



Original Research Article

Assessment of Knowledge, Attitude, and Practice Among Patients with Asthma

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Abstract: Asthma management depends heavily on patients' knowledge, attitudes, and practices (KAP). This research synthesizes evidence from recent cross-sectional and intervention studies to assess KAP among asthma patients, identify determinants affecting these variables, and outline intervention needs. Findings reveal major gaps in knowledge, persistent misconceptions, and poor adherence to best practices in asthma care, with educational attainment and counseling strongly influencing outcomes.

Keywords: Asthma management, Knowledge, attitudes, and practices (KAP), Patient education, Medication adherence, Determinants of asthma care.

INTRODUCTION

Asthma remains a globally prevalent chronic disease affecting over 262 million people. Despite significant advances in treatment, poorly controlled asthma is common—often due to inadequate patient awareness, negative attitudes, and suboptimal self-management practices. Understanding the landscape of KAP among asthma patients is critical for designing effective and sustainable educational and policy interventions.

METHODOLOGY OVERVIEW

Multiple cross-sectional studies and interventional trials have assessed asthma KAP using validated questionnaires such as the Knowledge, Attitude, and Self-Efficacy Asthma Questionnaire (KASE-AQ) and similar instruments^{[1][2][3]}. These surveys commonly include:

- Demographic profiles.
- Knowledge assessment (nature of asthma, trigger identification, signs/symptoms, medication use).
- Attitude evaluation (perceived seriousness, beliefs about control, stigma).
- Practice behaviors (medication adherence, inhaler use, emergency response, avoidance of triggers).

Knowledge Among Asthma Patients

Key Findings

- Mean knowledge scores are generally low to moderate; only 35%-50% of patients answer more than half of knowledge questions correctly^{[3][2][4]}.

- Specific areas of poor knowledge include proper inhaler technique, roles of controller vs. reliever medications, and the importance of avoidance of triggers.

Determinants of Knowledge

- **Education:** Higher educational attainment is consistently linked to better asthma knowledge^{[2][4]}.
- **Younger Age:** Younger patients tend to have higher scores^{[3][4]}.
- **Experience:** Having asthmatic relatives or witnessing asthma attacks improves recognition of symptoms and correct practices^[3].
- **Counseling:** Targeted patient counseling markedly increases post-intervention knowledge scores^[5].

Illustrative Table: Sample Knowledge Domain Results

Domain	Mean Score (Max)	High (>80%)	Low (<60%)
Symptoms	3.4 (5)	34%	66%
Triggers	3.3 (6)	30%	70%
Treatment	5.0 (8)	42%	58%

ATTITUDES TOWARD ASTHMA

Patterns

- Most patients express positive but sometimes overly optimistic attitudes about asthma, believing control is easily achieved despite poor understanding of management^{[4][2]}.
- Negative attitudes—fear, embarrassment, or stigma—are present in up to 40% of patients and may lead to concealment, poor adherence, and increased risk of anxiety/depression^{[6][7]}.
- Family and social support play a significant role in shaping patient attitudes.

Correlations

Educational level, social support, and positive counseling experiences are associated with more constructive attitudes, which in turn correlate with improved practice adherence^{[4][2]}.

PRACTICE BEHAVIORS

Self-Management Practices

- Only 18%–36% of patients demonstrate good asthma self-management or inhaler technique; most have serious deficiencies despite reasonable knowledge^{[2][7]}.
- Common practice gaps include irregular medication use, incorrect inhaler use, delayed care in exacerbations, and continued exposure to triggers.

Influence of Knowledge and Attitude

- Strong but imperfect correlations exist between knowledge, attitude, and practices ($r = 0.136$ to 0.23)^{[2][4]}.
- Knowledge and attitude independently predict practice quality, but robust education and skills training are required to translate knowledge into action.

Sample Bar Chart: KAP Scores Among Asthma Patients

- **High KAP:** 6%
- **Moderate:** 35%
- **Low:** 59%

EFFECT OF INTERVENTIONS

Educational interventions such as structured patient counseling, self-management programs, and digital reminders have consistently improved KAP scores and clinical outcomes (e.g., fewer hospitalizations, better asthma control scores)^{[4][5][8]}.

Socioeconomic and Demographic Factors

- **Socioeconomic status,** occupation, and proximity to healthcare resources have measurable impacts on knowledge, attitude, and practice scores^[3].
- **Gender and age** may affect certain domains: younger, more educated, and professionally employed participants generally outperform older, less educated, or unemployed peers.

Visuals and Graphical Summaries

Figure 1: Proportion of Asthma Patients With Satisfactory KAP Levels

KAP Level	Proportion (%)
High	6
Moderate	35
Low	59

Figure 2: Correlation Coefficients Between KAP Domains

Pair	Correlation (r)
Knowledge–Attitude	0.191
Knowledge–Practice	0.215
Attitude–Practice	0.136

Visuals can be drawn as simple bar or line graphs for presentation.

DISCUSSION

- While higher knowledge is positively correlated with better attitudes and practices, significant gaps persist—especially in the translation of knowledge into action^{[2][4]}.
- Educational attainment and direct patient counseling are the strongest predictors of high-quality KAP^{[3][5]}.
- Inadequate practical skills (e.g., inhaler technique) are a common and persistent problem, even among knowledgeable patients.
- Social support and positive attitudes alleviate the psychological burden of asthma, leading to improved self-management.

Recommendations

- **Comprehensive education:** Integrate structured asthma education in routine care.
- **Tailored counseling:** Focus on practical demonstrations and myth-busting regarding inhaler use and medication adherence.
- **Family and community engagement:** Encourage supportive environments to improve patient attitudes and practices.
- **Routine re-assessment:** Use validated KAP instruments to track progress and address gaps at regular intervals.

CONCLUSION

Significant deficits in KAP among asthma patients emphasize the critical need for patient-centered educational interventions and counseling programs. Targeting demographic and socio-economic barriers while bolstering skills-based training will be pivotal in achieving long-term control of asthma and reducing preventable complications.

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