

## Knowledge, Attitude, and Practice Assessment of Adult Asthmatic Patients towards Pharmacotherapy of Asthma at Jimma University Specialized Hospital

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Received: December 09, 2019; Published: October 31, 2020

### Abstract

**Background:** Inadequate management of asthma can lead to a significant consequence, leading to social and professional dependence and can lead to death due to respiratory failure. Much of the morbidity from asthma is believed to be due to factors such as denial of having a chronic condition, poor knowledge of the disease process and medication use, poor understanding on the use of inhalers and poor self-management. Thus, an evaluation of patient's knowledge of medicine and its use may help to screen the problems in therapy and improve the therapeutic outcomes. Therefore, we have assessed knowledge, attitude, and practice of asthmatic patients towards pharmacotherapy of asthma at Jimma University Specialized Hospital, Jimma Zone, Oromia Region, Ethiopia.

**Method:** Prospective cross-sectional study was conducted on a sample of 132 asthmatic patients attending Jimma University Specialized Hospital. The study subjects are selected using systematic random sampling technique from February 2019 - March 2019 G.C. Quantitative data was collected on demographic, knowledge, attitude and practice towards asthma treatments by using structured questionnaires.

**Result:** The recent study shows 66.1% of the asthmatic patients have knowledge about asthma and exacerbate factors which increased the risk of asthma attack. Knowledge of male patients was better as compared to females. Education levels and school type also affect the knowledge of patients. Respondents in the younger age (18-30) groups had comparatively higher knowledge than those aged  $\geq 60$  years.

**Conclusion:** Knowledge about asthma is poor among asthma patients of JUSH and misconceptions are prevalent. Strategies are needed to increase education and awareness about the disease in order to improve disease management, reduce stigmatization and

**Keywords:** Asthma; Jimma University Specialized Hospital; KAP; Pharmacotherapy

### Background

Asthma affects an estimated 300 million individuals worldwide [1]. It is a serious global health problem affecting all age groups, with increasing prevalence in many developing countries, rising treatment costs, and a rising burden for patients and the community. It is associated with symptoms such as wheezing, shortness of breath, chest tightness and cough that vary over time in their occurrence, frequency and intensity [2].

Asthma cannot be cured completely but clinical episodes can be prevented and controlled by proper management and adequate knowledge of the disease. Proper management may relieve the symptoms of asthma and can help the patient to carry a normal social and professional life, while inadequate management can lead to a significant consequences leading to social and professional dependence and can lead to death due to respiratory failure [3].

Moreover, nowadays there is increase in the incidence of chronic diseases such as bronchial asthma (BA) and chronic obstructive pulmonary disease (COPD), these ailments require long-term or even lifelong therapy which demands the appropriate use of medications to improve the outcome and better quality of life.

Consequently, appropriate use of asthma medication can lead to reduced asthma morbidity and mortality. Accordingly, most international asthma management guidelines recommend that patients initially diagnosed with asthma receive short acting beta2 agonist (SABA), preferably by inhalation, combined with inhaled steroid. If poor response is noted, the patient should be prescribed a long acting beta2 agonist (LABA), combined with inhaled steroid. Salbutamol or albuterol is the most widely prescribed bronchodilator on the control of asthma [4].

However, much of the morbidity from asthma is believed to be due to factors such as denial of having a chronic condition, poor knowledge of the disease process and medication use, poor understanding on the use of inhalers and poor self-management [5].

Thus, patient education is one of the pillars for proper asthma management. The patients should have knowledge about their asthma etiology, pathophysiology, precipitating factors, and dangers of underuse or over- use of medications. As a result, an evaluation of patient's knowledge of medicine and its use may help to screen the problems in therapy and improve the therapeutic outcomes. Asthma patients should be made aware about the positive attitude towards treatment, which is needed for good disease management [6]. But no previous studies examined knowledge, attitude and practice towards management of Asthma in study area, Jimma University Specialized Hospital.

