



The Lebanese Order of Pharmacists
26th Annual Congress

Teaming Up for Excellence in Patient Care
معاً للتميز في رعاية المريض

Knowledge, attitude and practices of Lebanese community pharmacists towards chronic obstructive pulmonary disease

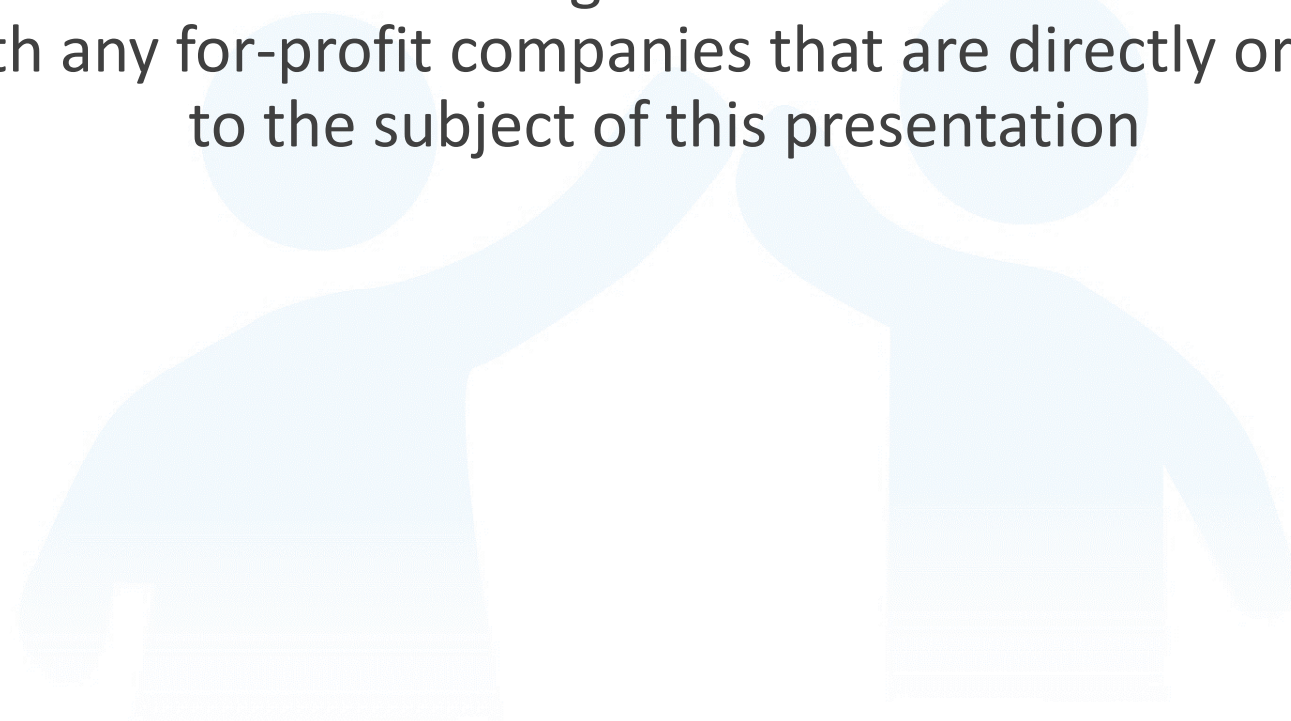
Sylvia Saade, PharmD





Disclosure

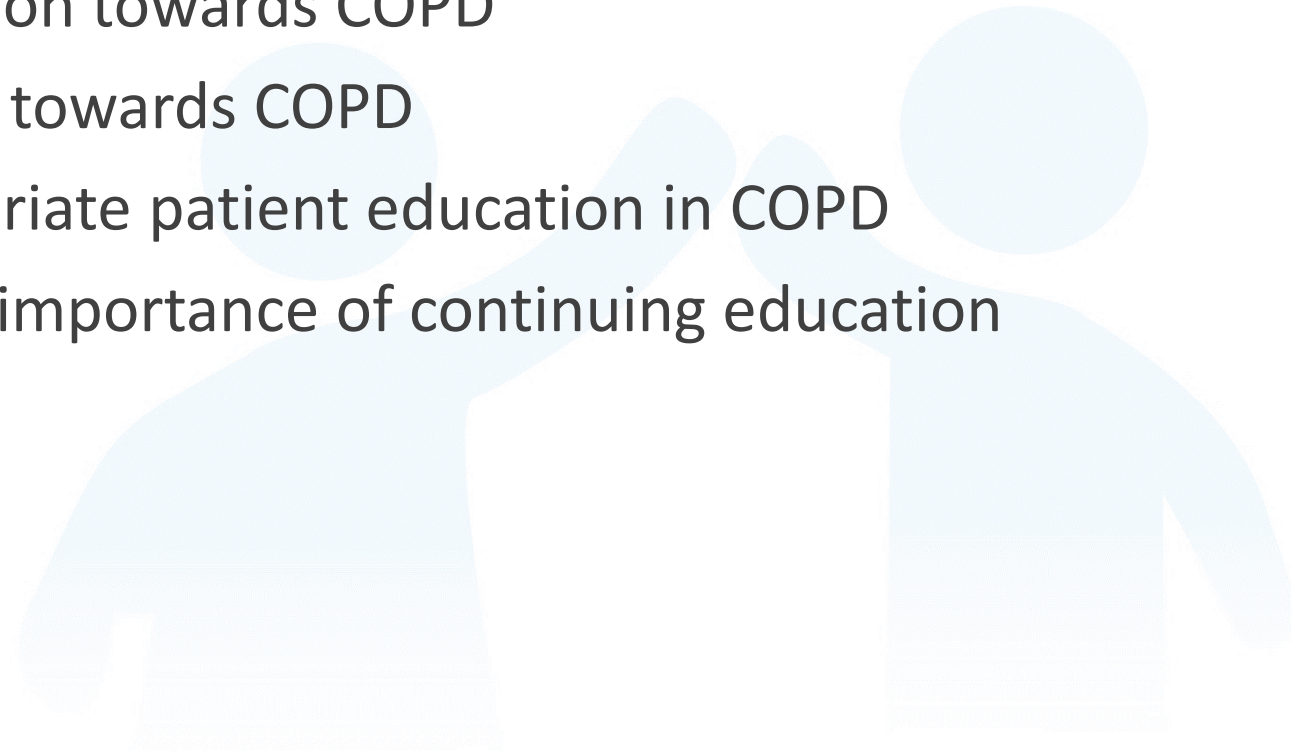
Sylvia Saade declares to meeting attendees that there are no financial relationships with any for-profit companies that are directly or indirectly related to the subject of this presentation





