Republic of Iraq

Ministry of Higher Education

And Scientific Research

University of Babylon

Faculty of Pharmacy

Study of the Spread of Medicinal Herbs Use Among Patients Suffering from Chronic Diseases in Iraq

A Research Project

Submitted To Council of Faculty of Pharmacy / University of Babylon in Partial Fulfillment of The Requirements for The Bachelor of Science in Pharmacy

By

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1444 A.H 2023 A.D

بسم الله الرحمن الرحيم

(اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (1) خَلَقَ الإِنسَانَ مِنْ عَلَقٍ (2) اقْرَأْ وَرَبُّكَ الأَكْرَمُ (3) الَّذِي عَلَّمَ بِالْقَلَمِ (4) عَلَّمَ الإِنسَانَ مَا لَمْ يَعْلَمْ (5)) سورة العلق

صدق الله العظيم

CRTIFICATE

I certify that this research (Prevalence of medicinal plants use among Iraqi patients with chronic disease) was prepared under my supervision at the Department of pharmacology, faculty of Pharmacy University of Babylon as a partial fulfillment of the requirements for the degree of graduation in Pharmacy.

Signature:

Supervisor: Dr. Qayssar Joudah Fadheel

Address: Dep. of pharmacology/College of

Pharmacy/University of Babylon

Date: / /2023

In view of the available recommendations, I forward this project for debate by examination committee.

Signature:

Name:

Scientific Dean Assistant:

Date: / /2023

COMMITTEE CERTIFICATE

We, the examining committee after reading this research (Prevalence of medicinal plants use among Iraqi patients with chronic disease) and examining the students (Tabarak Mahdi Shakir, Esraa Asaad Latife, Wurood Kadhim Abass) in its contents, find it adequate as a partial fulfillment of the requirements for the degree of graduation in Pharmacy

Signature:

Name:

{Chairman}

Date: / /2023

Signature:

Name:

{Member}

Date: / /2023

Signature:

Name:

{Member}

Date: / /2023

Approved for the University Committee for Graduate Studies.

Signature:

Name:

Dean of College of Pharmacy

University of Babylon

Date: / /2023

Acknowledgement

Owing to the blessing of The Almighty God, we finished this research.

We want to express our gratitude towards our families for their encouragement.

We take the opportunity to record our thanks to our supervisor,

Dr. Qayssar Joudah Fadheel.

Further great thanks to all members in the department of pharmacology.

We also record our thank to all who directly or indirectly offer their helping in this venture.

Dedication

Dedicated to,

Our parents who taught us to believe in ourselves,

our teachers who used to lead us to light,

Dr. Qayssar Joudah.

Summary:

Background:

the present study aimed to detect the Prevalence of medicinal plants use among Iraqi patients with chronic disease by create a questionnaire to the Iraqi people. This study is important to evaluate the current knowledge and practices of safe use of herbs among the patient and the Percentage of users of those herbs.

Aim of the study:

To assess the Prevalence of medicinal plants use among Iraqi patients with chronic disease and compare it with another study in same or different countries.

Patient, Material, and Methods:

Patient:

This is a randomized questionnaire on internet and social media sites.

Methods

In this cross-sectional study, peoples with chronic diseases from different age group were recruited. Participants had an internet questionnaire to answer. This questionnaire embraced age, gender, occupation, marital status, education level and some lifestyle details as demographic data, a large proportion of the questionnaire was related to herbs, both prescribed and OTC ones.

Result:

Gender distribution: about 70% of patients were female and 30% male.

Education level: uneducated 35%, primary school 30%, secondary school 25%, academic 10%.

Place of residence: 30% lived in Urban and 70% in Rural.

Diseases distribution: 30% having hypertension, 20% diabetes, 10% asthma, 10% migrain, 15% hyperlipidemia and 15% rheumatoid arthritis

Medicinal plants: 10% green tea, 5%fish oil, 15% anise 25% castor oil and 15% spirulina.

Indication of medicinal plants: green tea for DM, Fish oil for asthma, Garlic for hypertension, Anise for migraine, spirulina for hyperlipidemia, Gastor oil for RA

Side effect of Garlic: bad breath, heartburn, diarrhea, allergy.

Side effect of green tea: diarrhea, headache, waking, anemia.

Side effect of fish oil: nausea, diarrhea, heartburn, rach.

Side effect of anise: nausea, SOB, diarrhea, allergy.

Side effect of spirulina: stomach pain, insomnia, constipation, allergy.

Side effect of gastor oil: abdominal cramp, nausea, diarrhea, allergy.

Side effect of castor oil: abdominal cramp, nausea, diarrhea, allergy.

Conclusion: The study found a high prevalence of herbal medicine use among chronic disease patients in Iraq. Several factors (education, rural residence, age, low quality of life and multiple chronic conditions) associated with herbal medicine use were identified. This knowledge will support health care providers and policy makers in decision making on the use of herbal medicine.

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LIST OF ABBREVIATIONS

WHO	World Health Organization
NCDs	Non-Communicable Diseases
IgE	Immunoglobulin E
DM	Diabetes mellitus
IDF	International Diabetes Federation
RA	Rheumatoid Arthritis
T2DM	Type 2 Diabetes Mellitus
DMARD	Disease-Modifying Antirheumatic Drug
AS	Ankylosing Spondylitis
HDL	High-Density Lipoprotein
VLDL	Very Low-Density Lipoprotein
LDL	Low-Density Lipoprotein
ASCVD	Atherosclerotic Cardiovascular Disease
AHA	American Heart Association
SPSS	Statistical Package for the Social Sciences
LSD	Least Significant Difference
ANOVA	Analysis of variance

Chapter One Introduction and Literature review

1.1Introduction:

Organization (WHO), traditional medicine refers to the sum total of knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures that are used to maintain health, as well as to prevent, diagnose, improve, or treat physical and mental illnesses. Traditional medical practices can include plant, animal, and mineral-based medicines, massage, spiritual therapies, and a variety of other techniques unique to different regions and cultures.(1)

Traditional medicine is typically contrasted with conventional medicine, also referred to as allopathic, modern, orthodox, or Western medicine, which is based on biochemical theories of illness. In countries with limited access to allopathic medicine, traditional medicine is often the main source of health care.