### **Objective of the Study**

The main aim of this study was to assess knowledge, attitude, and practice of asthmatic patients towards pharmacotherapy of asthma at Jimma University Specialized Hospital, Jimma Zone, Oromia Region, Ethiopia.

### **Methodology**

The study was conducted in Jimma University Specialized Hospital (JUSH), Jimma town, Jimma zone, Oromia regional state. It is found around 346 km from Addis Ababa. JUSH is the only teaching and referral hospital in the southwestern part of the country. The hospital gives inpatient services in six clinical departments (Internal medicine, surgery, gynecology and obstetrics, pediatrics, psychiatry and ophthalmology) and outpatient services in the chronic and ambulatory clinics (diabetes, cardiovascular, asthma, epilepsy, tuberculosis and HIV and psychiatry), dermatology, dentistry and other outpatient services.

### **Results**

A total of 132 study participants were interviewed making the response rate 100%. Among 132 respondents 56.8% were males and mean age was  $29 \pm 11$  years. Most patients were Oromo and Amhara ethnic groups which is (45%) and (19.7%) respectively. Most of the study patient age were (18 - 30) and (31 - 45) which is (49.2%) and (31.9%) respectively. 30.3% of participants were graduated from college, 16.7% of them had secondary school and 20.5% had a primary school. More than half of the participants were working and 22.7% were jobless. 53% of participants had a family history of asthma. The marital status of the participants' revealed that majority, 49.2% of them were married.

| Variables                        | Prevalence        | Percentage (%) |      |
|----------------------------------|-------------------|----------------|------|
| Age                              | 18 - 30           | 69             | 52.3 |
|                                  | 31 - 45           | 38             | 28.8 |
|                                  | 46 - 60           | 16             | 12.1 |
|                                  | > 60              | 9              | 6.8  |
| Sex                              | Male              | 75             | 56.8 |
|                                  | Female            | 57             | 43.2 |
| Marital Status                   | Married           | 65             | 49.2 |
|                                  | Single            | 43             | 32.6 |
|                                  | Divorced          | 12             | 9.1  |
|                                  | Widowed           | 12             | 9.1  |
| Educational Status               | Illiterate        | 29             | 22   |
|                                  | Primary           | 27             | 20.5 |
|                                  | Secondary         | 22             | 16.7 |
|                                  | High School       | 14             | 10.6 |
|                                  | College or Higher | 40             | 30.3 |
| Occupation                       | Housewife         | 29             | 22   |
|                                  | Employed          | 38             | 28.8 |
|                                  | Farmer            | 24             | 18.2 |
|                                  | Daily labor       | 12             | 9.1  |
|                                  | Merchant          | 18             | 13.6 |
|                                  | Others            | 11             | 8.3  |
|                                  |                   |                |      |
| Ethnicity                        | Oromo             | 60             | 45   |
|                                  | Amhara            | 26             | 19.7 |
|                                  | Gurage            | 9              | 6.8  |
|                                  | Others            | 37             | 28   |
| Other ethnicity                  | Yem               | 11             | 8.3  |
|                                  | Wolayita          | 11             | 8.3  |
|                                  | Tigre             | 4              | 3    |
|                                  | Sidama            | 2              | 1.5  |
| Smoking pattern                  | Never             | 117            | 88.6 |
|                                  | Given up          | 11             | 8.3  |
|                                  | Current           | 4              | 3    |
| Duration of Asthma               | 6 - 12 months     | 35             | 26.5 |
|                                  | 1 - 2 years       | 22             | 16.7 |
|                                  | 2 - 3 years       | 33             | 25   |
|                                  | > 3 years         | 42             | 31.8 |
| Family history of asthma         | Yes               | 71             | 53.8 |
|                                  | No                | 61             | 46.2 |
| Monthly income in Ethiopian birr | < 1000            | 26             | 23.6 |
|                                  | 1000 - 2000       | 30             | 27.3 |
|                                  | 2001 - 3000       | 20             | 18.2 |
|                                  | 3001 - 4000       | 23             | 20.9 |
|                                  | > 4000            | 11             | 10   |
| Family support                   | Yes               | 66             | 50   |
|                                  | No                | 66             | 50   |