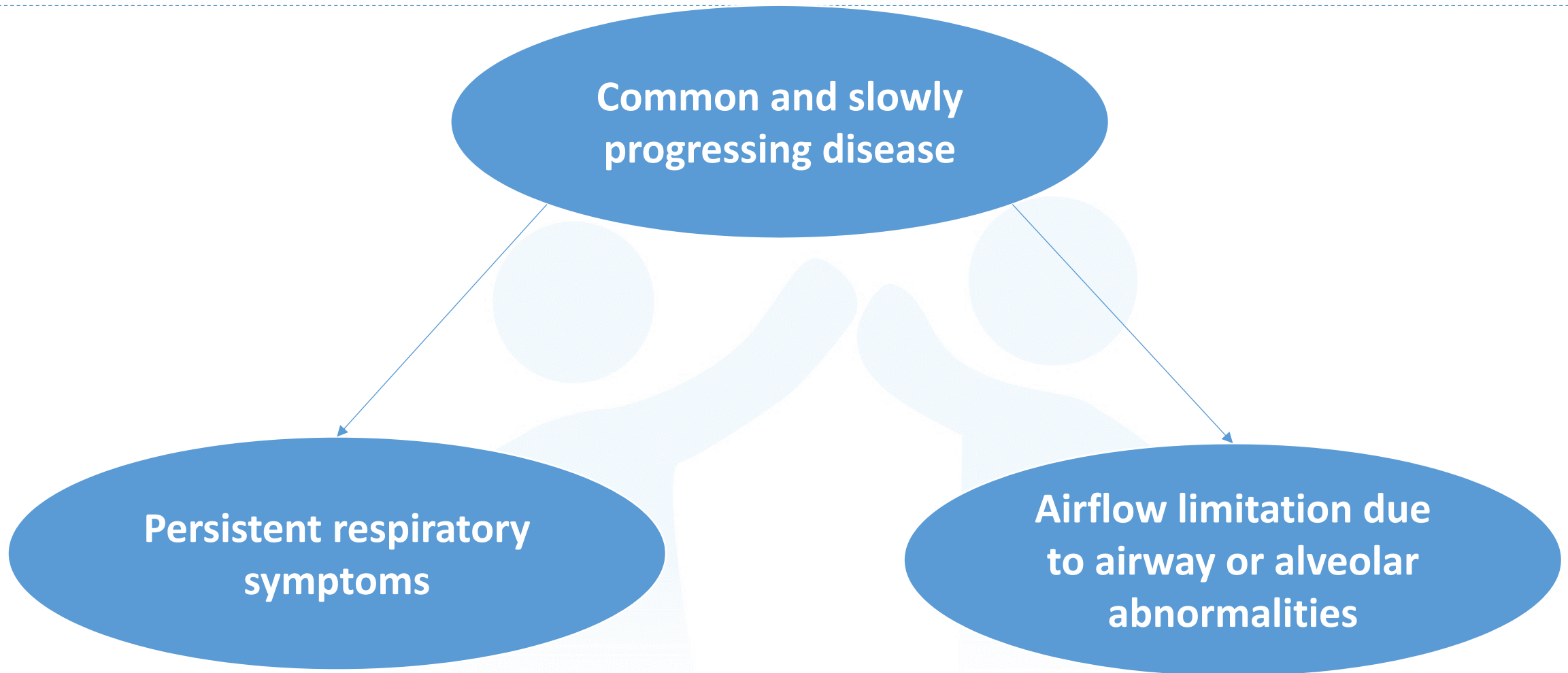
Learning objectives

- Describe the role of pharmacist in the management of COPD patients
- Assess knowledge about COPD
- Assess perception towards COPD
- Assess attitude towards COPD
- Provide appropriate patient education in COPD
- Emphasize the importance of continuing education