In some countries in Asia and Africa, 80% of the population uses traditional medicine for primary health care needs. In many developing nations, there are more traditional healers than there are allopathic practitioners, and the population of allopathic practitioners is often concentrated in urban areas, further reducing rural access to medical care. (2)

Chronic diseases, also known as non-communicable diseases (NCDs), are defined by the World Health Organization as long-term disorders, which usually progress slowly and are not transmissible between people (WHO 2014). The risk factors of chronic diseases are complex and results of a combination of different genetic, physiological, behavioral and environmental factors (WHO 2014).Chronic diseases such as hypertension, diabetes, cancer, asthma, and chronic kidney diseases are increasingly becoming a major problem of health care systems worldwide due to their considerably increasing prevalence.In 2008, around 36 million (63%) of all global deaths were caused

by chronic diseases (Alwan et al. 2010), this number increased to39 million (72%) of all global deaths in 2016 . (Naghavi et al. 2016)

Phytotherapy and traditional medicine studies are especially interesting, because few researches focused on specific aspects such as spontaneous plant species used in traditional medicine.(3)

1.2Asthma:

Asthma is a complex inflammatory disease causes airway narrowing and associated with changes in the levels of eosinophils, mast cells, lymphocytes, cytokines and other inflammatory cell products. It is well known that patients with asthma have high levels of specific IgE that binds to receptors of mast cells and other inflammatory cells. Interaction between IgE antibody and antigen results in the activation of a series of inflammatory cellular reactions, including the release of mediators such as histamines, prostaglandins and leukotrienes, which subsequently lead to contraction of airway smooth muscle and bronchoconstriction. Asthma is a common disease that is rising in prevalence worldwide, with the highest prevalence in industrialized countries. it has been estimated that a further will be affected. Since 1970s, the global prevalence, morbidity, mortality, and economic burden of asthma have increased particular in children.(4)

1.2.1 Signs and symptoms:

Asthma severity was dependent on variety of symptoms, consisting mostly of wheezing, breathlessness, chest tightness, and cough.

1.2.2 Medicinal plants:

Medicinal plant used for the treatment of asthma should have anti-inflammatory, immunomodulatory, antihistaminic, smooth-muscle relaxants and allergic activity According to Ayurveda anti-asthmatic drug should have properties such

as Spirulina Antioxidant supplements are effective in reducing bronchoconstriction severity by inhibiting pro-inflammatory events as a result of neutralizing the effects of excess reactive oxygen species and reactive nitrogen species. Current asthma therapy lacks satisfactory success due to adverse effect, hence patients are seeking complementary and alternative medicine to treat their asthma.(5)

Garlic has several health benefits, including anti-inflammatory properties, according to a 2013 study. Because asthma is an inflammatory disease, garlic may be able to help relieve your symptoms. Still, there's no conclusive evidence that garlic is effective against preventing asthma flare-ups.

Green tea is packed with antioxidants, which may help reduce asthma-related inflammation. It's also a source of caffeine, which may temporarily relax your airways.(6)

Cinnamon and honey are a powerful concoction in treating asthma. The anti-bacterial and anti-oxidants properties prevent growth of bacteria and fungus in the respiratory system. This mixture fights asthma efficiently than other mixtures. Mix 1 teaspoon of honey with half a teaspoon of cinnamon powder.

1.3 Diabetes mellitus (DM):

Diabetes mellitus (DM) is a serious, chronic disease that occurs either when the pancreas does not produce enough insulin, or when the body can't effectively use the insulin it produces According to IDF report, approximately 463 million adults (20–79 years) were living with diabetes; by 2045 this will rise to 700 million.

The proportion of people with type 2 diabetes is increasing in most countries, and about 79% of adults with diabetes were living in low- and middle-income countries. Patient education, diet, and lifestyle modifications greatly improve the prognosis of diabetes mellitus, these strategies help to reduce weight, improve

glycemic control and reduce the risk of cardiovascular complications, which account for 70%–80% of deaths among those with diabetes.(7)

Alternative systems of medicine based on plant extracts have thrived through the ages and are still practiced by a large population for the management of diabetes.

1.3.1 Medicinal plant:

medicinal plants have been used as a source of medicine and 80–85% of populations rely on these medicinal plants using the extracts or their active components as a traditional medicine to meet their primary health care needs. indicate that more than 1200 plants have been used in traditional medicine systems following claims of their hypoglycemic properties. Many studies confirmed the benefits of medicinal plants with hypoglycemic effects in the management of diabetes mellitus. The effects of these plants may delay the development of diabetic complications and correct metabolic abnormalities. During the past few years, some of the new bioactive drugs isolated from hypoglycemic plants showed antidiabetic activity with more efficacy than oral hypoglycemic agents used in clinical therapy.

Green tea doesn't contain added sugar, is naturally calorie-free when enjoyed plain from the bag, and is a nutritional powerhouse — all of which makes it a great beverage to add to your diabetes diet. Some research indicates that anethole, the active ingredient in anise seed, may keep blood sugar levels in check when paired with a healthy diet. In one 45-day study in diabetic rats, anethole helped reduce high blood sugar by altering levels of several key enzymes. While omega-3 fatty acids are crucial for our overall health, it's generally better for people with type 2 diabetes to get their intake by eating at least two portions of oily fish a week, than by taking supplements. These findings indicate that RA and/or castor oil could be a useful functional fatty acid to treat allergy or type 2 diabetes.(8)

garlic significantly improved blood glucose control, and also had significantly positive roles in blood liquid regulation in 12 weeks, which is a very common co-morbility in T2DM patients.

Omega-3 fatty acids can be given in conjunction with metformin to reduce triglyceride levels in diabetic dyslipidaemia without any adverse drug reactions or any drug interaction

found that increasing the amount of omega-3, omega-6, or total polyunsaturated fats in the diet over an average study period of nearly three years didn't seem to have any effect on glucose metabolism or diabetes risk(9)

1.4 Rheumatic diseases

Often grouped under the term “arthritis,” rheumatic diseases are autoimmune or inflammatory diseases that cause your immune system to attack your joints, muscles, bones, and organs.

Rheumatic diseases, including most forms of arthritis and spondyloarthropathies (inflammatory spinal conditions), are usually painful, chronic, and progressive, which means they get worse over time.(10)

Early diagnosis and treatment can slow the progression of many rheumatic diseases.

