

## Quality of life Among Elderly People with Bronchial Asthma in Beni-Suef City

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**Abstract:** Bronchial asthma in older people is common and is characterized by under diagnosed and under treatment and nursing interventions should focus on improving quality of life of elderly. **Aim** of the present study is to assess the quality of life among elderly people with bronchial asthma in Beni-Suef city. **Design:** A descriptive design was used in this study. **Setting:** Beni-Suef Chest Dispensaries outpatient clinics. **Sample:** A purposive sample, total number of newly diagnosed cases (162 cases). **Tools:** 1) structural interviewing questionnaire sheet to assess demographic characteristics, medical history and knowledge of the participants, and quality of life questionnaire sheet, 2) an observational checklist sheet to assess practice of elderly people with bronchial asthma home and environmental. **Results:** our results demonstrate that less than one quarter had good total knowledge regarding bronchial asthma. Nearly two thirds of elderly patients didn't correctly practice about bronchial asthma while more than one quarter had correctly done practice about bronchial asthma. Nearly two thirds of older people with asthma affected on their quality of life in physical health, more than two thirds of them affected in their in psychological status, and more than half in the social QOL situation. **Conclusion:** There was a highly statistically significant correlation between total knowledge and total done practices and quality of life of elderly patients' ages and educational levels. **Recommendations:** The current study recommended that continuous education program of elderly people with bronchial asthma about manifestations of asthma and how to deal with it and improvement of home environment of elderly people with bronchial asthma.

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### I. Introduction

The world is ageing. Today, there are about 600 million people aged 60 and over worldwide; this total will double by 2025 and will reach virtually two billion by 2050. The majority of older people will be living in developing countries that are often the least prepared to confront the challenges of rapidly ageing societies. The quality of life for these older patients dramatically alters as they are forced towards often irretrievable physiological and psychological decline (WHO, 2018).

Bronchial asthma is one of the most common chronic conditions in the world and the most common non-communicable disease among elderly; according to the World Health Organization (WHO), the global burden of disease study and the global asthma report 2014, asthma affects an estimated 334 million people worldwide. The prevalence of asthma has been reported to range from 1 to 18 % of the population in different countries (Brooks, et al, 2017).

In recent decades, both asthma prevalence and incidence have been increasing worldwide, not only due to the genetic background, but mainly because of the effect of a wide number of environmental and lifestyle risk factors. In many countries non-communicable diseases, like asthma, are not yet considered a healthcare priority (Aydin, et al, 2015).

About 13% of the U.S. population is older than 65 years of age and this percentage is expected to double by the year 2050. About 7% of individuals 65 years old and older have asthma. However, little is known about asthma in these cases as few asthma studies have examined this target group. Elderly people with asthma are more likely to be underdiagnosed, undertreated, and hospitalized when compared with younger adults affected by this condition (England and Wales, 2017).

Bronchial asthma affects a significant proportion of elderly people, but unfortunately, it is responsible for a high asthma-related morbidity and mortality in this population. This may be related not only to the development of a more severe asthma phenotype compared to younger cases, with more marked airway obstruction and a more neutrophilic type of airway inflammation, but also to the presence of many co-morbid conditions. Furthermore, in older people, asthma is often under-diagnosed, undertreated and poorly managed.

Unfortunately, elderly people have usually been excluded of clinical trials on asthma (Chotirmall and Burke, 2016).

According to a study performed in the United States .the prevalence of bronchial asthma in the elderly has been reported to be equal or even higher than in the general asthmatic population. The current prevalence of asthma in elderly people over 65 years old was 7.0 %– 10.6 %, Furthermore, they have a higher morbidity and rate of hospital admission for asthma than younger patients. This has been attributed to a frequent under- or misdiagnosis, poor assessment and under-treatment of asthma in this group (Dougherty & Fahy, 2014).

Bronchial asthma was defined as a complex chronic disease that presents acute exacerbation periods. Its signs and symptoms includes; dyspnea and broncho-spasm which are usually reversible by bronchodilators. Considering disease manifestations, treatment of elderly people with asthma can have both short-term treatment for asthma exacerbations and long-term treatment to obtain and maintain asthma control. Long-term treatment is crucial to reduce future risks, namely asthma attacks and lung function deterioration. Also, atopic sensitization and comorbidities are present in a large percentage of asthmatics (Polosa, 2015).

Quality of life seems to be lower in elderly people with bronchial asthma and decreases even further in asthma since elderly asthmatics tend to have higher levels of anxiety and depression. However, QOL in elderly asthmatics is most often low due to difficulty in carrying out domestic activities, walking, climbing stairs, because these actions induce dyspnea. Quality of life can be divided into : health status and physical aspect, psychological aspect, and social aspect of elderly (Scott, and Callister, 2015).

Geriatric health nursing play a major role in the care of elderly patients with asthma and are uniquely placed to identify and support those with severe asthma, nurses play a key role in prioritize recognizing and treating exacerbations promptly, avoiding aggravating factors, minimizing adverse drug reactions, optimizing activity level, and maximizing quality of life. Monitoring elderly people with asthma and identifying those needing a referral to specialist services, nurse act as an advocator, counselor, teacher, home visitor, collaborator ... etc.(England & Wales 2017).

### **Significance of the Study:**

The prevalence of asthma among Egyptians ranged from 4.8% to 9.4%. Despite a large volume of clinical and epidemiological researches within affected populations, the etiology and risk factors of these conditions remain poorly understood (Abdel-Azeem & Rashad, 2013).

The prevalence of bronchial asthma in elderly varies between countries from 7% to 15% and associates with an increased morbidity and a lower quality of life for elderly patients. However, elderly people with asthma are under diagnosed (Ariano & Panzani, 2012).