Definition





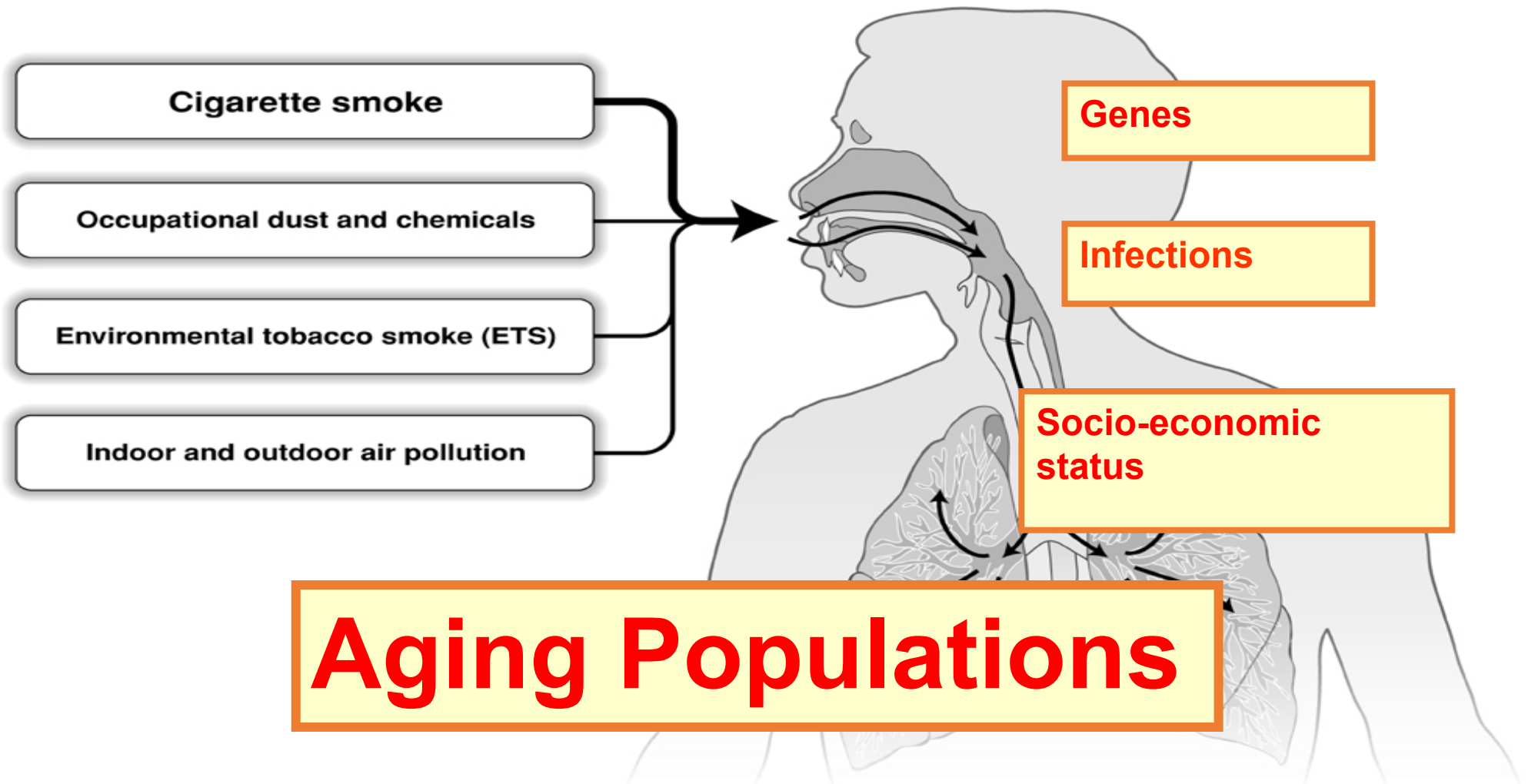
Causes

Long term exposure



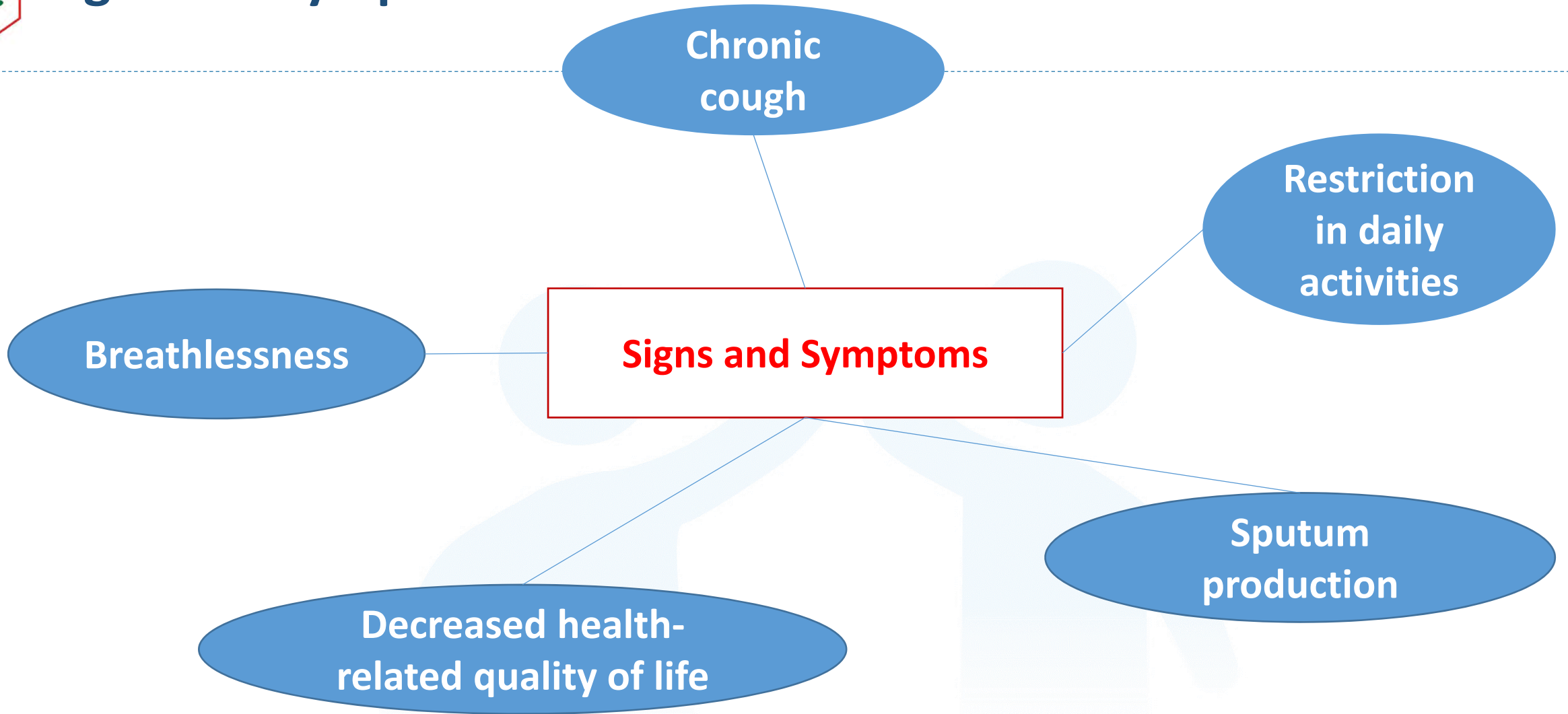


Risk Factors





Signs and symptoms





Exacerbations

Exacerbations of the disease may lead to

**Medical emergencies
and hospitalizations**

**Higher healthcare
expenditure**

**Increased risk of
mortality**





- Ranked eighth as a cause of disease burden by the Global Burden of Disease Study in 2015
- Fourth leading cause of death in the world and is projected to be the 3rd leading cause of death by 2020.
- High and growing prevalence: the highest percentage increase in COPD cases between 1990 and 2010 in the Eastern Mediterranean region:118.7%.
- In Lebanon, in 2012, the prevalence in residents aged 40 years and above was 9.7%. Only 20.2% of the cases were already diagnosed by a physician.



Management

- The disease is non-curable, yet preventable and treatable.
- Symptomatic management: pharmacological and non-pharmacological treatments.



