Assessment of Knowledge and Attitude of Healthcare Professionals Managing Persons with COPD on Oxygen Therapy In a South Indian Tertiary Care Hospital

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INTRODUCTION

- Chronic obstructive pulmonary disease (COPD) is a condition that causes continuous airflow obstruction, and it is a chronic, treatable, and incurable disease.[1]
- COPD is anticipated to be the third most prevalent cause of mortality globally by 2030, according to the WHO's list.[2]
- In oxygen therapy, greater oxygen concentrations are administered than would occur naturally in ambient air to treat or prevent hypoxia.[3]

INTRODUCTION

- Uncontrolled oxygen administration in COPD patients may worsen Hypercapnia with inhibition of pulmonary vasoconstriction as one of the primary factors. As a result, the ventilation/perfusion mismatch worsens, and the CO_2 dissociation curve shifts to the right (Haldane effect), raising $PaCO_2$. [4,5]
- Knowledge about oxygen therapy for COPD management among healthcare professionals is essential to improve treatment delivery.

AIM/OBJECTIVES

To determine the knowledge and attitude of health care professionals managing persons with COPD on oxygen therapy in a tertiary care hospital.

MATERIALS AND METHODS

The study was approved by Institutional Research Committee (IRC),

Inclusion criteria:

- Critical care physician, Pulmonologist, and Emergency physician
- Respiratory Therapist
- Nursing staff working in ICUs and Pulmonary wards.

Exclusion criteria:

- First, second, and third-year students of Respiratory Therapy
- BSc and MSc Nursing students.

The participants were given a questionnaire containing 25 closed-ended questions (Knowledge 14Q and Attitude 11Q) and each participant was asked to complete the questionnaire individually in his/her own time under the monitoring of the primary investigator.

Knowledge domain consisted of 14 multiple-choice questionnaires (MCQs), and the answers obtained in MCQs were scored as binary variables (i.e., each correct response was allotted 1 point and each incorrect response was allotted 0 points).

Knowledge categorized into three levels of knowledge based on **Bloom's cutoff point** method.

High level (80-100%): 12-14 points

Moderate level (60-79%): 9-11 points

Low level (less than 60%): 0-8 points

1.Attitude domain consisted of 11 questions, which were scored using a 5-point Likert scale under the categories of strongly agree, agree, neutral, disagree, and strongly disagree.

The answers obtained from the 5-point Likert scale were scored as positive, negative, and neutral attitude (i.e., strongly agree, agree was categorized as a positive attitude, and disagree, strongly disagree was categorized as a negative attitude).

1.Data obtained were exported into a spreadsheet.

Stepwise analysis of logistics was performed.

