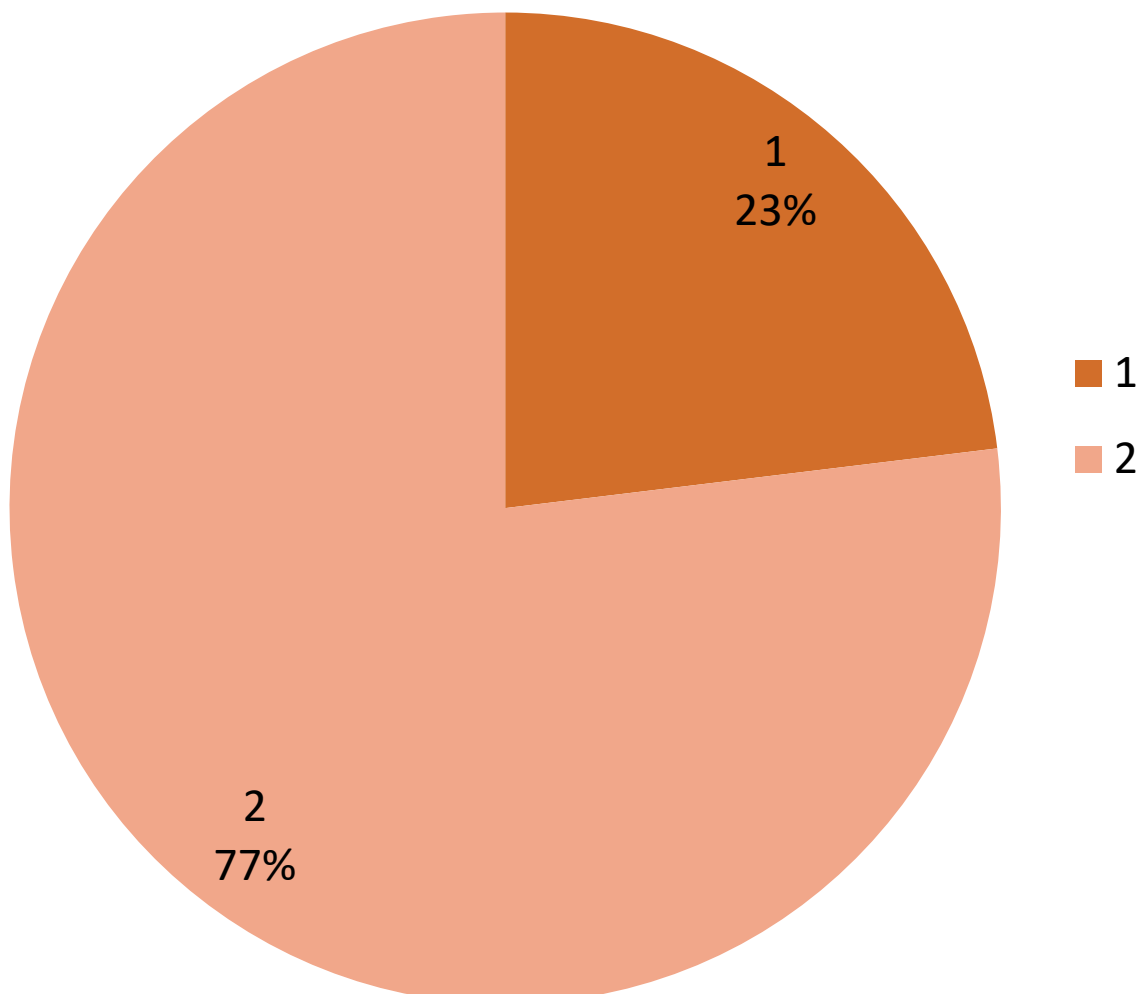
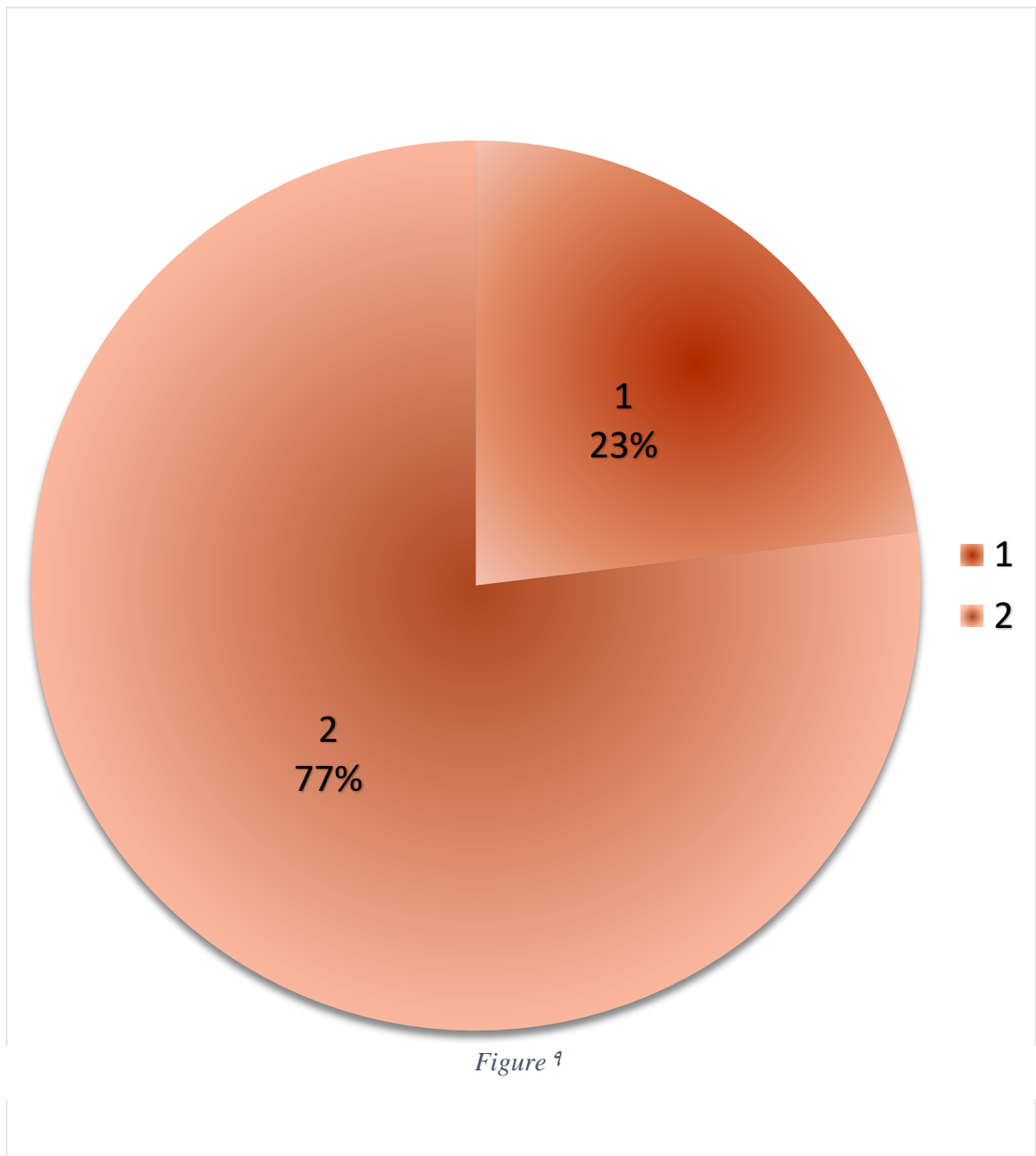