Long-term adherence to pharmacotherapies is pertinent for effective management



Previous studies

Clear association between **adherence** to COPD treatments and both clinical and economic outcomes

Non-adherence increases hospitalization and exacerbation rates



Yet, rates of adherence for medication use in COPD patients remain low

Patient education: crucial for the successful management of COPD

It should include:

- ✓ Information of their condition
- ✓ Warning signs and symptoms
- ✓ Pathology
- ✓ Appropriate treatment



BREATHE study

conducted in ten countries in the MENA region

LEBANON

71.8% of COPD patients were still smoking

30.6% were receiving respiratory treatments

Treatment expectations are undervalued by patients

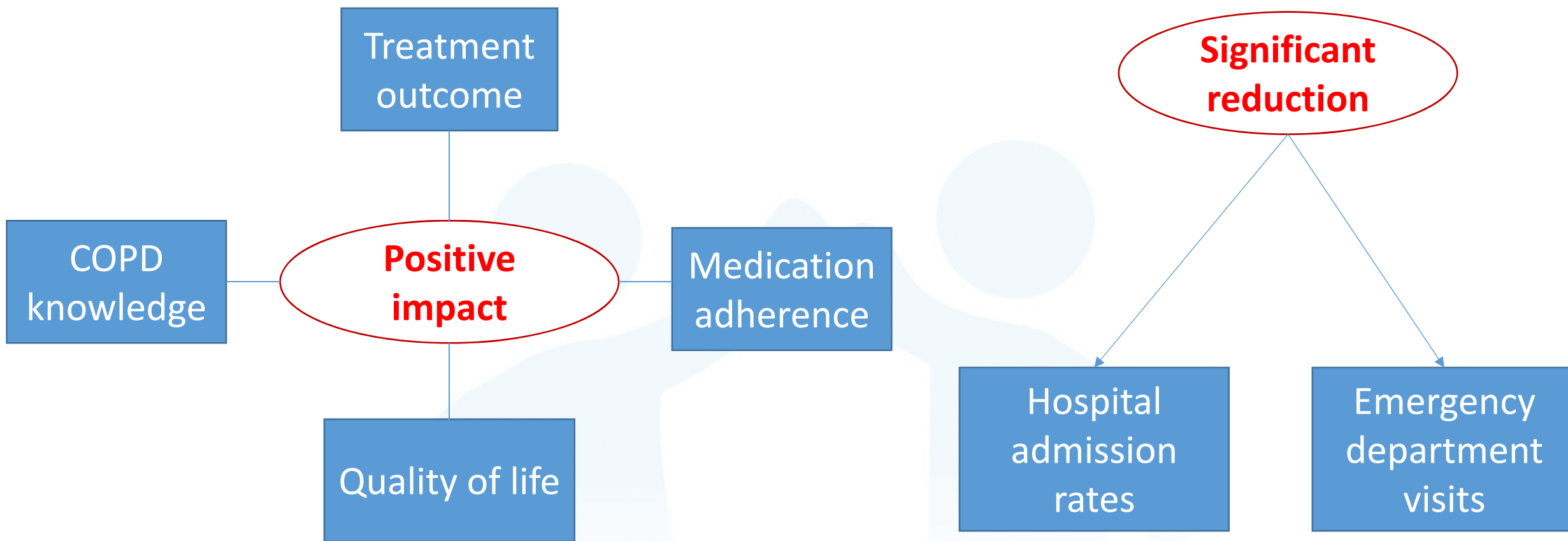
Patient awareness of COPD is suboptimal

Need for more effective patient-physician communication

Need of better patient education



Pharmacy-led patient education





Community pharmacists

Easily accessible: focal point of information and education to patients

Healthcare professionals with the most frequent contact with chronic disease patients

Community pharmacists

Play an essential role in education, counseling, disease prevention and management

The community pharmacy is the first place people visit for consultation regarding health problems

90% of Lebanese pharmacists agreed that patients come to them first for counseling