**Table 1:** Characteristics of participants (n = 132).

**Overall assessment of knowledge, attitude and practices**

| Domain    | Total no of items | Maximum score | Mean score | Median score | Percentage mean score |
|-----------|-------------------|---------------|------------|--------------|-----------------------|
| Knowledge | 17                | 17            | 11.34      | 11           | 66.71                 |
| Attitude  | 5                 | 25            | 16.39      | 15           | 65.56                 |
| Practice  | 10                | 10            | 5.73       | 06           | 57.30                 |

**Table 2:** Elucidate total number of items in each component of KAP questionnaire and maximum score, mean score, median score, percentage mean.

**Assessment of subject’s knowledge**

Most of participants knew as asthma is a chronic inflammatory disorder of airways (77.3%). While, 78.8% of subjects knew as symptom of asthma is breathing difficulty with wheezing sound. Only, 47.7% of subjects knew as smoking can make asthma worse and 50.8% knew that inhalers/tablets/syrups could be used for treatment of asthma. Also, 65.2% of participants answered correctly about asthma medicines are usually of two types one to give immediate relief and one to prevent symptoms asthma and 34.8% had incorrect answers. 53.3% had adequate knowledge regarding the asthma symptoms can be caused by allergy and the rest 46.7% had a poor knowledge. Only 26.5% had good knowledge about asthma symptoms can be caused by exercise.

| Questions  |            | Prevalence (no) | Percentage (%) | Correct (%) | Incorrect (%) |
|--|------------|-----------------|----------------|-------------|---------------|
| Asthma is a chronic inflammatory disorder of airways                                       | Agree      | 102             | 77.3           | 77.3        | 22.8          |
|  | Disagree   | 27              | 20.5           |             |               |
|  | No opinion | 3               | 2.3            |             |               |
| In asthma breathing tubes in lungs become narrow due to mucus (sputum) collection.         | Agree      | 59              | 44.7           | 44.7        | 55.3          |
|  | Disagree   | 52              | 39.4           |             |               |
|  | No opinion | 21              | 15.9           |             |               |
| In asthma breathing tubes in lungs become narrow due to tightening of muscles around them. | Agree      | 66              | 50             | 50          | 50            |
|  | Disagree   | 30              | 22.7           |             |               |
|  | No opinion | 36              | 27.3           |             |               |
| In asthma breathing tubes in lungs become narrow due to swelling of their walls.           | Agree      | 63              | 47.7           | 47.7        | 52.3          |
|  | Disagree   | 26              | 19.7           |             |               |
|  | No opinion | 43              | 32.6           |             |               |
| Symptom of asthma are breathing difficulty with wheezing sound                             | Agree      | 104             | 78.8           | 78.8        | 21.2          |
|  | Disagree   | 11              | 8.3            |             |               |
|  | No opinion | 17              | 12.9           |             |               |
| Asthma symptoms vary time to time, less at some times and more at other times              | Agree      | 83              | 62.9           | 62.9        | 37.4          |
|  | Disagree   | 42              | 31.8           |             |               |
|  | No opinion | 7               | 5.3            |             |               |
| Asthma symptoms more likely to occur at night or early morning                             | Agree      | 75              | 56.8           | 56.8        | 43.2          |
|  | Disagree   | 43              | 32.6           |             |               |
|  | No opinion | 14              | 10.6           |             |               |