According to the National Institute of Arthritis and Musculoskeletal and Skin Diseases, there are more than 100 rheumatic diseases. Among the most common rheumatic diseases are:(11)

- Ankylosing Spondylitis (AS) AS :is a common type of spondyloarthritis, a type of arthritis that attacks the spine and, in some people, the joints of the arms and legs.

- Nonradiographic axial spondyloarthritis is a related condition in which the disease causes symptoms including lower back pain but unlike ankylosing spondyloarthritis, there is no visible damage on X-rays
- Gout is a form of arthritis characterized by the accumulation of urate crystals in a joint — often the large joint of your big toe — causing swelling and pain
- Infectious Arthritis A sudden and painful form of arthritis brought on by a viral or bacterial infection, infectious arthritis can sometimes lead to permanent joint damage.
- Lupus is a systemic autoimmune disease that occurs when your body's immune system attacks your own tissues and organs, causing damage to joints and organs
- Osteoarthritis (OA) The most common form of arthritis, is an age-related disease that damages cartilage and bone, causing pain and, in some cases, disability
- Psoriatic Arthritis (PsA) An inflammatory type of arthritis affecting some people who have psoriasis
- Rheumatoid Arthritis (RA) is an autoimmune and inflammatory disease that occurs when your immune system mistakenly attacks your own body's tissues, causing painful swelling.

1.4.1 Signs and Symptoms :

Different types of rheumatic disease have different symptoms.

The following are some of the most common symptoms of arthritis and rheumatic diseases:

- Joint pain

- Swelling of a joint or joints
- Joint stiffness that lasts for at least one hour in the early morning
- Chronic pain or tenderness in a joint or joints
- Warmth or redness in a joint area
- Limited movement in an affected joint or joints
- Fatigue
- In addition, some rheumatic diseases are characterized by specific symptoms. For example, the majority of people with lupus will experience some form of skin rash along with joint pain with inflammation and fatigue.

1.4.2 Causes and Risk Factors of Rheumatic Diseases:

Experts don't know what causes most types of rheumatic disease. However, per Johns Hopkins Medicine, researchers believe that some or all of the following may play a role, depending on the type of rheumatic disease:

- Genes and family history
- Environmental triggers
- Lifestyle choices
- Infection
- Trauma
- Metabolic problems
- Wear and tear or stress on a joint or joints
- Genetics are thought to play a role in the development of ankylosing spondylitis

1.4.3 Medicinal plants:

Various types of medication are prescribed to treat rheumatic diseases along with drugs used to treat the symptoms, including pain and inflammation.

Medications used to treat rheumatic diseases include:(12)

Corticosteroids which can slow the progression of rheumatic diseases by affecting the body's immune reactions and inflammatory processes Janus kinase inhibitors a DMARD subclass that targets Janus kinase pathways, which are involved in the body's immune system response.

Castor oil: The anti-inflammatory properties of castor oil may be specifically beneficial in treating inflammatory conditions like rheumatoid arthritis.

1.5 Migraine:

A migraine is a headache that can cause severe throbbing pain or a pulsing sensation, usually on one side of the head. It's often accompanied by nausea, vomiting, and extreme sensitivity to light and sound. Migraine attacks can last for hours to days, and the pain can be so severe that it interferes with your daily activities.

For some people, a warning symptom known as an aura occurs before or with the headache. An aura can include visual disturbances, such as flashes of light or blind spots, or other disturbances, such as tingling on one side of the face or in an arm or leg and difficulty speaking. Medications can help prevent some migraines and make them less painful.

1.5.1 Symptoms:

Migraines, which affect children and teenagers as well as adults, can progress through four stages: prodrome, aura, attack and post-drome. Not everyone who has migraines goes through all stages.

Prodrome

One or two days before a migraine, you might notice subtle changes that warn of an upcoming migraine, including:(13)

• Constipation

• Mood changes, from depression to euphoria

• Food cravings

• Neck stiffness

• Increased urination

• Fluid retention

• Frequent yawning

1.5.2. Attack:

A migraine usually lasts from 4 to 72 hours if untreated. How often migraines occur varies from person to person. Migraines might occur rarely or strike several times a month.(13)

During a migraine:

• Pain usually on one side of your head, but often on both sides

• Pain that throbs or pulses

• Sensitivity to light, sound, and sometimes smell and touch

• Nausea and vomiting

1.5.3 Medicinal plants:

Herbals plants are commonly used as complementary therapy with conventional drugs being practised clinically in the treatment of arthritis. The various plants like Cannabis, Withania, somnifera, Terminalia bellerica, Emblica officinalis, Terminalia chebula, Boswellia serrata, Curcuma longa, are been used in different

formulations for arthritis are responsible for the antioxidant and anti-inflammatory activity. The evaluation of these herbal formulations by clinical studies and preclinical studies provided the evidence-based data demonstrating the mechanism of such herbal plants and the active constituent of herbal plants accountable for suppressing the inflammatory mediators or the molecular signaling pathways involved in arthritis.(13)

Cannabis is a flower used to reduce headache associated with migraine.(14)

1.6 Hyperlipidemia:

Hyperlipidemia is a condition that incorporates various genetic and acquired disorders that describe elevated lipid levels within the human body. Hyperlipidemia is extremely common, especially in the Western hemisphere, but also throughout the world. Alternatively, a more objective definition describes hyperlipidemia as low-density lipoprotein (LDL), total cholesterol, triglyceride levels, or lipoprotein levels greater than the 90^{th} percentile in comparison to the general population, or an HDL level less than the 10^{th} percentile when compared to the general population.(1) Lipids typically include cholesterol levels, lipoproteins, chylomicrons, VLDL, LDL, apolipoproteins, and HDL.