Nurses and other health-care providers in Beni-Suef city should ensure that persons with asthma have received education and training on how to use their prescribed device, and that they can demonstrate satisfactory technique using a device-specific checklist at each visit (Morjaria, et al., 2016). So the purpose of the current study is to assess the quality of life among elderly people with bronchial asthma in Beni-Suef city.

## **II. Subjects and methods**

This study aimed to assess the quality of life among elderly people with bronchial asthma in Beni-Suef city through:

1. Assessing the elderly people knowledge about bronchial asthma.
2. Assessing the elderly people practice about bronchial asthma.
3. Assessing the effect of bronchial asthma on quality of life among elderly people.

### **Research Question:**

1. What is the elderly people knowledge about bronchial asthma?
2. What is elderly people practice about bronchial asthma?
3. Is bronchial asthma affect elderly peoples' quality of life?
4. What's relation between elderly people knowledge and their practice regarding improve their quality of life?

### **Research Design:**

Descriptive research design was used to achieve the aim of the current study.

### **Research setting:**

The study was conducted at Beni-Suef Chest Dispensaries outpatient clinics affiliated to ministry of health.

**Sample:**

A purposive sampling was used to achieve the aim of the study. The study sample comprised of 162 older adults they represent about 10% from the total attending the outpatient clinic in the period of the beginning of May 2018 until the end of September 2018. The elderly patients have been selected according to the following criteria: age 65y and above, diagnosed with bronchial asthma, able to communicate and accept to participate in the study.

**Tools of data collection:**

Three data collection tools were used to carry out the current study namely; structural interviewing questionnaire sheet, an observational checklist sheet, and quality of life questionnaire sheet.

**Tool I: structural interviewing questionnaire sheet:**

This tool was developed by investigator after reviewing the national and international related literature. It consists of three main parts:

**Part I:** Elderly people demographic characteristics: This part include data about age, gender, marital status, level of education, occupation, residence, monthly income, family type, and number of home rooms.

**Part II:** Concerned with medical history of elderly people with bronchial asthma that include; duration of disease, recurrent hospitalization, time of follow-up, food allergy, having other type of allergy, other chronic diseases, smoking, diagnosis of asthma, treatment, recurrence of asthma episodes during the year, recurrence of asthma episodes during the month, the time of frequency for an asthma attack during the day.

**Part III:** Elderly people Knowledge about bronchial asthma. It was constructed to assess the elderly people knowledge which included meaning, factors that increase bronchial asthma, symptoms, causes, complications, prevention, first aid during attack, nutrition, and exercise.

**Scoring System:**

For knowledge items, a correct complete answer was scored (Two 0opoints) and a correct incomplete answer was scored (One point), while the wrong answer or don't know was given (Zero), according to elderly people with bronchial asthma answers, their knowledge was categorized into:

Good knowledge  $\geq 75\%$ ,

Average knowledge  $\geq 50\% - < 75\%$

Poor knowledge  $< 50\%$ .

**Tool II : Quality of life questionnaire sheet:**

This tool adopted from Marks, G. (1999). to assess quality of life for elderly people suffering from bronchial asthma and includes: physical, emotional and social domains of quality of life and its component physical((14 items) psychological ( 18 items ) Social ( 9 items ) .

**Scoring system:**

For of life items, scores ranged from one two three as the following; never (1), sometimes (2), and always (3), then scores were converted to percentage to indicate quality of life for the studied elderly people.

**Tool III: An Observational checklist sheet:**

This tool consisted of two parts:

**First part:** It will be adopted from Black, P. (2009). and Mohamed, J. (2013). to assess elderly people practice level regarding using spray (7 items), using the nebulizer (11 items), breathing exercise (6 items) and nutritional practices as reported by the elderly people (7 items).

**Second part:** was concerned with asthma home environment checklist guided by United States Environmental Protection Agency, (2004) to assess the home environment of the elderly people with bronchial asthma as reported by patient. It include 19 items as ventilation at home, house is quiet and away from the noise, curtains on the windows, home is clean and free of odors, lighting in rooms and corridors, a healthy source of drinking water, adequate home sanitation, the kitchen is clean, tidy and separate from the living space, floor coverings, bathroom is clean and has a personal hygiene items, furniture, animals such as cats and dogs at home, birds at home, mold on the walls or windows or in the bathroom, plants near the house and there is stagnant water in

their containers, conditioning at home, traces of insects and rodents at home, holes and gaps in the walls and the disposal of garbage.

**Scoring system:**

These scores were converted into percentage score. The elderly people with bronchial asthma patients were considered done practice, if the percentage score was  $\geq 75\%$ ; while it was considered not done practices , if percentage score was less than 50% .

**Tools Validity:**

Content validity of the tools was assessed by jury group consisted of five of professors, three from the community health nursing and two specialty from chest hospital. Jury members judge tools for comprehensiveness, accuracy and clarity in language. Based on their recommendations correction, addition and / or omission of some items were done.

**Tools Reliability:**

The study tools were tested for its internal consistency by Cronbach's Alpha. It was 0.81.

**Operational Design:**

The operational design for this study included three phases namely; preparatory phase, pilot study, and field work.

**Preparatory phase:**

This phase started with a review of current and past, national and international related literature concerning the subjects of the study, using textbooks, articles, journals, and websites. This review was helpful to the researcher in reviewing and developing the data collection tools.

**Pilot study:**

A pilot study was conduct on 10% (16) of the total sample to evaluate the relevance, clarity and content validity of the tools used for data collection, evaluate time needed to fill tools of the study and find the possible obstacles and problems that might face investigator and interfere data collection. According to the results of the pilot study, no modifications were done. Those subjects will be included from the actual study sample.

**Administrative Design**

An official letter requesting permission to conduct the study was directed from the dean of the faculty of nursing Helwan University to the director of the ministry of health and population administration to obtain their approval to carry out this study. This letter included the aim of the study and photocopy from data collection tools in order to get their permission and help for collection of data.