|  |            |    |      |      |      |
|--|------------|----|------|------|------|
| Asthma symptoms can be caused by:  |            |    |      |      |      |
| Allergy  | Agree      | 73 | 55.3 | 55.3 | 46.7 |
|  | Disagree   | 46 | 34.8 |      |      |
|  | No opinion | 13 | 9.8  |      |      |
| Air pollution(dust)  | Agree      | 47 | 35.6 | 35.6 | 64.4 |
|  | Disagree   | 57 | 43.2 |      |      |
|  | No opinion | 28 | 21.2 |      |      |
| Living with asthma patient   | Agree      | 35 | 26.5 | 26.5 | 73.5 |
|  | Disagree   | 58 | 43.9 |      |      |
|  | No opinion | 39 | 29.5 |      |      |
| Common cold  | Agree      | 47 | 35.6 | 35.6 | 64.4 |
|  | Disagree   | 41 | 31.1 |      |      |
|  | No opinion | 44 | 33.3 |      |      |
| Exercise   | Agree      | 35 | 26.5 | 26.5 | 73.5 |
|  | Disagree   | 52 | 39.4 |      |      |
|  | No opinion | 45 | 34.1 |      |      |
| Certain food   | Agree      | 27 | 20.5 | 20.5 | 79.5 |
|  | Disagree   | 46 | 34.8 |      |      |
|  | No opinion | 59 | 44.7 |      |      |
| Without obvious reason   | Agree      | 24 | 18.2 | 18.2 | 81.8 |
|  | Disagree   | 56 | 42.4 |      |      |
|  | No opinion | 52 | 39.4 |      |      |
| Smoking make asthma worse  | Agree      | 63 | 47.7 | 47.7 | 52.3 |
|  | Disagree   | 29 | 22   |      |      |
|  | No opinion | 40 | 30.3 |      |      |
| Asthma medicine can be given a tablet/syrup/inhalers   | Agree      | 67 | 50.8 | 50.8 | 49.2 |
|  | Disagree   | 38 | 28.8 |      |      |
|  | No opinion | 27 | 20.5 |      |      |
| The best way to take asthma medicine is inhalation   | Agree      | 74 | 56.1 | 56.1 | 43.9 |
|  | Disagree   | 18 | 13.6 |      |      |
|  | No opinion | 40 | 30.5 |      |      |
| Asthma medicine are usually of two types- one to give immediate relief and other to prevent symptoms | Agree      | 86 | 65.2 | 65.2 | 34.8 |
|  | Disagree   | 22 | 16.7 |      |      |
|  | No opinion | 24 | 18.2 |      |      |
| Most effective drugs for controlling asthma are called steroids                                      | Agree      | 61 | 46.2 | 46.2 | 53.8 |
|  | Disagree   | 41 | 31.1 |      |      |
|  | No opinion | 30 | 22.7 |      |      |

|  |            |    |      |      |      |
|--|------------|----|------|------|------|
| I know which drug is for regular use and which is to be used if breathlessness occur                         | Agree      | 59 | 44.7 | 44.7 | 55.3 |
|  | Disagree   | 56 | 42.4 |      |      |
|  | No opinion | 17 | 12.9 |      |      |
| Inhalers are free from significant side effects  | Agree      | 52 | 39.4 | 39.4 | 60.6 |
|  | Disagree   | 63 | 47.7 |      |      |
|  | No opinion | 17 | 12.9 |      |      |
| Asthma medicine has to be taken till symptom persist then can be stopped                                     | Agree      | 93 | 70.5 | 70.5 | 29.5 |
|  | Disagree   | 63 | 47.7 |      |      |
|  | No opinion | 17 | 12.9 |      |      |
| Asthma medicine has to be taken even after symptoms are no longer there, till your doctor advise you to stop | Agree      | 93 | 70.5 | 70.5 | 29.5 |
|  | Disagree   | 30 | 22.7 |      |      |
|  | No opinion | 9  | 6.8  |      |      |