Through a vast array of trials and studies, it has been consistently shown that elevated levels of LDL cholesterol increase a person's risk for the development of atherosclerotic plaques and subsequent vascular disease. In stark contrast, high-density lipoprotein (HDL) cholesterol assists in regulating cholesterol levels to prevent imbalances that would increase the risk of atherosclerotic vascular disease. Each patient's LDL cholesterol goal is conditional on their overall cardiovascular risk, and medical therapy should be independently tailored to the patient. Managing risk factors, such as hyperlipidemia, to diminish the risk for atherosclerotic cardiovascular disease is referred to as "primary prevention." The grounds for lowering LDL cholesterol derives from widespread epidemiologic

data that reveals a positive, continuous correlation between LDL cholesterol levels, cardiovascular events, and patient mortality.(15)

Treatment of hyperlipidemia continues to evolve as we better conceptualize the underlying pathophysiology, and we concurrently improve on preceding medical therapies. This article will overview the background, diagnosis, and most recent treatment guidelines for hyperlipidemia.

1.6.1 Signs and symptoms:

The decision to treat elevated LDL cholesterol levels depends on the determination of overall cardiovascular risk by the patient's primary physician, and this should be discussed in great detail with the patient. The absolute risk reduction affiliated with lipid-lowering therapy for hyperlipidemia is generally less than for patients with known underlying cardiovascular disease. To reduce risk in patients without a known diagnosis of cardiovascular disease, only treatments of elevated LDL cholesterol have proven to be of clinical benefit. There is no proven clinical benefit to the treatment of hypertriglyceridemia or low HDL cholesterol levels.

Initial treatment modalities are focused on diet and lifestyle modification, with the possible addition of lipid-lowering medications if needed. Patients with mild hyperlipidemia and low ASCVD risk (below 7.5% 10-year risk) should focus on a low fat, low carbohydrate diet, and moderate to high-intensity physical activity (recommended 30 minutes per day, 5 to 6 days per week). The AHA advises limiting saturated fat consumption to about 5% of your daily calories and restricting the total quantity of trans-saturated fat consumption as much as possible. Quitting smoking, lowering blood pressure, and losing weight have all proven to be very advantageous in regards to lowering vascular disease risk. For patients at moderate to high ASCVD risk (over 7.5% 10-year risk), the addition of lipid-lowering "statin" medications should be added.

The most well rounded and complete meta-analysis investigating primary prevention trials in hyperlipidemia patients discovered an all-cause mortality benefit and that lowering LDL cholesterol is effective at decreasing cardiovascular events, in particular, reducing the risk of myocardial infarction. There is a clear and proven benefit to statin therapy for the vast majority of patients, from low risk to high risk, and if side effects and financial constraints did not exist, almost all patients would be prescribed statin therapy. Therefore, these medication's side effects and costs should be weighed against the individual patient's potential benefit from taking the drug.(15)

1.6.2. Medicinal Plants:

Different remedies are used to treat hyperlipidemia in traditional medicine in which the role of medicinal plants is significant. Recent researches performed on medicinal plants and food supplements used in traditional medicine indicate that compounds present in them including food fibers, vitamins, flavonoids, sterols, and other antioxidant compounds can lower lipids, inhibit low-density lipoprotein oxidation, eliminate oxygen free radicals, and possibly improve this disease by having an effect on the immune system and improving metabolic disorders of the body.

Ex: Cynara cardunculus *(Artichoke)* , *Medicago sativa (Alfalfa)* , *Allium sativum L (garlic)*(16)

Aim of the study:

To assess the Prevalence of medicinal plants use among Iraqi patients with chronic disease and compare it with another study in same or different countries.

Chapter Two
Patients, materials and methods

2.1. Study groups

A randomized sample of 100 patients with different chronic diseases in Iraq country.

2.2. Data collections

The data has been collected by using electronic questionnaire. The questions were about patient's age, sex, weight, Hight, place of residency, education, job, smoking, there chronic disease, name of herb use, how describe the herb for them.

2.3. Duration of study

This is a cross sectional Statistic study carried out from November 2022 to March 2023.

2.4. Place of study

The study was taken by online questionnaire on social media sites.

2.5. Statistical analysis

Statistical analysis was performed using SPSS. An expert statistical advice was consulted for test used. Differences in each variable were compared using paired-sample student' t-test. Analysis of variance (ANOVA) followed by post-hoc tests using LSD method was used for the multiple comparison among all study populations. Microsoft Excel 2010 Also were used. In all test, $P < 0.05$ was considered to be statistically significant unless other levels were stated.

Chapter Three
Results

3.1. Gender distribution among study population

In present study there was a significant difference regarding to the prevalence of medicinal plants used in female with chronic disease as compared with male (figure-3.1).

3.2. Age distribution among study population

The current study show significant difference in age group(60-69 year) as compared with age groups(30-39 year , 20-29 year) and non-significant difference as compared with age groups(50-59 year , 40-49 year).Also there was a significant difference in age group(40-49 year) as compared with age groups(30-39 year , 40-49 year) and non-significant difference as compared with age groups(50-59 year , 60-69 year) as shown in (figure-3.2)

3.3. Chronic disease distribution among study population

The present study show significant difference in prevalence of hypertension among study population as compared with other chronic disease , while diabetes show non-significant difference as compared with hyperlipidemia and rheumatoid arthritis but significant differences compared with migraine and asthma (figure-3.3) .

3.4. Distribution of medicinal plants used among study population

There was a non- significant difference between the use of garlic and castor oil among study population but significant difference as compared them with other medicinal plants .Also non-significant differences between the use of spirulina and anise but significant differences when compared them with fish oil (as shown in figure-3.4) .

3.5. Distribution of medicinal plants indication for chronic diseases among study population

There were non-significant differences between garlic for hypertension and castor oil for rheumatoid arthritis but significant differences when compared them with others among study population. Also, non-significant differences among spirulina for hyperlipidemia, anise for migraine, and green tea for diabetes mellitus but significant differences between spirulina for hyperlipidemia, and anise for migraine as compared with fish oil for asthma (as shown in figure-3.5).

3.6. Economic status among study population

There were non-significant differences in economic status regarding to the use of medicinal plants (as shown in figure-3.6).

3.7. Place of residency among study population

There was a significant differences in place of residency among population used medicinal plants (as shown in figure-3.7).

3.8. Level of education among study population

There was a significant differences between uneducated as compared with academic, primary as compared with academic, and secondary as compared with academic but non-significant differences among uneducated , primary , and secondary (as shown in figure-3.8) .

3.9. Distribution of marital status among study population

There was a significant differences regarding to the marital status among population used medicinal plants for chronic disease (as shown in figure-3.9) .