Rationale and objectives

Rationale

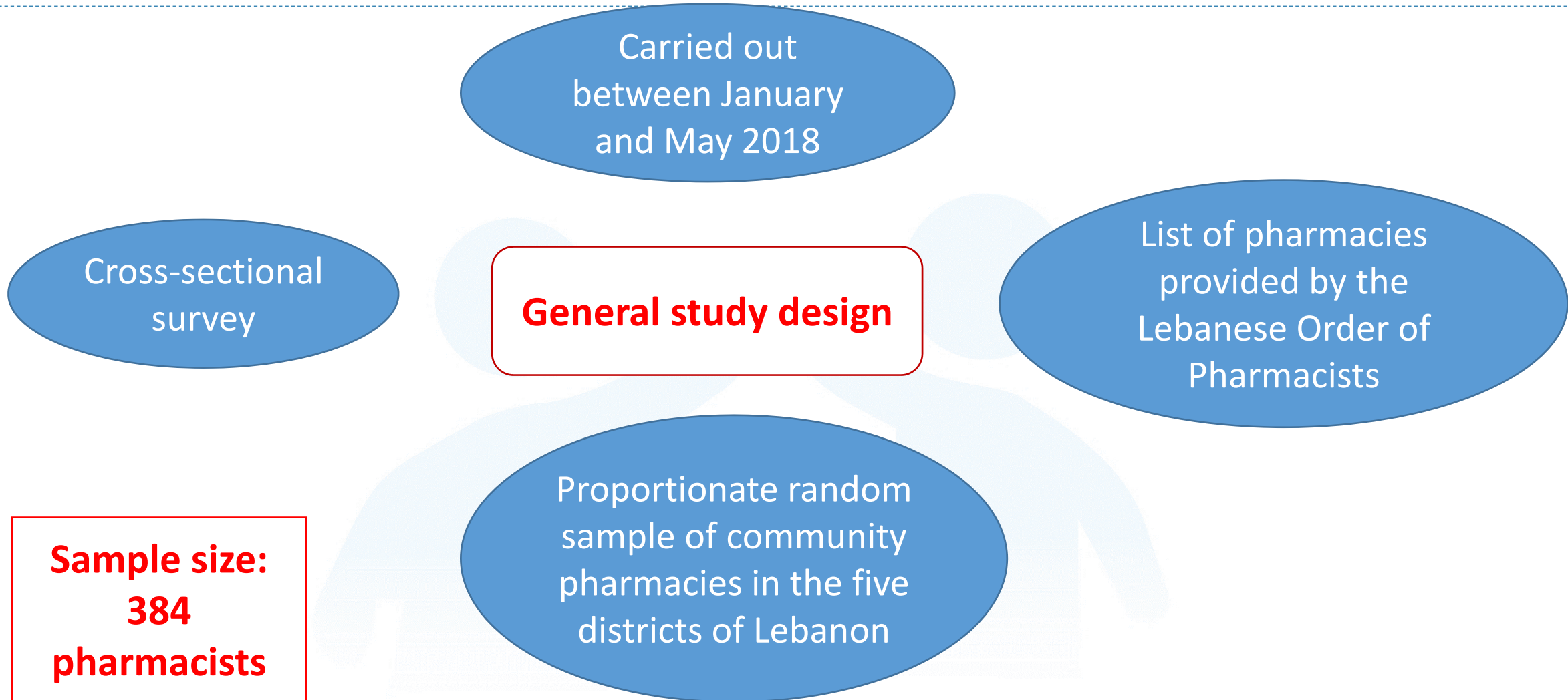
No epidemiological studies from Lebanon assessing the level of knowledge of community pharmacists regarding COPD.

Objectives

- ✓ Evaluate whether the Lebanese community pharmacists have the sufficient knowledge about COPD
- ✓ Explore their attitudes and perceptions towards the management of this disease.



Methods





Questionnaire

Section 1: **socio-demographic characteristics** including years of experience in community pharmacy practice and the highest degree achieved.

Section 2: examined pharmacists' **knowledge** about COPD

Questionnaire

Section 4: examined **attitudes** about COPD

Section 3: examined **practices** towards COPD



Knowledge score

1. What is the difference between COPD and chronic bronchitis?
2. What are the common symptoms of COPD?
3. What are the risk factors for COPD?
4. What changes take place in the body when you have COPD?
5. What complications can COPD lead to?
6. Is COPD contagious?
7. Can COPD be completely cured?
8. Are antibiotics indicated in patients with COPD exacerbation with a viral etiology?
9. What antibiotics would you give to the patient with COPD exacerbation?
10. What is the duration of antibiotics treatment in a patient with COPD exacerbation?
11. Do you think that steroids could be prescribed to patients to treat COPD exacerbation?
12. Is smoking an important cause of COPD?



Perceptions score

1. You always do a patient's medication review (dose, dosage form, duration of therapy, etc.) regarding the concomitant treatments of COPD.
2. Drug-related problems are recorded and forwarded to the physician.
3. Do you usually teach/give advices for your patients on how to use the metered-dose inhaler even if they do not ask you?
4. When a patient is using a metered dose inhaler, do you tell him to shake the canister just before taking a puff?
5. Do you counsel patients regarding the best time to take the inhalers?
6. Do you usually teach/give advices for your patients on how to use the powder inhalers even if they do not ask you?
7. When a patient is using steroids by inhalation, do you counsel him about rinsing the mouth after inhalation?
8. Do you assess the patient's knowledge deficit when they come for counseling?
9. Do you assess the patient's expectations of their COPD therapy?
10. Do you counsel the patient about worsening of COPD symptoms?
11. Do you refer the patient to a physician in case of COPD exacerbations?
12. Do you prescribe mucolytics for patients with COPD exacerbation?
13. If yes which one?



