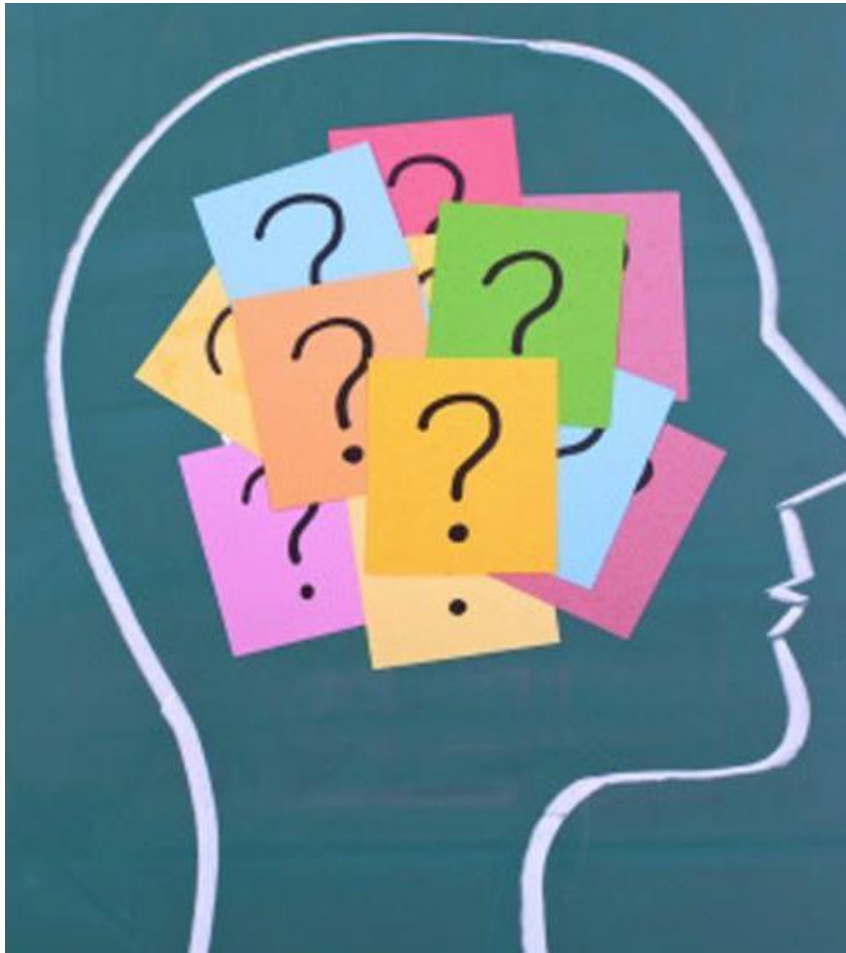


Beliefs about medicines in obstructive pulmonary diseases



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Material and methods

- This study included 325 patients with asthma or COPD aged 63.04±11.29 years.
- The study used standardized questionnaires:
 - the Adherence to Refills and Medication Scale (ARMS)
 - 12-48 points, higher scores indicating lower adherence
 - Beliefs about Medicines Questionnaire (BMQ)
 - consists of four domains assessing respondents’ beliefs about the overuse of medicines by doctors, beliefs about the harmfulness of medicines, beliefs about the necessity of medication and concerns about medicines.
 - 4-20 points
 - higher scores indicate stronger beliefs about medicines
 - Test of Adherence to Inhalers (TAI)
 - 12-48 points
 - ≤ 24 points: sporadic and deliberate patterns of non-compliance

Key results

Questionnaire	Score range	Mean per question	Mean±SD	
BMQ	Belief that medicines are overused by doctors	4-20	3.19	12.74±3.18
	Belief that medicines are harmful	4-20	2.82	11.29±2.70
	Belief in the necessity of medication	5-25	3.87	19.35±2.97
	Concerns about medicines	5-25	3.33	16.67±3.25
ARMS	Total ARMS score	12-48	1.76	21.15±6.23
	Medication taking as prescribed	8-32	1.68	13.41±4.44
	Refills on schedule	4-16	1.94	7.74±2.21
			%	
TAI*	Sporadic non-compliance			74.15%
	Deliberate non-compliance			59.69%
	Unconscious non-compliance			11.38%



Patients' characteristics

Variable	Total (n=325)	
Sex	Female	159 (48.92%)
	Male	166 (51.08%)
Marital status	Single	86 (26.46%)
	In a relationship	239 (73.54%)
Education	Tertiary	67 (20.62%)
	Secondary	141 (43.38%)
	Vocational	87 (26.77%)
	Primary	30 (9.23%)
Place of residence	Urban area	205 (63.08%)
	Rural area	120 (36.92%)
Professional status	Economically active	83 (25.54%)
	Working pensioner	25 (7.69%)
	Old-age pensioner	157 (48.31%)
	Disability pensioner	48 (14.77%)
	Student	1 (0.31%)
	Unemployed	11 (3.38%)
Smoking status	Regular smoker	83 (25.54%)
	Occasional smoker	47 (14.46%)
	Non-smoker	195 (60.00%)
Duration of disease	< 1 year	9 (2.77%)
	1-4 years	68 (20.92%)
	5-10 years	122 (37.54%)
	> 10 years	126 (38.77%)
Number of inhaled medications used	1	105 (32.31%)
	2	176 (54.15%)
	3 or more	44 (13.54%)
Medications	SAMA	84 (25.85%)
	SABA	43 (13.23%)
	LABA	206 (63.38%)
	LAMA	199 (61.23%)
	Theophylline	52 (16.30%)
	ICS	112 (34.46%)



Linear regression analysis

BMQ	ARMS											
	Total score				Medication taking as prescribed				Refills on schedule			
	Parameter	95%CI		p	Parameter	95%CI		p	Parameter	95%CI		p
Overuse	-0.105	-0.402	0.191	0.487	-0.085	-0.303	0.134	0.45	-0.021	-0.125	0.083	0.694
Harm	0.417	0.053	0.781	0.025 *	0.278	0.009	0.546	0.043 *	0.14	0.012	0.267	0.033 *
Necessity	-0.34	-0.562	-0.117	0.003 *	-0.229	-0.393	-0.065	0.007 *	-0.11	-0.188	-0.033	0.006 *
Concerns	0.175	-0.083	0.434	0.185	0.123	-0.067	0.314	0.206	0.052	-0.039	0.143	0.262

Conclusions:

1. Patients with obstructive pulmonary diseases show moderate adherence to the oral and inhaled pharmacotherapy.
2. Beliefs about medications have a significant impact on adherence to oral and inhaled medications.