3.10. Distribution of side effects caused by garlic among study population

The present study shows a significant difference between bad breathy and other side effects. Also, significant differences between heartburn, allergy and diarrhea but non-significant differences between diarrhea and allergy (as shown in figure-3.10).

3.11. Distribution of side effects caused by green tea among study population

The current study shows a significant difference between diarrhea and other side effects but there were non-significant differences between headache, waking and anemia (as shown in figure-3.11).

3.12. Distribution of side effects caused by fish oil among study population

The current study shows the significant differences between nausea, heartburn and rash but non-significant differences between nausea and diarrhea. Also there was a significant differences between diarrhea, heartburn and rash (as shown in figure-3.12) .

3.13 Distribution of side effects caused by anise among study population

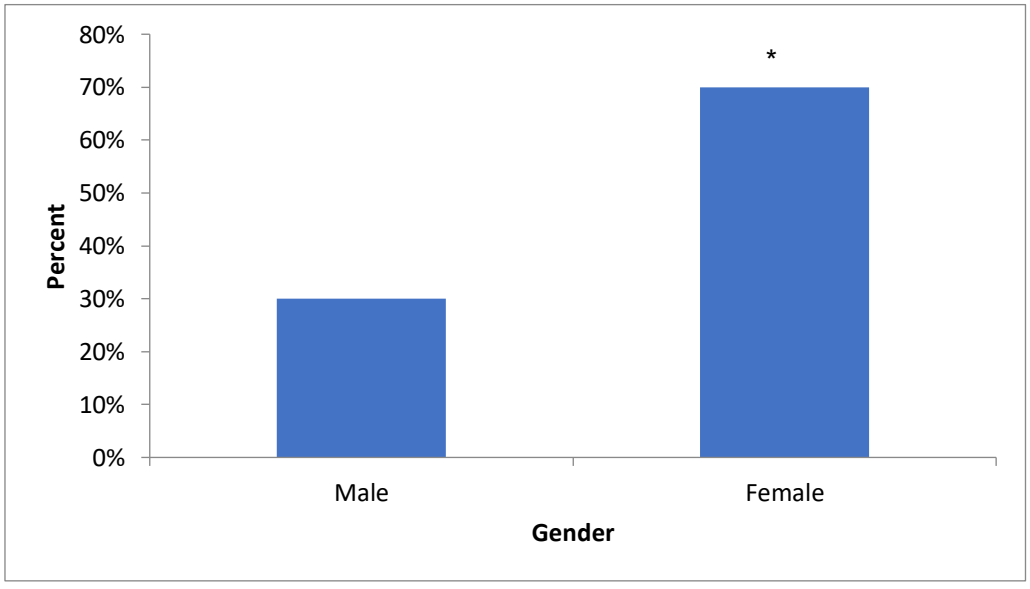
There were non-significant differences between diarrhea when compared with allergy and nausea but significant differences between allergy, diarrhea when compared with shortness of breath but non-significant differences between nausea and SOB.

3.14. Distribution of side effects caused by spirulina among study population

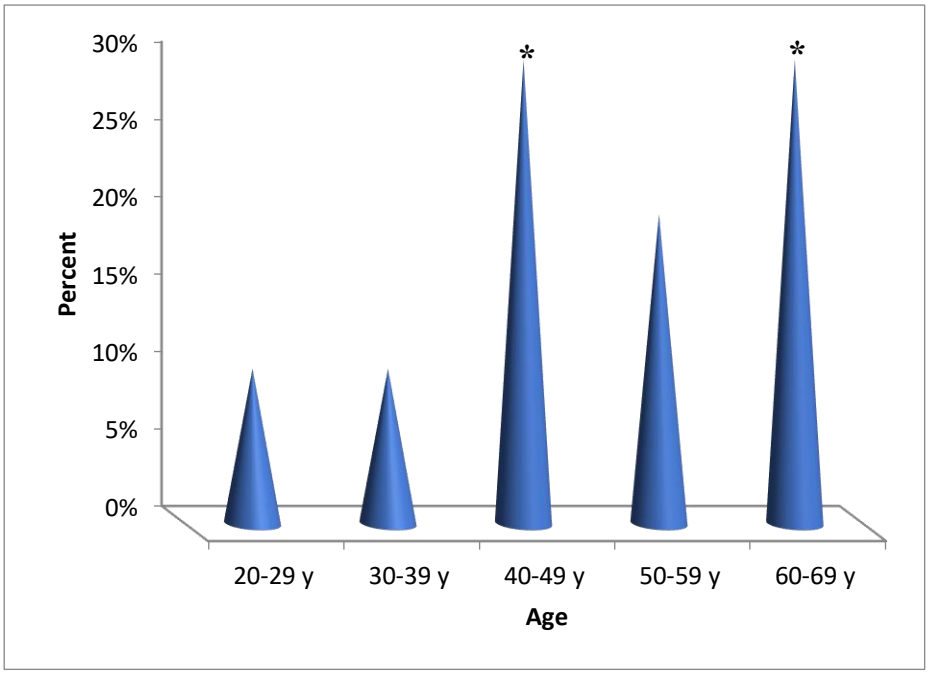
There were non-significant differences between insomnia as compared with stomach pain. Also, non-significant differences between constipation and allergy. There were significant differences between insomnia as compared with allergy and constipation but non-significant differences between constipation as compare with allergy. There was a significant difference between stomach pain as compared with allergy and constipation.

3.15. Distribution of side effects caused by castor oil among study population

There was a significant differences between abdominal cramp as compared with nausea, diarrhea, and allergy but non-significant differences between nausea , diarrhea, and allergy .