**Table 3:** Knowledge of respondents about asthma (n = 132).

### Assessment of subject's attitude

The (11.4%) of patients strongly agreed that if one person has asthma, then all of the families are likely to have asthma as well. Fifty-six (42.2%) of the respondents strongly agreed with asthma is contagious and (6.1%) were strongly disagreed. In the other hand, (33.7%) of the respondents agreed people with asthma cannot do as much physical exercise as other people and 11.4% were disagreed. In addition, patient's response regarding asthma can be cured (22.7%), (22%) and (12.1%) were strongly agreed, neutral and strongly disagreed respectively. Regarding asthma can't be controlled, (31.8%) strongly agreed and (5.3%) were neutral.

| Questions  | Frequencies and Percentage |           |           |           |                   |
|--|----------------------------|-----------|-----------|-----------|-------------------|
|  | Strongly Agree             | Agree     | Neutral   | Disagree  | Strongly Disagree |
| If one person has asthma, then all of the families are likely to have asthma as well | 15 (11.4)                  | 42 (31.8) | 14 (10.6) | 40 (30.3) | 21 (15.9)         |
| Asthma is contagious   | 56 (42.2)                  | 37 (28)   | 4 (3)     | 27 (20.5) | 8 (6.1)           |
| People with asthma cannot do as much physical exercise as other people               | 30 (22.7)                  | 44 (33.7) | 36 (27.3) | 15 (11.4) | 7 (5.3)           |
| Asthma can be cured  | 30 (22.7)                  | 32 (24.2) | 29 (22)   | 25 (18.9) | 16 (12.1)         |
| Asthma can't be controlled   | 42 (31.8)                  | 64 (48.5) | 7 (5.3)   | 9 (6.8)   | 10 (7.6)          |

**Table 4:** Attitude of respondents regarding Asthma (n = 132).

### Practice pattern of included subjects

The practice pattern was average among most of participants as only 107 (81.1%) will go to physician seeking for medication for asthma symptoms. Also, only 56.1% would use nasal sprays for treatment. 66.7% of subjects will avoid house dust and smoke as preventive methods for asthma and only 67.4% of subjects strictly follow the doctor's instructions. About 47% of respondents were using over the counter drugs without consulting a physician.

| Questions   |     | Prevalence | Percentage (%) |
|---|-----|------------|----------------|
| Do you usually visit physician when developing symptoms?                                | Yes | 107        | 81.1           |
|   | No  | 25         | 18.9           |
| Do you use nasal spray?   | Yes | 74         | 56.1           |
|   | No  | 58         | 43.9           |
| Do you buy over the counter drugs without consulting a physician?                       | Yes | 62         | 47             |
|   | No  | 70         | 53             |
| Do avoid house dust and smoke?  | Yes | 88         | 66.7           |
|   | No  | 44         | 33.3           |
| Do strictly follow the doctors' instruction?  | Yes | 89         | 67.4           |
|   | No  | 43         | 32.6           |
| Have you done physical work or exercise in the last two weeks?                          | Yes | 50         | 37.9           |
|   | No  | 82         | 62.1           |
| Many people tend to forget taking medication. Have you forgotten in the last two weeks? | Yes | 49         | 37.1           |
|   | No  | 83         | 62.9           |
| If the asthma symptoms getting worse I change my medication                             | Yes | 81         | 61.4           |
|   | No  | 51         | 38.6           |
| Do you use a fan to remove smoke and steam during cooking?                              | Yes | 68         | 51.5           |
|   | No  | 64         | 48.5           |
| Do you use deodorants or perfumes?  | Yes | 72         | 54.5           |
|   | No  | 60         | 45.5           |

**Table 5:** Practice of respondents regarding Asthma (n = 132).

**Associations between knowledge score and socio demographic characteristics**

There was variation in responses for knowledge items. The males had more good knowledge than the females (66.1% vs. 33.9%), and more married participants knew that asthma medication has to be taken even after symptoms are resolved compared with singles (46.3% vs. 31.7%). Respondents in the younger age (18 - 30) group had comparatively higher knowledge than those aged ≥ 60 years.