Attitude score

In summary, how much do you agree on the role of the pharmacist in patient education and awareness regarding the following subjects:

1. Smoking cessation
2. Effect of second hand smoking
3. Use of inhalers
4. Role of nutrition
5. Exercise
6. Drug-drug and drug-food interactions
7. Long-term treatment effect
8. Importance of patient compliance
9. Vaccines for the prevention of acute exacerbation
10. Drug use and auto-prescription
11. Antibiotic misuse or abuse
12. Use of humidifier



Questions

- What is the difference between COPD and chronic bronchitis?
 - a. There is no difference
 - b. COPD is characterized by emphysema only
 - c. **COPD is the combination of emphysema and chronic bronchitis**
- Do you prescribe mucolytics for patients with COPD exacerbation?
Yes / No
- If yes which one? **N-acetylcysteine**
- Are antibiotics indicated in patients with COPD exacerbation with a viral etiology? **Yes / No**
- What antibiotics would you most likely give to the patient with COPD exacerbation?
 - a. Amoxicillin
 - b. TMP-SMX
 - c. **Quinolones**
 - d. **B- lactams**
- Is smoking an important cause of COPD? **Yes / No**



Results

30.9% of them practiced pharmacy for more than 12 years

Out of 850 questionnaires distributed, 709 (83.41%) questionnaires were collected back from community pharmacists

66.2% worked more than 40 hours a week

46.5% have patients from mixed demographic areas

Sociodemographic and other characteristics of the participants

57.9% have a bachelor degree in pharmacy

63.4% were pharmacy owners

52.8% live in Mount Lebanon

58% females
42% males

Mean age of the pharmacists was 35 years



Analysis

Knowledge

A significantly higher mean knowledge score was found:

- in Bekaa compared to all other districts
- in pharmacists having patients with mixed demographic areas compared to all other categories.

Attitude

A significantly higher attitude score was found:

- in females compared to males
- in pharmacists having patients from poor demographic area.



Analysis

Perception

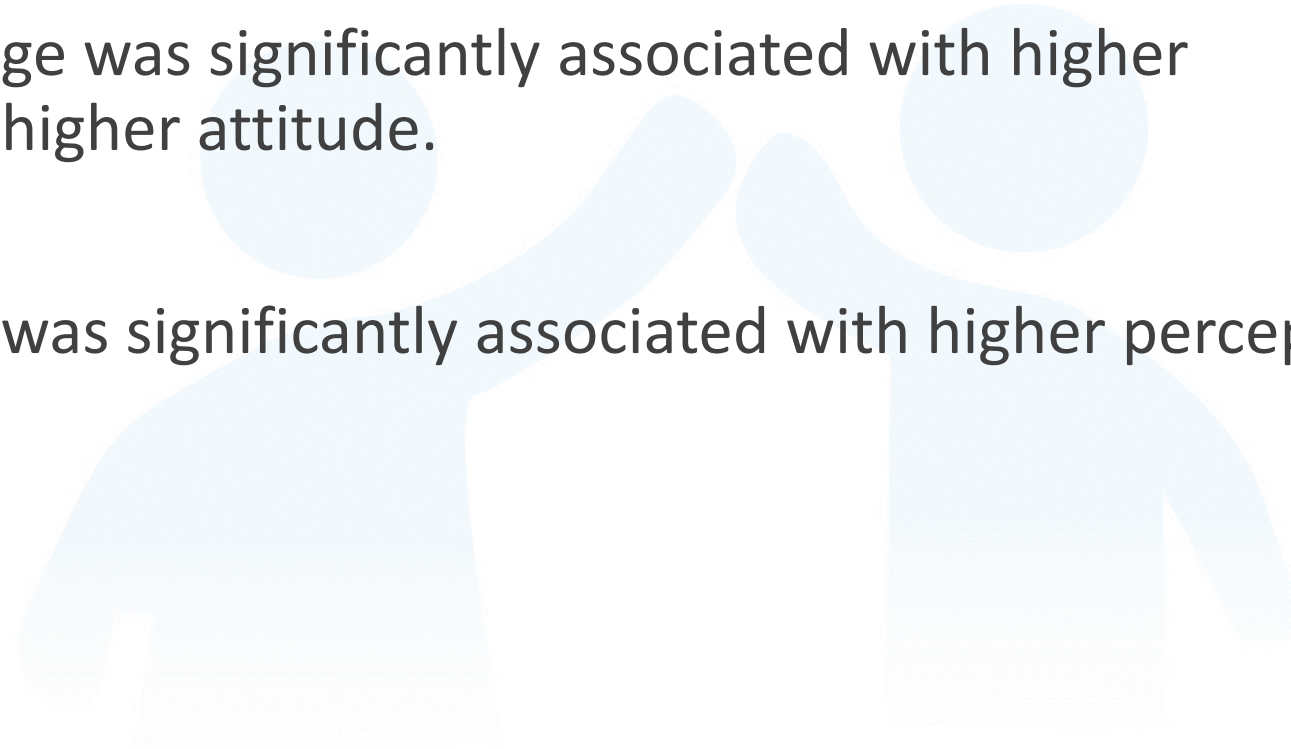
A significantly higher mean perception score was found:

- in males compared to females,
- in South Lebanon compared to all other districts
- in pharmacists with a PhD degree compared to all other degree holders
- in pharmacists working more than 40 hours a week compared to other categories
- in pharmacy employers compared to employees.