**Ethical Consideration**

Prior to the pilot study ethical approval was obtained from the scientific research ethical committee of faculty of nursing Helwan university, an official permission was taken from the authoritative personnel in the mentioned hospital and oral consent was obtained from all elderly peoples, the purpose and the nature of the study was explained to them prior the interview. The investigators emphasized that the participation in the study is entirely voluntary; anonymity and confidentiality were assured through coding the data and he has the right to withdraw at any time.

**Field work:**

Data collection of the study was started at the beginning of May 2018, until the end of September 2018. The investigator introduced her-self to elderly people, explained the aim of the study and its implications and how to fill in the knowledge questionnaire, and ensure their cooperation. Informed consent was obtained from the participants.

Interviewing the elderly people was carried out in specialized room in outpatient clinic at chest hospital in Beni-Suef City three days per week (Saturday- Monday -Thursday) from 10 am to 12 am. It takes 20-25 minutes to be filled for five months. The interviewing questionnaire sheet will be completed by the investigator from each elderly people. The investigator distributed the quality of life questionnaire sheet to elderly people to assess their quality of life; participants were observed using observation checklist sheet to assess their practice and home environment, and the questionnaire was distributed and collected in the same time.

**Statistical Design:**

The collected data were coded and entered into the statistical package for the social science (SPSS). Quality control was done at the stages of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentages for categorical variables, and means and standard deviations for continuous quantitative variables. Qualitative variables were compared using chi-square test, T test and F test. Pearson test was used to test the correlation between variables. Statistical significance was considered when P-value < 0.05 and highly significant difference obtained at p<0.001.

### III. Result

**Table (1):** Revealed demographic characteristics of the study sample 65.4%, of the elderly people were aged 65 > 75 years with the mean age  $68.22 \pm 6.39$  years, 55.6 % were males and 58.6 % of them were married. Concerning the occupation 52.5 % of them retirement, 75.3 % of them the came from rural area. 56.2% of them live in extended family .Also, 46.9% of them live in two rooms only.

**Table (1):** Frequency distribution of the demographic Characteristics of the study sample (n=162).

Characteristics	No.	%
<b>Age</b>		
65 >75years	106	65.4
≥ 75 years	56	34.6
<b>Mean ± SD</b> (range)	$68.22 \pm 6.39$ 65–75	
<b>Gender</b>		
Male	90	55.6
Females	72	44.4
<b>Marital status</b>		
Single	7	4.3
Married	95	58.6
Widow	43	26.5
Divorced	17	10.5
<b>Occupation</b>		
working	30	18.5
Housewife	47	29.0
Retirement	85	52.5
<b>Residence</b>		
Urban	40	24.7
Rural	122	75.3
<b>Types of family</b>		
Live alone	28	17.3
Nuclear family	43	26.5
Extended family	91	56.2
<b>Number of room</b>		
Two rooms	76	46.9
Three room	55	34.0
Four or more rooms	31	19.1

**Table (2):** Illustrate the elderly people period affected by asthma 41.4% of them ≥ 10 years or more , 63.6% of them admission in hospital in the last years two or more admission .Regarding the family history of asthma 90.1% of them no family history. Regarding the time of follow-up, 46.9% of them time of follow up more than one month.54.3% of the elderly people no allergic of food. 40.7% of elderly smoking, 80.4% of them the duration of smoking ≤ 5 years.

Regarding the chronic disease 15.4% of them suffering from diabetes .67.3% of them made rays on the chest .40.7% of elderly people give tablets treatment .40.7% of them time to attack asthma during winter.64.8% of them the number of attack asthma last month three or more time.36.4% of them the time of attack asthma day and night.

**Table (2a):** Percentage distribution of the elderly regarding to their medical history (n=162).

Items	No.	%
<b>Duration affected by asthma</b>		
≤ 5 year	44	27.2
5 > 10 years	51	31.5
≥10 years	67	41.4
<b>Previous hospital admission in hospital in the last years</b>		
None	19	11.7
Once	40	24.7
Tow and more	103	63.6

Items	No.	%
<b>Family history of asthma</b>		
First degree relative	8	4.9
Two-third degree relative	8	4.9
None	146	90.1
<b>Time of follow-up</b>		
Every two week	34	21.0
Every three week	4	2.0
Every month	48	29.6
More than one month	76	46.9
<b>Allergic of food</b>		
Eggs	19	11.7
Fish	21	13.0
Mango	15	9.3
bananas	4	2.5
Other	15	9.3
None	88	54.3
<b>Smoking</b>		
Yes	66	40.7
No	96	59.3
<b>Duration of smoking =66</b>		
< one year	9	13.6
1-5 years	4	6.0
>5 years	149	80.4