Figure(3.1.):- percent of male and female among study population



Figure(3.2.):- age distribution among study population

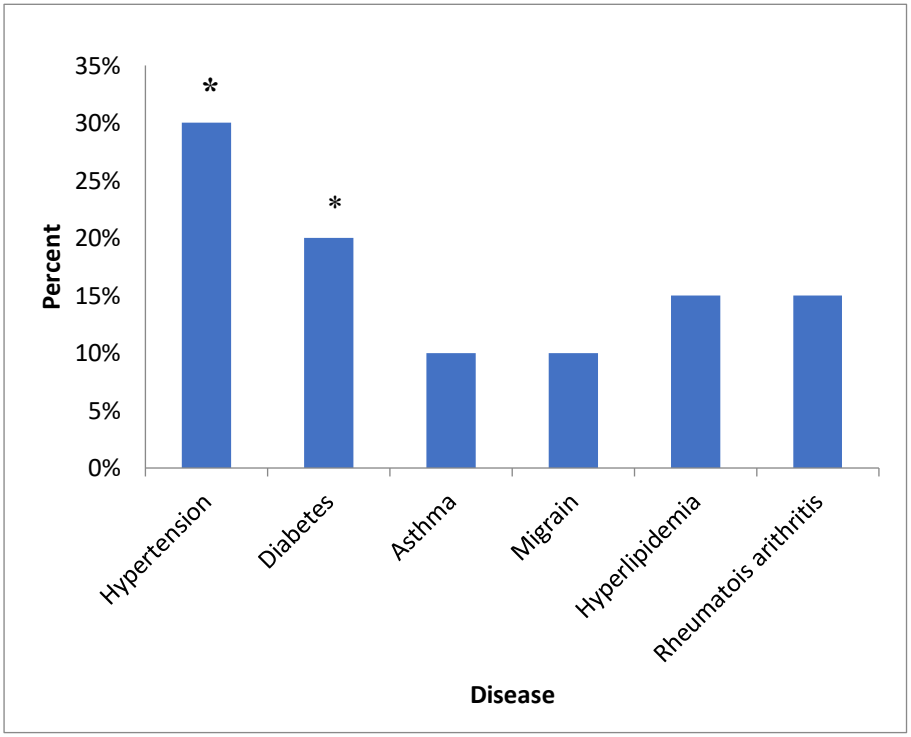


Figure (3.3): - disease distribution among study population

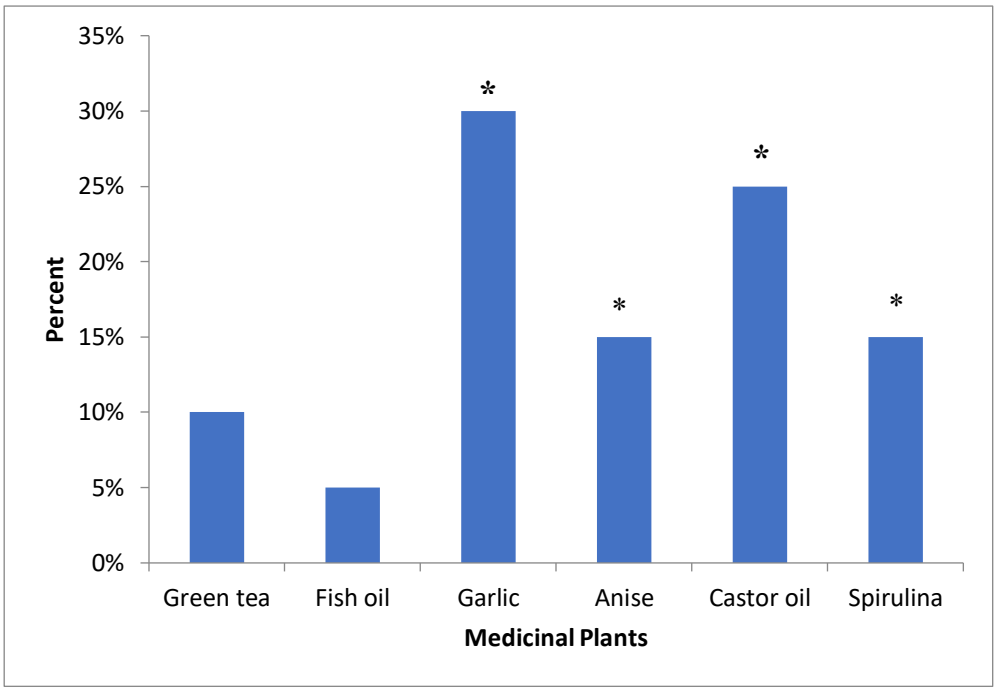
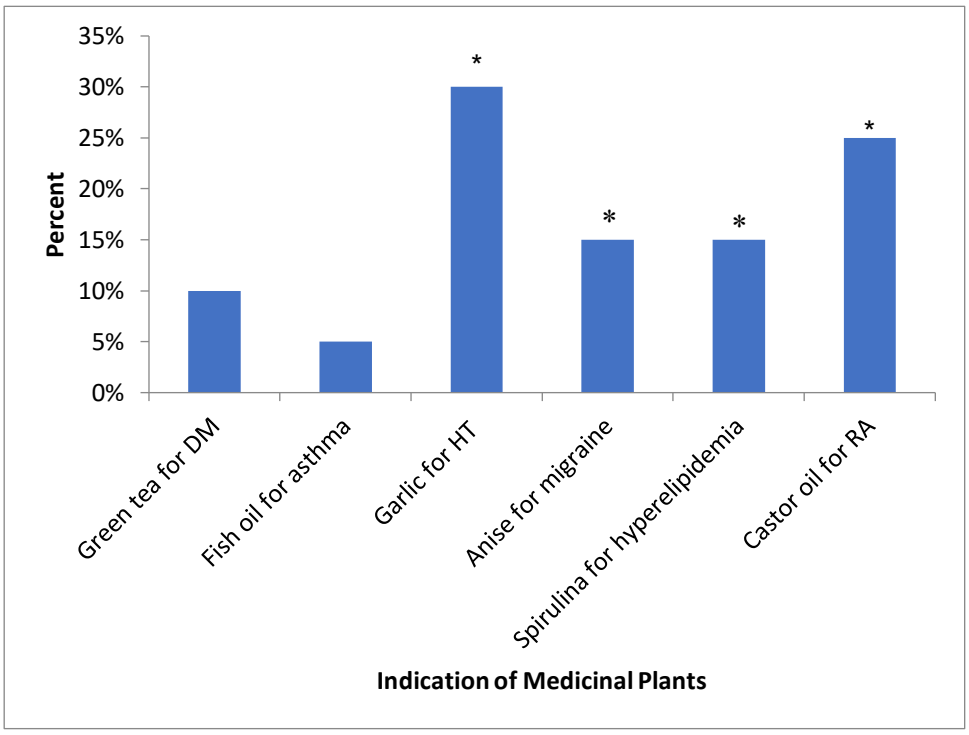
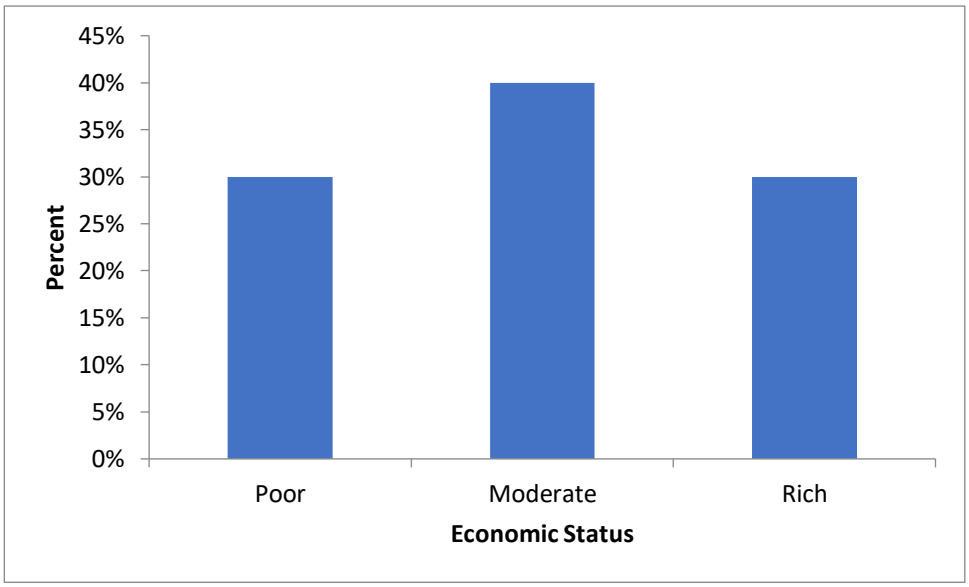