**Discussions**

There is a global problem with asthma management, either under treatment due to ignorance or distorted information/knowledge of patients about their disease [7].

Numerous studies have revealed that cognitive variables such as knowledge, attitude and practices of patients regarding their illness are potent contributing factors of disease management [8]. Asthma practices are more significant in controlling the disease. This study was conducted to assess the level of knowledge, attitudes and practices of adult patients with asthma in JUSH. The questionnaire was based on knowledge about basic pathophysiology of the disease, symptoms, triggering factors, precipitating factors, medication and management of asthma which is essential to know by patients with chronic asthma. Apart from that, it also assessed the behaviors that patients must adhere, to minimize future asthma exacerbations.

Moreover, the attitudes and beliefs towards asthma that motivate good health behaviors and influence medication compliance for optimum disease management were also considered. The knowledge level with respect to asthma and its medication is not in a satisfactory

| Variables                |                   | Good Knowledge (n) | Average Knowledge (n) | Poor Knowledge (n) | Total (n) | Total (n) |
|--------------------------|-------------------|--------------------|-----------------------|--------------------|-----------|-----------|
| Age                      | 18 - 30           | 32                 | 17                    | 20                 | 69        | 0.54      |
|                          | 31 - 45           | 17                 | 14                    | 7                  | 38        |           |
|                          | 46 - 60           | 6                  | 3                     | 7                  | 16        |           |
|                          | > 60              | 4                  | 3                     | 2                  | 9         |           |
| Gender                   | Male              | 39                 | 18                    | 18                 | 75        | 0.153     |
|                          | Female            | 20                 | 19                    | 18                 | 57        |           |
| Marital Status           | Married           | 37                 | 12                    | 16                 | 65        | 0.001     |
|                          | Single            | 20                 | 11                    | 12                 | 43        |           |
|                          | Divorced          | 2                  | 8                     | 2                  | 12        |           |
|                          | Widowed           | 0                  | 6                     | 6                  | 12        |           |
| Educational status       | Illiterate        | 16                 | 4                     | 9                  | 29        |           |
|                          | Primary school    | 11                 | 12                    | 4                  | 27        |           |
|                          | Secondary school  | 3                  | 8                     | 11                 | 22        |           |
|                          | High School       | 6                  | 2                     | 6                  | 14        |           |
|                          | Collage or higher | 23                 | 11                    | 6                  | 40        |           |
| Occupation               | House wife        | 11                 | 10                    | 8                  | 29        |           |
|                          | Employed          | 18                 | 13                    | 7                  | 38        |           |
|                          | Farmer            | 8                  | 6                     | 10                 | 24        |           |
|                          | Daily labor       | 12                 | 0                     | 0                  | 12        |           |
|                          | Merchant          | 6                  | 5                     | 7                  | 18        |           |
|                          | Others            | 4                  | 3                     | 4                  | 11        |           |
| Ethnicity                | Oromo             | 37                 | 10                    | 11                 | 58        | 0.00      |
|                          | Amhara            | 14                 | 8                     | 5                  | 27        |           |
|                          | Gurage            | 0                  | 5                     | 4                  | 9         |           |
|                          | Others            | 8                  | 14                    | 16                 | 38        |           |
| Smoking pattern          | Never             | 56                 | 33                    | 28                 | 117       | 0.012     |
|                          | Given up          | 3                  | 4                     | 4                  | 11        |           |
|                          | Current smoker    | 0                  | 0                     | 4                  | 4         |           |
| Duration Of Asthma       | 6 - 12 months     | 2                  | 15                    | 18                 | 35        | 0.244     |
|                          | 1 - 2 years       | 1                  | 13                    | 8                  | 22        |           |
|                          | 2 - 3 years       | 2                  | 23                    | 9                  | 34        |           |
|                          | > 3 years         | 4                  | 27                    | 10                 | 41        |           |
| Family history of asthma | Yes               | 7                  | 41                    | 23                 | 71        | 0.323     |
|                          | No                | 2                  | 37                    | 22                 | 61        |           |
| Monthly Income           | < 1000            | 0                  | 21                    | 5                  | 26        | 0.013     |
|                          | 1000 - 2000       | 2                  | 18                    | 10                 | 30        |           |
|                          | 2001 - 3000       | 3                  | 16                    | 1                  | 20        |           |
|                          | 3001 - 4000       | 2                  | 17                    | 4                  | 23        |           |
|                          | > 4000            | 1                  | 3                     | 7                  | 11        |           |
| Family Support           | Yes               | 4                  | 41                    | 21                 | 66        | 0.773     |
|                          | No                | 5                  | 37                    | 24                 | 66        |           |