**Table (2b):** Percentage distribution of the elderly regarding to their medical history (n=162).

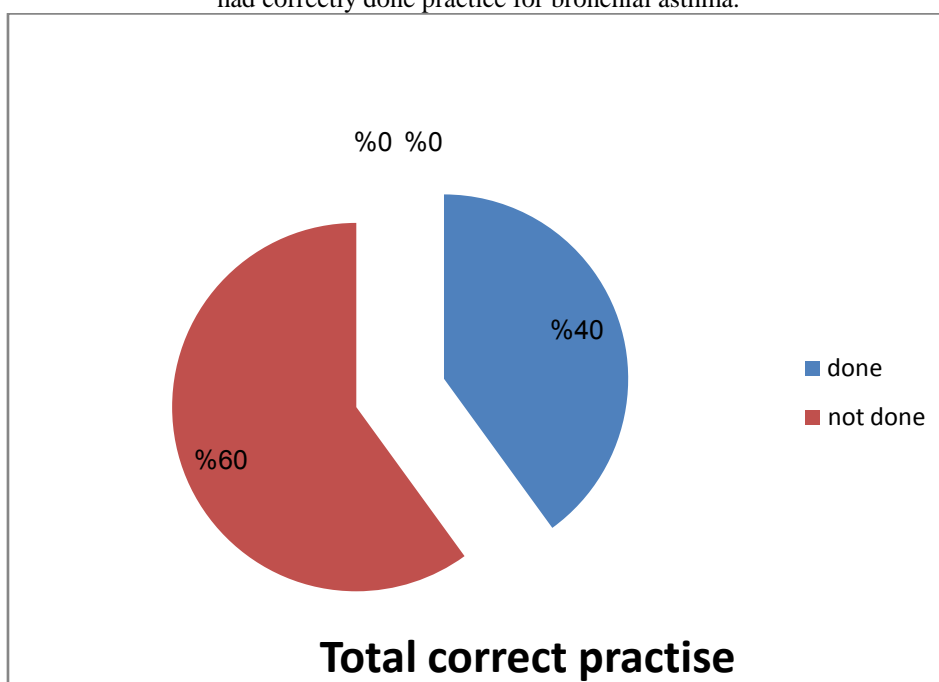
Items	No.	%
<b>Chronic diseases:</b>		
Heart diseases	19	11.7
Diabetes	25	15.4
Rheumatoid	6	3.7
liver diseases	6	3.7
kidney diseases	3	1.9
Blood diseases	11	6.8
none	92	58.8
<b>Investigation</b>		
lung function	11	6.8
Rays on the chest	109	67.3
Sputum analysis	33	20.4
Complete blood picture	1	0.6
Don't know	8	4.9
<b>Treatment</b>		
Tablets	66	40.7
Sprays	57	35.2
Injections	30	18.5
medical herb	9	5.6
<b>Time to asthma attack</b>		
During winter	66	40.7
During spring	8	4.9
During summer	30	18.5
During change season	58	35.9
<b>Number of attack asthma last month</b>		
One	19	11.7
Two	38	23.5
Three or more time	105	64.8
<b>Time of attack asthma</b>		
Early morning	57	35.2
At night	46	28.4
Day and night	59	36.4

**Table(3):** Shows that, the majority of all elderly had incomplete knowledge about bronchial asthma in most items of knowledge 85% ,74%, 73% , 70%, 69%, 61% related to complication, meaning of the bronchial asthma, nutrition, causes of diseases, first aid during asthma, and exercise, prevention causes increase your bronchial asthma.

**Table (3):** Percentage distribution of the elderly regarding to knowledge about bronchial asthma (n=162)

Items	No.	%
<b>Meaning the asthma</b>		
Complete	45	27.8
Incomplete	74	45.7
Don't know	43	26.5
<b>Causes of asthma</b>		
Complete	36	22.2
Incomplete	70	43.2
Don't know	56	34.6
<b>Sign and symptoms</b>		
Complete	100	61.7
Incomplete	31	19.1
Don't know	31	19.1
<b>Causes increase your bronchial asthma</b>		
Complete	74	45.7
Incomplete	61	37.7
don't know	27	16.7
<b>Complication of bronchial asthma</b>		
Complete	24	14.8
Incomplete	85	52.5
Don't know	53	32.7
<b>Prevention of bronchial asthma</b>		
Complete	74	45.7
Incomplete	61	37.7
Don't know	27	16.7
<b>First aid during bronchial asthma</b>		
Complete	58	35.8
Incomplete	69	42.6
don't know	35	21.6
<b>Nutrition</b>		
Complete	45	27.8
Incomplete	73	45.1
don't know	44	27.1
<b>Exercise</b>		
Complete	51	31.5
Incomplete	69	42.6
don't know	42	25.9

**Figure (1):** Illustrated that, 60.0% patients had not done practice for bronchial asthma. while, 40.0% of them had correctly done practice for bronchial asthma.



**Figure (1):** Percentage distribution of patient regarding total done correct practice regarding bronchial asthma (n=162).

**Table (4):** Illustrated the home environmental condition of the studied patients, 95.1% , 94.4%,92.6% and 92.0% of them there is good ventilation at home,the kitchen is clean and tidy and separate from the living area,the house is clean, tidy and odorless and there is a source of drinking water inside the house .Also 83.3% and 85,2% of them lighting rooms and corridors are sufficient, the bathroom is clean and has toiletries and garbage is removing by collected in all bags and put them out of the house .

**Table (4):** Asthma Home Environment Measurement Scale for elderly people with bronchial asthma reported by the patient (n=162).

Home Environment	Present %
1)There is good ventilation at home)	95.1
2)The house is quiet and far from noise	51.9
3)There are curtains on the windows in the house	46.3
4)The house is clean, tidy and odorless	92.6
5)lighting rooms and corridors are sufficient	83.3
6)There is a source of drinking water inside the house	92.0
7)There is adequate sanitation at home	42.0
8)The kitchen is clean and tidy and separate from the living area	94.4
9)there are floor covering of carpets or rugs	51.9
10)The bathroom is clean and has toiletries	83.3
11) The furniture is convenient, comfortable and tidy	74.7
There are animals in the house, such as cats and dogs12)	33.3
Birds are raised at home13)	33.3
14)There is mold on the walls, windows or in the bathroom	22.2
15)There are plants near the house and the containers are stagnant water	24.1
16)There is home adaptation	19.1
17) There is the effect of rodents and rodents at home	42.0
18)There are holes and gaps in the wall allowingPests enter the house	34.0
19)Garbage is removing by collected in all bagsAnd put them out of the house	85.2