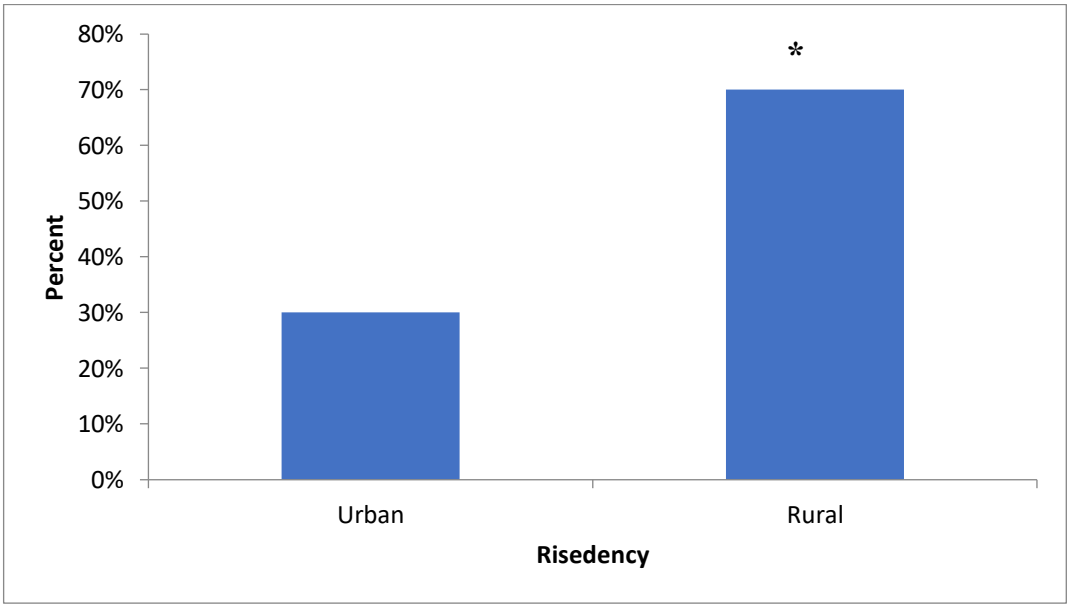
Figure (3.4): - Percent of medicinal plants used by study population



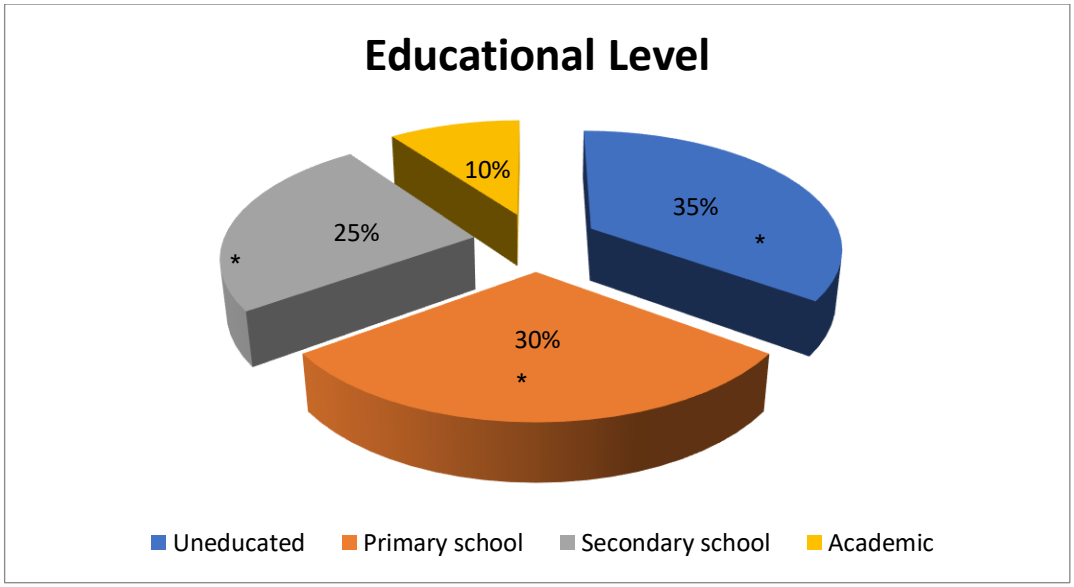
Figure(3.5.):- percent and purpose of each medicinal plant used by study population