Figure 8

B. Percentage of pharmacists who received workshops or training after graduation in TPN preparation (Figure 9)



4. Comparison with other hospitals in Arab countries

In a clinical study done in Kuwait, data were collected via face-to-face semi-structured interviews with the senior TPN pharmacists at all the hospitals which provide TPN preparation services

. Results in this study showed that:

- Pharmacists mainly performed technical tasks such as TPN compounding with minimal role in providing direct patient care [٧] .
- . Pharmacists reported positive and negative experiences with physicians depending on their practice environment [٧] .
- None of the hospitals had a functional NST. However, pharmacists expressed preference to work within NSTs due to the potential benefits of enhanced communication and knowledge exchange among practitioners and to improve service [٧] .

Results in this study showed that:

- Pharmacists perceived several barriers to providing pharmaceutical care including lack of reliable sources of TPN-related information, lack of a standard operating procedure for TPN across hospitals, insufficient staff, time constraints and poor communication between TPN pharmacists [9].

CONCLUSION

The role of clinical pharmacists within the TPN process in Makkah hospitals is limited to TPN manufacturing process. Comparing with other Arab countries, the role of clinical pharmacists is the same. However, TPN clinical pharmacists' role is more advanced in Europe. Nevertheless, an emerging role for clinical pharmacists has been noticed through skills enhancement and removing barriers to pharmaceutical care practice.

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