**Table (5):** show that the quality of life of older people with asthma affected on physical health 63.6% , .60.5% of them always avoid activities that require effort such as exercise and need to exit sputum continuously . Also, 54.9% of them suffer from difficulty breathing due to the condition of asthma; suffer from the weight of the chest. Also, 40.7%, 54.3%, 51.7% of them always suffer from wheezing during chest exhalation; have difficulty sleeping at night because of asthma and you often feel tired. 56.8%, 57.4% of them) your eating habits have changed as a result of your asthma and your family understands the impact of the disease on your physical abilities and the difficulty of moving to meet your personal needs. 43.8% of them your health condition prevents you from taking care of yourself. **Table (5):** Percentage distribution the quality of life of older people with bronchial asthma effected on their (physical status ) (n=162).

physical status	Always %	Sometimes %	Never %
.1) Your health condition prevents you from taking care of yourself .	43.8	42.0	14.2
2) Your health condition prevents you from taking care of your home	38.3	43.2	18.5
suffer from difficulty breathing due to the condition of asthma3)	54.9	28.4	16.7
4) suffer from the weight of the chest	54.9	27.8	17.3
suffer from wheezing during chest exhalation5)	40.7	32.7	26.6
6) have difficulty sleeping at night because of asthma	54.3	30.2	15.5
suffer from problems in the sinuses 7)	30.9	21.6	47.5
-8) need to exit sputum continuously	60.5	27.2	12.3
.Avoid activities that require effort such as exercise9)	63.6	16.0	20.4
Try to avoid moderate activities such as shopping10)	58.5	24.1	17.4
11)Your health affects tasks related to your day-to-day activities such as work	45.1	34.6	20.4
12) You often feel tired	51.7	40.7	7.6
13) Your eating habits have changed as a result of your asthma	56.8	26.5	16.7
14)Your family understands the impact of the disease on your physical abilities and the difficulty of moving to meet your personal needs	57.4	29.0	13.6



**Table (6):** show that the quality of life of older people with asthma affected on emotional and psychological status .69.1%, 61.7% and 61.1% of them always you are satisfied with your family members dealing with you, you get the moral support that you need from others .and get angry because you wake up from sleep because of the symptoms of asthma. Also, 59.3%.58.6% 51.9% and 50.0% of them always you can control the important things in your life.feel that you have the ability to adapt to your illness, feel anxiety toward your current and future life due to your illness and troubled and impatient .42.0% of them never you feel that you have become a burden on your family after you have bronchial asthma.

**Table (6):** Percentage distribution of on the lifestyle of older people with asthma **emotional psychological status** (n=162).

<b>Emotional and psychological status</b>	<b>Always %</b>	<b>Sometimes %</b>	<b>Never %</b>
1) Feel that you have the ability to adapt to your illness	58.6	25.9	15.5
2) You feel depressed because of your health condition	39.5	43.8	16
3) get angry because you wake up from sleep because of the symptoms of asthma	61.1	27.2	11
4) troubled and impatient	50.0	38.3	11
5) ) Feel afraid that asthma medication is not available when you need it	37.0	34.6	28
6) ) Fear the cost of treatment	37.0	24.1	38
7) ) Satisfied with your appearance after the disease	44.4	33.3	22
8) Feel anxiety toward your current and future life due to your illness	51.9	17.9	30
9) You can control the important things in your life	59.3	33.3	7
10) you get the moral support that you need from others.	61.7	26.5	11
11) ) feel that there have been changes in your life because of your illness	46.3	41.4	12.3
12) tend to look at the bright side of your life	31.5	37.7	30.9
13) You are satisfied with your family members dealing with you	69.1	18.5	12.3
14) you have the idea of another serious illness	27.2	26.5	46.3
15) Check your body continuously to make sure there is no evidence of another disease	29.0	16.1	54.9
16)Fight with family members because of your illness	28.4	24.7	46.9
17) little attention to the opinion of others regarding your health	30.2	36.4	33.4
18) You feel that you have become a burden on your family after you have bronchial asthma	19.3	38.3	42.4

**Table (7):** show that the quality of life of older people with asthma affected on social situation. 54.9% , 53.7 and 52.5% of them always your family, friends or neighbors help you when an asthma attack occurs in take treatment - climb stairs and move preparation of food - cleaning the place and washing clothes. Also, 42.6% 42.0% of them always enjoy your life with others and avoid going to places where you can have an asthma attack and do not find help and 37.7% of them never your illness causes you to be isolated from people.

**Table (7):** Percentage distribution of on the lifestyle of older people with asthma social jsituation(n=162).

<b>Social Situation</b>	<b>Always %</b>	<b>Sometimes %</b>	<b>Never %</b>
1) Bronchial asthma effects on your social relations.	34.6	48.1	17.3
2)Avoid going to places where you can have an asthma attack and do not find help	42.0	37.7	20.3
3)Your health condition prevents you from exercising, hobbies or other recreational activities that you can share with others	53.7	29.6	16.7
4)your pathological condition you suffer from it affects on your relation with your family	48.1	21.0	30.9
5) your family, friends or neighbors help you when an asthma attack occurs in -Take treatment - climb stairs and move Preparation of food - cleaning the place and washing clothes	54.9	30.2	14.9
6) enjoy your life with others	42.6	45.1	12.3
7) You feel that you have restrictions on social activities such as Talk - visiting friends / relatives	37.8	53.6	8.6
8) You are satisfied with your social relationships	52.5	34.0	13.5
9) Your illness causes you to be isolated from people	21,6	40.7	37.7

**Table (8):**Shows the relation between total knowledge score and total practice score and quality of life regarding patient age and educational levels .there was a highly statistically significant correlation between total knowledge and total practices and quality of life regarding patient age and educational levels at  $p \leq 0.001^*$

**Table (8):** Correlation coefficient between total knowledge score, total practice score, quality of life and age and educational level regarding bronchial asthma patient

Variable	Elderly			
	Age		Educational level	
	R	P	R	P
Total knowledge	-0.316	<0.05*	0.307	<0.05*
Total done practice score	-0.391	<0.01**	0.540	<0.01**
Quality of life	-0.433	<0.01**	0.339	<0.05*

### III. DISCUSSION

So the purpose of the current study is to assess the quality of life among elderly people with bronchial asthma in Beni-Suef city.