Analysis

- Higher age was significantly associated with higher perception score
- Higher knowledge was significantly associated with higher perception and higher attitude.
- Higher attitude was significantly associated with higher perception.





Discussion

The pharmacists' role in education, counseling, disease prevention and management of COPD has been recognized in previous studies

First study evaluating knowledge, practice, and perceptions of Lebanese community pharmacists towards COPD patients.

The only study conducted worldwide addressing the same topic is a study conducted in Finland in 2018



Knowledge about COPD

Our study showed that 52.3% of community pharmacists self-assessed to have good knowledge concerning key issues of COPD and the current care guideline

Previous studies in Finland and other European countries in other topics: guideline knowledge was suboptimal

Pharmacists should base their counseling on evidence-based current care guidelines

Continuing education is needed:

- ✓ Current guidelines content
- ✓ Guidelines implementation into evidence-based medication counseling



Perception about COPD

48.9% of pharmacists have:

- ✓ **A positive attitude**
- ✓ **Perceive themselves as important providers of medication counseling and support for the COPD patients' treatment**

Finnish study:

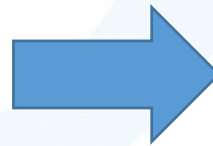
- ✓ Counseling of COPD patients is meaningful
- ✓ Pharmacists have an important role in the COPD patients' treatment



Perception about COPD

Medication counseling offered by Lebanese community pharmacists:

- ✓ **medicinal product driven**
- ✓ **based on lifestyle changes and the needs of each COPD patient**



Counseling focus:

- ✓ Use of medicines (correct use of inhalers, counseling on steroid-containing products, side effects..)
- ✓ Nutrition, physical activity and smoking cessation



Perception about COPD

Previous studies conducted in community pharmacies in Finland, Belgium and the Netherlands:

- ✓ medicinal product–related topics
- ✓ **Less** counseling on guidance for smoking cessation and physical exercise

Study conducted in the US on the role and responsibility of pharmacists in chronic diseases:

Need for pharmacists to focus more on wellness and not only on drugs



KAP relationship regarding COPD

Positive and significant relationship between the three components of KAP variable

Positive association between the number of working hours and the perception score

There are no other studies discussing this association in the same topic

The same findings were also seen in other areas



KAP relationship regarding COPD

Gender differences:

- ✓ females had better attitude
- ✓ being a male was associated with better perception

This finding contradicts with the study conducted in Finland where no significant difference was found



Practice implications

Wider awareness of the COPD current care guideline

Implementation of the guideline to medication counseling

Almost half of respondents showed to have a poor knowledge

Continuing education: needed to confirm that pharmacists have the competency and skills for optimal counseling of COPD patients



The education should include:

- ✓ **Lifestyle changes:** smoking cessation, physical exercise, nutrition
- ✓ **Medication counseling** in relation to each patient's individual needs



Future studies

For the purposes of developing pharmacy education: further studies are needed from both the pharmacists and patients' perspectives

More information is needed about patient perceptions of their information needs of COPD in order to better support self-management of the patients by community pharmacists



Strengths

This is the second specific study concerning KAP towards COPD patients among community pharmacists

Strengths

The survey was filled by community pharmacists in the five districts of Lebanon: the results are representative of the whole country



Conclusion

- Around half of Lebanese community pharmacists self-assessed that they have good knowledge on key components of COPD and its treatment.
- Half of the participants showed a positive attitude towards COPD and perceived that they have an important role in counseling COPD patients.
- COPD medication counseling was found to be medicinal product driven as well as based on lifestyle changes and the individual status and needs of the patient.



Key Points

Pharmacy-led patient education: positive impact on treatment outcome, COPD knowledge, medication adherence, quality of life



Pharmacists' capabilities of fulfilling their role have to be assessed

Inclusion of a pharmacist in the support system for any patient group

Pharmacy-led patient education: significant reduction in hospital admission rates and ED visits



Continuing education is needed to increase community pharmacist's knowledge in order to reach better patient outcomes in COPD management and treatment



Key Points

Medication counseling: correct use of product, inhaler technique, counseling on steroid-containing products, side effects, adherence...

- ✓ Information of their condition
- ✓ Pathology
- ✓ Appropriate treatment
- ✓ Vaccination

**Patient
Education**

Warning signs & symptoms

Lifestyle changes: Exercise, nutrition, physical activity, avoidance of risk factors...

THANK YOU