RESULTS

Figure 11- Overall knowledge of participants as per blow-n (n=166) cut off

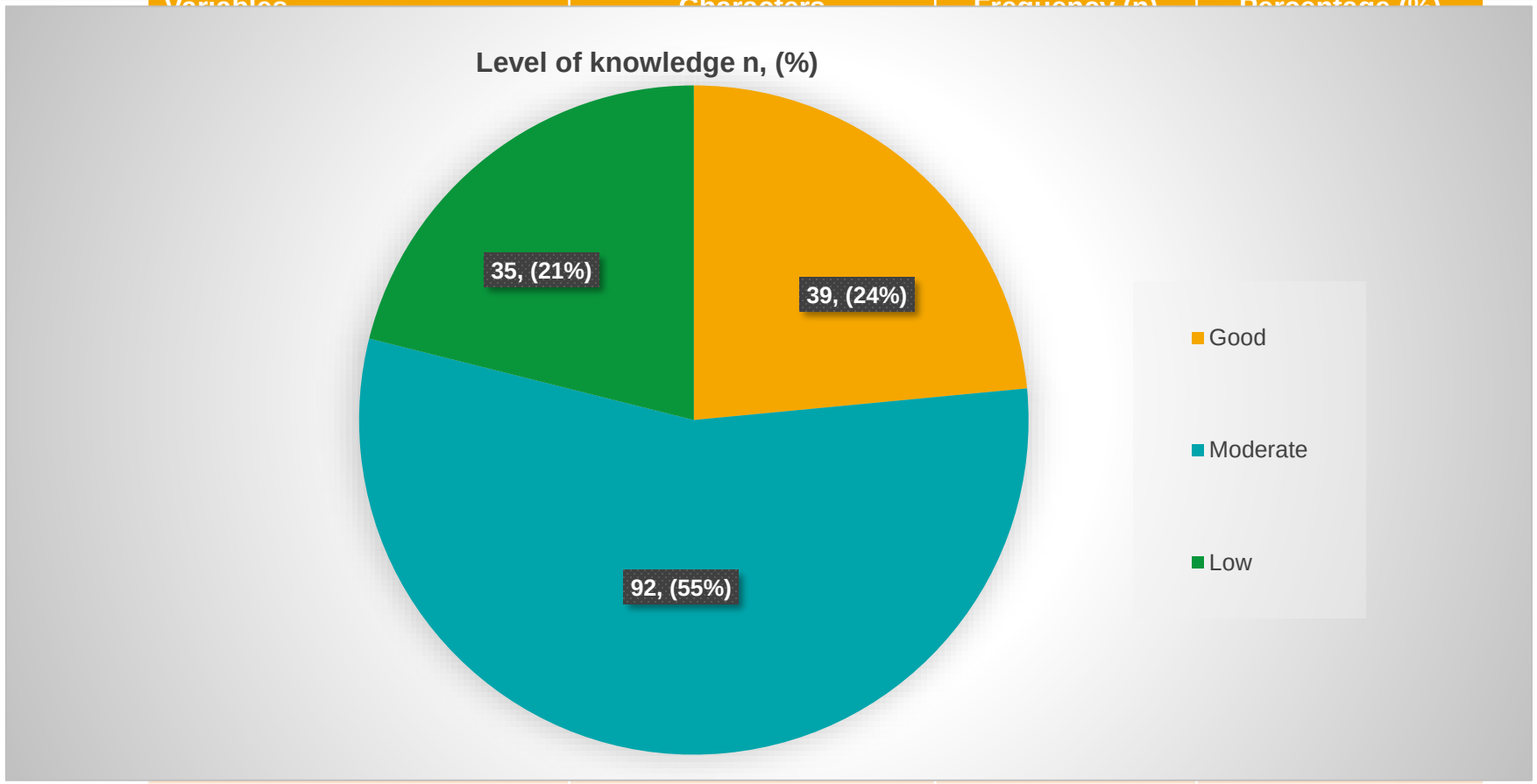
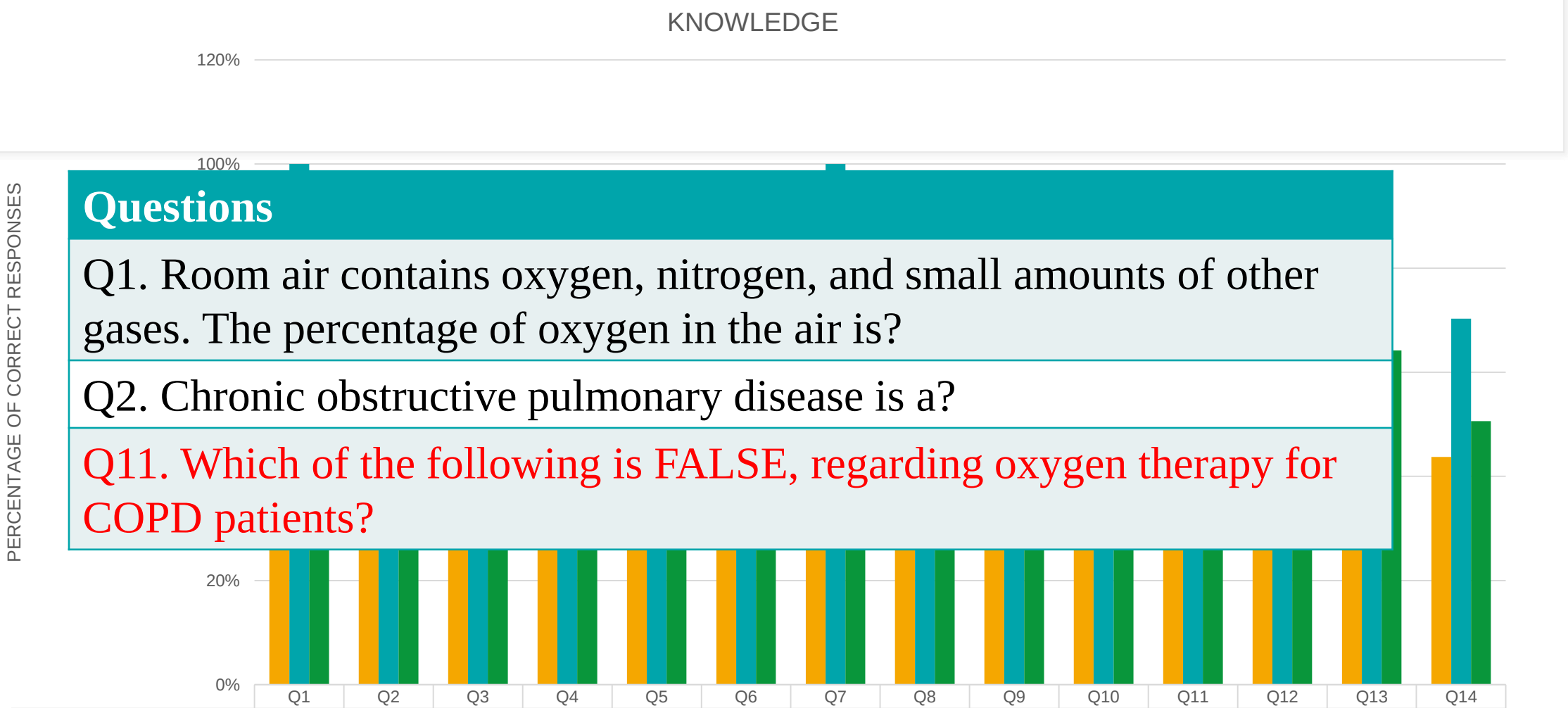
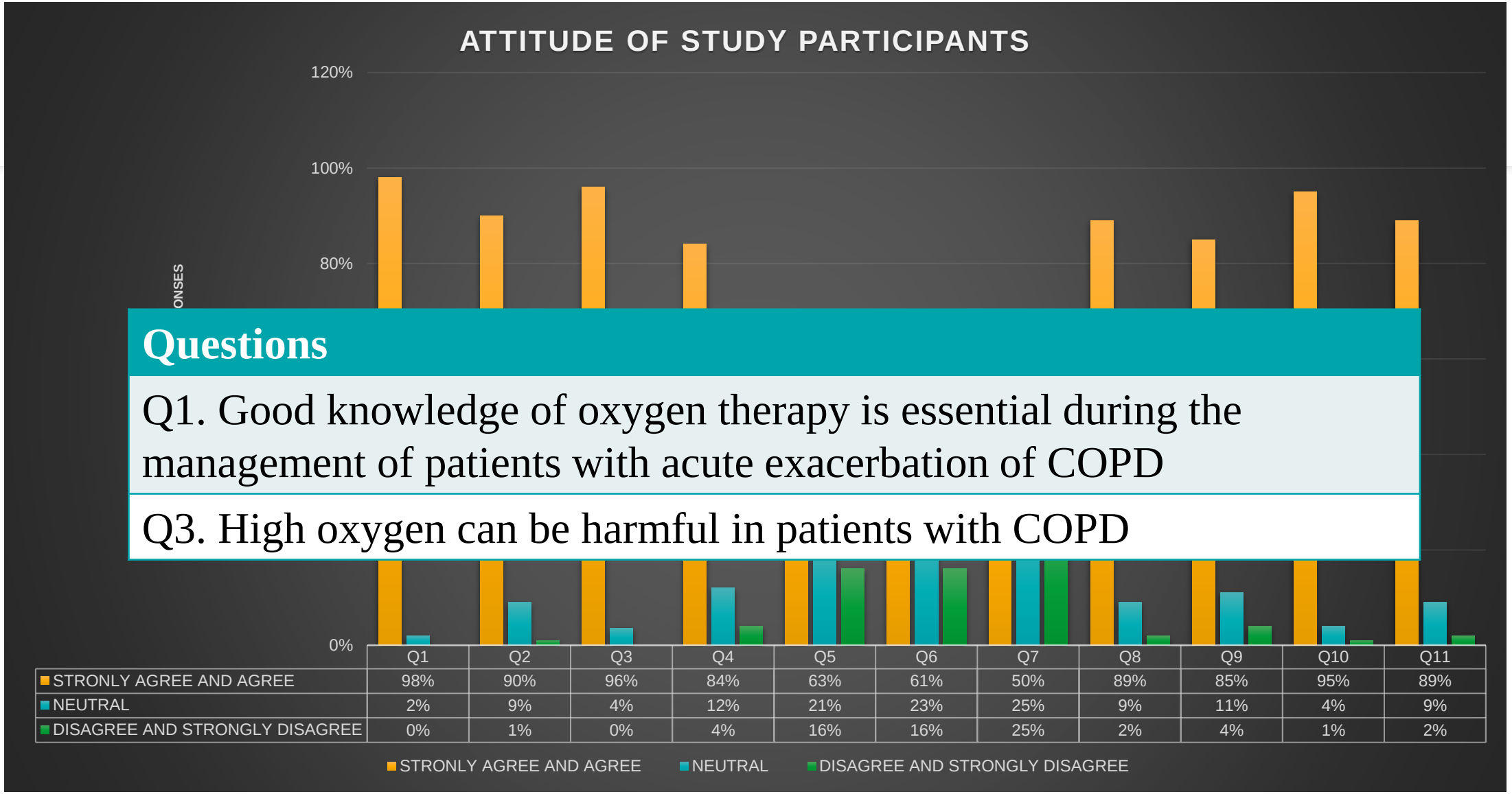