Regarding the demographic characteristics of the studied elderly people, the current study revealed that nearly two thirds of the elderly people had from 65 > 75 years old, more than half of them were males, married, retired, and live with extended family. More than three quarters of them live in rural area and nearly three quarters of elderly people were illiterate.

This study agrees with *Matalqah, et al., (2018)* who conducted a study about "factor associated with health-related quality of life among bronchial asthma in Northern Jordan" and found that three quarters of the participants were female with mean age 68 years. Also, this result agreement with *Barakat (2017)* who conducted a study about "the effect of risk factors bronchial asthma on elderly health related quality of life at Assiut university hospital in Egypt" mentioned that majority of the participants were living with extended families and monthly income not enough.

From the investigators' point of view, these findings may be due to low retirement wages and high living expenditures in Egypt, in addition to absence of others sources of income that affect quality of life of elderly people and add more financial burden on them.

Regarding monthly income, majority of their monthly income not enough while minority of them the monthly income were enough. In the same line *Pega and Wilson (2016)* who conducted a study about "a systematic review of health economic analyses of housing improvement interventions in elderly homes" reported that more than half of the participants had inadequate monthly income.

Also, this result is congruent with *Farrag, et al., (2017)* who conducted a study about "reassessment of cases of uncontrolled bronchial asthma in Port-Said chest hospital in Egypt" stated that more than three quarters of the participants get wages less than their monthly expenditures. From the researcher point of view this result may be due to the exaggerated rise in prices that affect the monthly budget of people.

Concerning to the medical history of the studied elderly people, the current study revealed that more than two fifth of elderly people ensured that the period affected by asthma  $\geq 10$  years or more, nearly two thirds of them admitted in hospital in the last years two or more admission.

This study agrees with *Galal, et al. (2018)* who conducted a study about "the medication adherence and treatment satisfaction in some Egyptian patients with bronchial asthma" and found that the majority of the participants suffered bronchial asthma attack in winter. Also, this result agreement with *Marincu, et al., (2015)* who conducted a study about "rates and predictors of uncontrolled bronchial asthma in elderly patients in western Romania" reported that elderly people readmitted to hospital complaining of sever asthmatic symptoms and readmitted several times in short periods.

Also, this result disagreement with *Malik, et al., (2017)* who conducted a study about "Assessment of health related quality of life among Asthmatic patients in Pakistan" and found that more than half of the studied elderly people having history of food allergy. From the investigator point of view, these findings may be due to the negative effect of smoking and winter weather on asthmatic patient. It can worsen their condition and increase suffering from elderly people and consequently affected their quality of life.

Regarding family history Majority of them have no family history, more than half of them have no allergic of food. Two fifth of them were smokers and majority of them smoke from  $\leq 5$  years. Two fifth of elderly people experienced asthma attack during winter and nearly two fifth of them suffered asthma three or more times in the last month. This result is in agreement with *Mahmoud, et al., (2017)* who conducted a study about "the efficacy of breathing exercises on daily living activities of patients with bronchial asthma in Egypt" and found that more than more than half of the participants were smokers and suffured from asthma in the last month. From the researcher point of view, this result may be due to the nature of those families and their bad traditions like smoking that affect their health negatively.

Regarding the time of follow-up, nearly half of them time of follow up more than one month. More than two thirds of them do rays on the chest. Nearly two thirds of them the number of attack asthma last month three or more time. More than one third of them had asthma attack in the day and night. This resut in agreement with *Hashemi, et al., (2015)* who conducted a study about "diet and its relationship to sarcopenia in community dwelling Iranian elderly" reported that more than half of them doing follow up from one to two months, and

majority of them suffered asthma attack in the day and night. From the researcher point of view, this result may be due to the increased frequency of the onset of asthma all over the day and night that get them follow up their health condition.

#### **Regarding question (1); what is the elderly people knowledge about bronchial asthma?**

Regarding the elderly according to their knowledge about bronchial asthma, majority of the participants had incomplete knowledge about the disease in all items of knowledge related to meaning of the disease, causes of diseases, causes increase your bronchial asthma, complication, prevention, first aid during asthma, nutrition, and exercise. Also, this result agreement with *Bayoumy, et al., (2015)* who conducted a study about “the effect on knowledge and perceived control among adult patients with asthma in Assiut governorate, Egypt” reported that the majority of the participants had poor knowledge about meaning, causes, and manifestations of asthma.

Also, this result agreement with *Hossain, et al., (2018)* who conducted a study about “the prevalence of asthmatic respiratory complications among the rural community of Tangail area in Bangladesh” reported that elderly people have low level of concentration so they have little information about causes of bronchial asthma, don’t know complications of such condition, and didn’t know the preventive strategies from complications.

This study agrees with *Elbanna, et al., (2017)* who conducted a study about “the effect of bronchial asthma education program on asthma control among adults” at Mansoura governorate, Egypt found that elderly people didn’t have enough knowledge about their condition, risk factors, and methods of managing the severity of their condition.

Also, this result agreement with *Davies, et al., (2018)* who conducted a study about “the association between asthma and obstructive sleep apnea” and reported that majority of elderly people didn’t able to define their condition, causes, and complication. These findings give great opportunity for worsens of their condition and decrease their qualities of life that subsequently affect morbidity and mortality rates. From the investigator point of view, this result may be due to low concentration levels of elderly people, lack of information sources, and poor health and all these factors can affect and limit their knowledge.