**Table 6:** Practice score and association with demographic characteristics of respondents (n = 132).

\*Patients were grouped in to 3 categories according to the level of practices.

Marks  $\geq 8$  as "good practices", 6 - 7 as "average practices" and  $\leq 5$  as "poor practices".



level in majority of asthma patients. Further patient education level could have made direct impact on their knowledge. It is suggested because; about 42.5% of the participants of this study had not completed their secondary education. On the other hand, patients who had educated above collage and higher education had significantly higher knowledge about their disease and medication. My results confirm the findings of parallel studies that higher asthma knowledge significantly correlate with higher level of education [9].

The higher educational level were associated with higher knowledge scores thus education is an essential part for asthma management and prevention [10].

Not only large numbers of patients (65.27%) were had poor knowledge about their disease, but also have various wrong beliefs associated with asthma. This is a further hindrance in getting the correct knowledge, besides ignorance and illiteracy. Studies by Sodhi., *et al.* Knowledge, attitude, practices of patients of bronchial asthma have reported similar findings, (Regarding the belief associated with asthma, 64% patients were ignorant regarding etiology of their disease; 16.3% patients believed it to be of allergic etiology; 8.7% patients attribute it to genetic; 3.6% patients had the misconception that it is the curse of God) [11].

Comparable findings were reported by Malarvizhi., *et al.* several patient characteristics were associated with knowledge about asthma. Patient's knowledge was significantly different with age even though some studies did not find it [8]. I assume that the low level asthma knowledge among 18 - 30 age group is due to less life experience with asthma and same situation in elderly (more than 60 years) patients is due to forgetfulness and memory impairment with their age.

Misconceptions were identified regarding inhaled medications. Though the majority of individuals with asthma thought inhalers are a best way to take asthma medications, some of asthmatics reported that inhalers are inferior in efficacy to tablets. This misconception could have a negative impact on adherence to medication and asthma control. It has also been implicated in the preference of treatment towards other forms of medications rather than inhaler medications [12].

International asthma guidelines state that effective asthma management requires a partnership between the person with asthma (or the parent/caretaker) and their health care providers [13]. In this model, patients should be empowered to gain the knowledge, confidence, and skills to assume a major role in the management of their asthma. A self-management approach has been shown to reduce asthma morbidity. Conversely, poor self-control is likely to result if the patient has misconceptions about their asthma and inhaled medication [12].

Similarly, these guidelines also advocate the use of regular prophylactic inhaled medication to prevent symptoms of chronic asthma, and regular bronchodilator therapy as required for symptomatic relief [14]. Inhaled corticosteroids have also been shown to be effective in developing countries, reducing hospital admissions and emergency room visits by up to 80% [13].

## **Conclusion**

Knowledge about asthma is poor among asthma patients of JUSH and misconceptions are prevalent. Strategies are needed to increase education and awareness about the disease in order to improve disease management, reduce stigmatization and work towards decreasing the societal burden of disease in Jimma.

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**Volume 9 Issue 11 November 2020**

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