Figure 2- Healthcare professional's responses to the knowledge



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14
RESPIRATORY THERAPIST	98%	98%	88%	44%	77%	85%	92%	52%	60%	58%	35%	88%	77%	44%
DOCTORS	100%	97%	84%	65%	81%	57%	100%	65%	89%	49%	78%	86%	65%	70%
STAFF NURSE	91%	91%	85%	57%	69%	85%	75%	51%	75%	52%	37%	70%	64%	51%

Figure 3- Healthcare professional's responses to the attitude



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
STRONLY AGREE AND AGREE	98%	90%	96%	84%	63%	61%	50%	89%	85%	95%	89%
NEUTRAL	2%	9%	4%	12%	21%	23%	25%	9%	11%	4%	9%
DISAGREE AND STRONGLY DISAGREE	0%	1%	0%	4%	16%	16%	25%	2%	4%	1%	2%

Table 2- Comparison between score percentages in each profession by ANOVA

	n=96	Mean (SD)	P value
Doctor	48	10.864865 (1.960)	0.00379
Respiratory Therapy	37	9.958333 (1.515)	
Staff Nurse	81	9.530864 (2.214)	

Conclusion

The study revealed suboptimal and inadequate knowledge of healthcare professionals regarding oxygen therapy in COPD patients. However, they showed a positive attitude toward oxygen therapy in COPD patients. Training should be imparted to healthcare workers to establish good knowledge about oxygen therapy and managing patients with COPD.

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THANK YOU