#### **Regarding question (2); what is the elderly people practice about bronchial asthma?**

Regarding elderly people practice of using the sprayer, around two thirds of the elderly people use the sprayer correctly. Also, more than half of them done practice regarding hold himself (not breathing) for about ten seconds and then breathe out naturally and wait a minute and then prepare the previous steps according to the number of pumps required.

This study disagreement with *Farrag, et al., (2017)* reported that more than half of elderly people didn’t use sprayer correctly and two thirds of them haven’t any knowledge about their uses and importance of using it.

Also, this result agreement with *Pega and Wilson (2016)* indicated the importance of sprayers for asthmatic elderly and the benefits of using it and recommended proper use of sprayers to produce better results. From the investigators’ point of view, this result may be due to lack of training program lead to the negative effect of practice and training on compliance of elderly people that result in bad performance.

Regarding elderly people practice of using nebulizer devices, majority of the participants done practice correlates the following practices: connect the mouthpiece or face mask to the cup, connect the device to electricity, place the appliance on a clean table or table, and connect the tube from the device to the cup while majority of them didn’t clean the machine.

This study agrees with *Al-Azzawi, et al., (2018)* who conducted a study about “the effect of nebulized salbutamol on serum potassium and blood sugar level of asthmatic patients in emergency department of Baghdad teaching hospital” reported that the majority of elderly people have nebulizer devices in their home and use it by a chance and don’t know the purpose of using it.

Also, this result agreement with *Lorensia, et al., (2016)* who conducted a study about “a comparative study of electrolyte disturbance between using intravenous aminophylline versus nebulization salbutamol for exacerbation asthma in Surabaya” Indonesia found that three quarters of the elderly people didn’t clean nebulizer device after using it, the study stressed on the importance of cleansing the nebulizer device after each use to prevent spread of infections. From the researcher point of view, they didn’t clean the machine because they hadn’t enough knowledge about how to clean it, when, and why, in addition to less understanding of the importance of cleaning such machine.

Regarding elderly people practice of breathing exercise, all the elderly setting in comfortable position during breathing exercise, majority of them done practice regarding spit mucus in a handkerchief and get rid of it in correctly way, cough out slowly twice while keeping the mouth open and repeat steps from two to five nearly one or twice as necessary. While around two thirds of them didn’t done practice regarding put one hand

on his chest and the other hand on his abdomen this makes the most comfortable and take the deep breath from the nose and hold it by count from 1 to 3 and then take it out of the mouth slowly.

This study agrees with *Mahmoud, et al., (2017)* found that more than half of the participants could perform breathing exercise while the remain perform it partially and don't follow the correct manner.

Also, this result agreement with *Pega and Wilson (2016)* ensured that almost of the participants do breathing excesses and holds them in comfortable position and feeling of comfort after the exercise. From the investigators' point of view this result indicated that the elderly people had superficial knowledge and skills about breathing exercise and needs more training for this skill to take more benefits from it.

Regarding elderly people practice related to diet system, majority of the participants done practice regarding drink plenty of fluids such as warm drinks and water, reduce the intake of salt or salted food and eat small meals and frequent during the day while more than half of them didn't done practice regarding avoid eating foods that have added flavor, aromatherapy and preservatives.

This study agrees with *Hashemi, et al., (2015)* jindicated that proper diet and fluid intake of elderly people suffering from bronchial asthma is very crucial to overcome their health condition. Also, this result agreement with *Srivastava and Gupta (2015)* who conducted a study about "using herbal agent for treatment of respiratory diseases of the elderly" using foods and dietary supplements in German" reported that nearly two thirds of the participants didn't take salt and fatty diet but take one meal a day that can affect their immunity in future, also they got enough fluids throughout the day. These findings may be due to loss of appetite in elderly so they added flavor, aromatherapy and preservatives to their foods for enhancing their appetite.

Regarding home environment for elderly people with bronchial asthma, majority of elderly people home environment were in good ventilation at home, the kitchen is clean and tidy and separate from the living area, the house is clean, tidy and odorless and there is a source of drinking water inside the house .Also, "lighting rooms and corridors are sufficient, The bathroom is clean and has toiletries and Garbage is removing by collected in all bags, And put them out of the house, also more than three quarters of them reported not present mold on the walls, windows or in the bathroom.

This study agrees with *Moussa, et al., (2016)* who conducted a study about "the environmental risk factors and the associated morbidity in a periurban area, Alexandria, Egypt" and found that more than half of elderly people and reported that their home environment had good ventilation and sanitation, three quarters of them exposed to direct sunshiny daily. Also, this result disagreement with *Khatab, et al., (2017)* who conducted a study about "the prevalence of sensitization to mould and yeast allergens in Egyptian patients with respiratory allergy" found that the majority of elderly people reported that their home environment not adequate ventilation but hade good sanitation, nearly half of the reported expose to sun all over the day.

### **Regarding question (3); what is the bronchial asthma affect peoples' quality of life?**

Regarding the effect of bronchial asthma on the quality of life of elderly people (physical status), nearly two thirds of the participants avoid activities that require effort such as exercise and need to exit sputum continuously. Also, more than half of them suffer from difficulty breathing due to the condition of asthma, suffer from the weight of the chest, have difficulty sleeping at night because of asthma and often feel tired. More than half of them changed their eating habits as a result of asthma and family understands the impact of the disease on physical abilities and the difficulty of moving to meet personal needs.

This study is in agreement with *El-Gilany and Alam, (2018)* who conducted a study about "the effects of nursing program as a life review on life satisfaction and happiness among elderly people" Mansoura, Egypt found that majority of elderly people had low adherence with health care providers instructions and having poor physical study. From the investigators' point of view, these finding may indicated that negative effect of bronchial asthma on physical status of elderly people

Less than half of them their health condition prevents them from taking care of themselves. This a study agrees with *Matalqah (2018)* found more than half of the participants suffered from difficulty of breathing and avoid activities that affect their breathing. From the investigators' point of view, these finding may indicated with asthma suffer many health problems and needs more attention and training to learn how to handle such problems.

Regarding the effect of elderly bronchial asthma on the quality of life of elderly people (emotional status), around two thirds of them get moral support that they need from others, .and get angry because they wake up from sleep because of the symptoms of asthma. Also, more than half of them can control the important things in their life, feel anxiety toward their current and future life due to their illness. feel that they have the ability to adapt to their illness.

This study agrees with *Esmaeel and Aly , (2019)* who conducted a study about "psychological assessment of patients with bronchial asthma: focus on some predictors of abnormalities, in Sohag University Hospital, Sohag, Egypt", reported that majority of elderly people needs more psychological support in this

period of life, psychological support may affect all aspects of elderly people. Also, this result agreement with *EL-Gilany and Alam*, (2018) indicated that quality of life for elderly people affected by psychological and emotional support, the more psychological and emotional support, that affect of the quality of life.

From the investigators' point of view, these results may be due to positive attitude of the family health care providers who give more attention and support for their elderly people and facilitating handling their life. They reassure them to relieve signs of stress and anxiety. Emotional support has great effect of elderly quality of life.

Regarding of the effect elderly of bronchial asthma on the quality of life of elderly people (social status), more than half of the elderly people had family, friends or neighbors who help them when an asthma attack occurs in give treatment - climb stairs and move preparation of food - cleaning the place and washing clothes. While less than half of them enjoy their life with others and avoid going to places where they can have an asthma attack and do not find help.

This study agrees with *Mungan, et al.*, (2018) who conducted a study about "the burden of disease associated with asthma among the adult general population of five Middle Eastern countries" reported that majority of elderly people receive social and emotional support from their relatives and neighbor and experiencing high quality of life. Also, this result agreement with *Barakat* (2017) mentioned found that three quarters of elderly people live with their family and have emotional stability and better quality of life.

From the research point of view this results may be due to effect of Egyptian culture and social support that act as norms for Egyptian people and give more consideration and respect for elderly people and help them in all activity daily living, these sociality enhance the quality of life and give them more encouragement and hope.

#### **Regarding question (4); what is the Relation between demographic characteristics of the older adults and their total knowledge and practice ?**

Regarding the relation between elderly people' total knowledge and age and their educational levels, the current study revealed that there was a highly statistically significant relation between total knowledge and patient age and educational levels.

This study agrees with *Elbanna, et al.*, (2017) reported that statistical significant relation between knowledge of the participants and their ages and educational levels. Also, this result agreement with *Nafie, et al.*, (2017) who conducted a study about "an assessment of bronchial asthma management among old adult patients in chest department in Zagazig University hospital, Egypt" reported that there is an statistical significant relation between knowledge of the participants and their educational levels

Form the researcher point of view, this result indicated that educational level and age by the time improve elderly peoples' knowledge regarding their condition; they can read about their condition, causes, complications, and preventive measures and consequently enhance their knowledge.

Regarding the relation between patients' total done practice and age and their educational levels, the current study revealed that there was a highly statistically significant relation between total practice and patient age and educational levels.

This study agrees with *Mungan, et al.*, (2018) the presence of significant relation between elderly done practice and their age and educational levels. Also, this result agreement with *Mahdy, et al.*, (2017) who conducted a study about "knowledge, attitude, and practice analysis of corticosteroid use among patients" and found that there is an statistical significant relation between done practice of the participants and their educational levels, gender, and ages.

Form the researcher point of view, this result may be due to the positive effect of high education levels on elderly peoples' practice that enable them to understand their condition and prevent its complications by adherence to the treatment instructions and healthy habits.

Regarding the correlation between total knowledge score and total done practice score and quality of life, there was a highly statistically significant correlation between total knowledge and total practices and quality of life. This result indicated that the more knowledge elderly have about their needed care, the more practice improvement and consequently enhance their quality of life.

This study agrees with *Mahdy, et al.*, (2017) who found that there was a significant correlation between total knowledge and practice of elderly people regarding self-care and consequently affected quality of life. Also, this result agreement with *Bayoumy, et al.*, (2015) reported presence of positive direct correlation between elderly peoples' knowledge and practice that affect the quality of life elderly people.

From the researcher point of view, this finding may be due to the fact that elderly people knowledge and done practice are interrelated and affected with the same factors and conditions, from researcher point of view there is a direct positive relationship between knowledge and their performance.

#### IV. Conclusion

According to the results and the study questions for elderly people with bronchial asthma . age 65y and above, the current study concluded nearly, majority of the participants had incomplete knowledge about the disease, two thirds of elderly patients didn't correctly done practice for bronchial asthma while more than one quarter of them had correctly done practice for bronchial asthma, effect physical quality of life of elderly people, nearly two thirds of the participants avoid activities that require effort such as exercise and need to exit sputum continuously, effect emotional quality of life of elderly people, around two thirds of them get moral support that they need from others, .and get angry because they wake up from sleep because of the symptoms of asthma, effect social quality of life of elderly people, more than half of the elderly people had family, friends or neighbors who help them when an asthma attack occurs in give treatment - climb stairs and move preparation of food - cleaning the place and washing clothes. Finally, there was a highly statistically significant correlation between total knowledge and total practices and quality of life of elderly patients' ages and educational levels at  $p \leq 0.001$ .

#### VI. Recommendations

**In the light of the results of this study, the following recommendations were suggested:**

- Continuous education program of elderly people with bronchial asthma about manifestations of asthma and how to deal with it.
- Disseminating health education booklets to increase elderly people awareness about bronchial asthma at outpatient units.
- Simple modifications of home environment to improve ventilation and degree of quality of life.
- Encourage social activities to improve psychological quality of life.

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