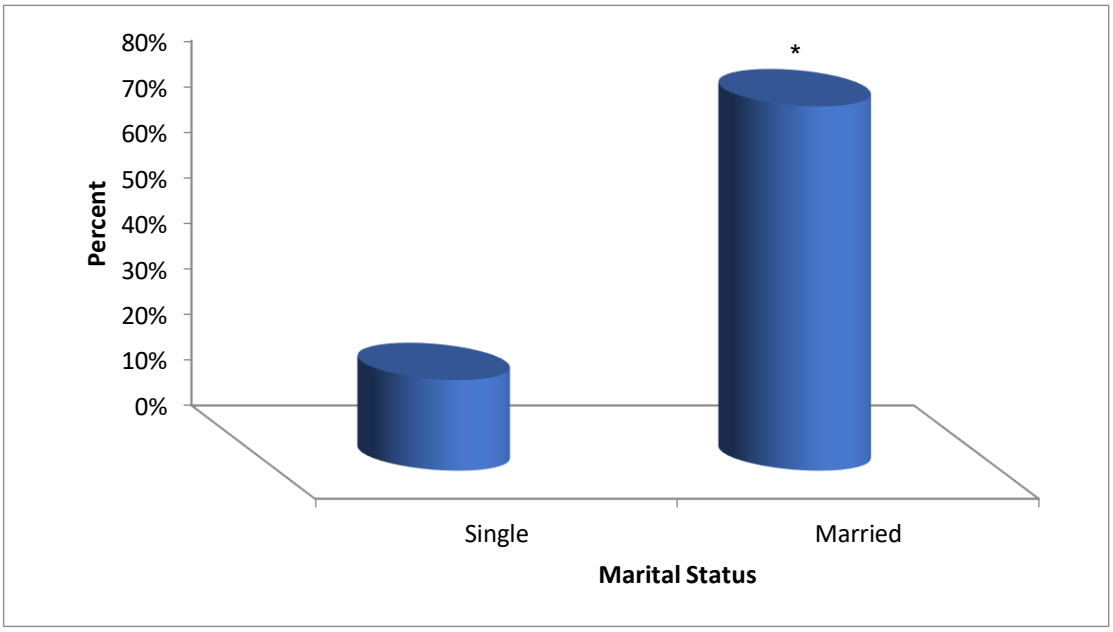
Figure(3.6.):- Distribution of economic status among study population



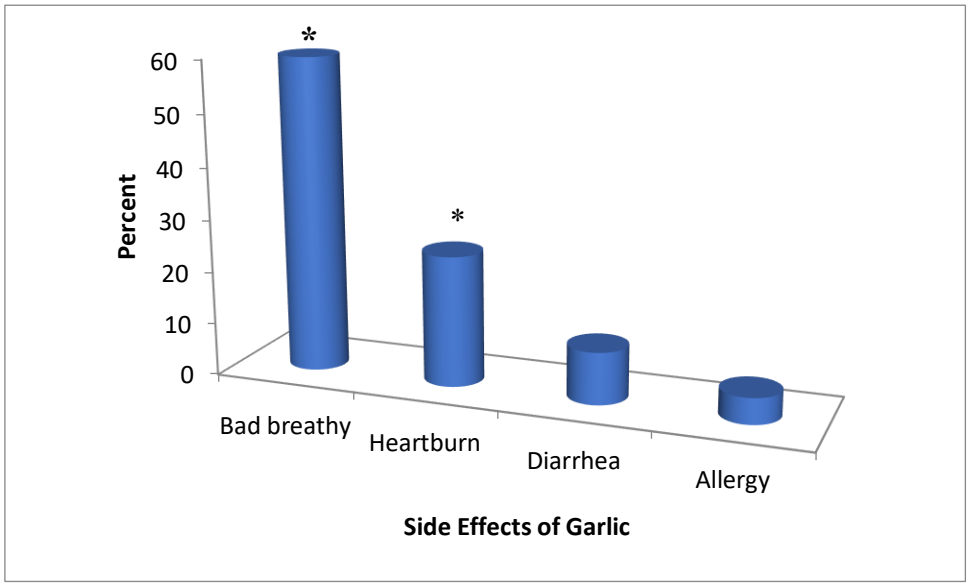
Figure(3.7.):- place of residency distribution among study population



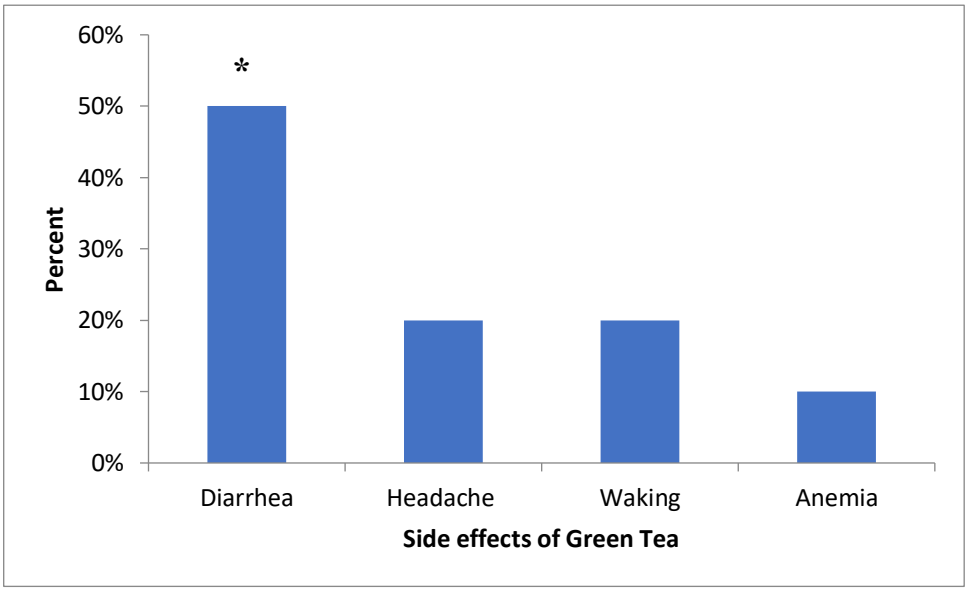
Figure(3.8.):- level of education distribution among study population



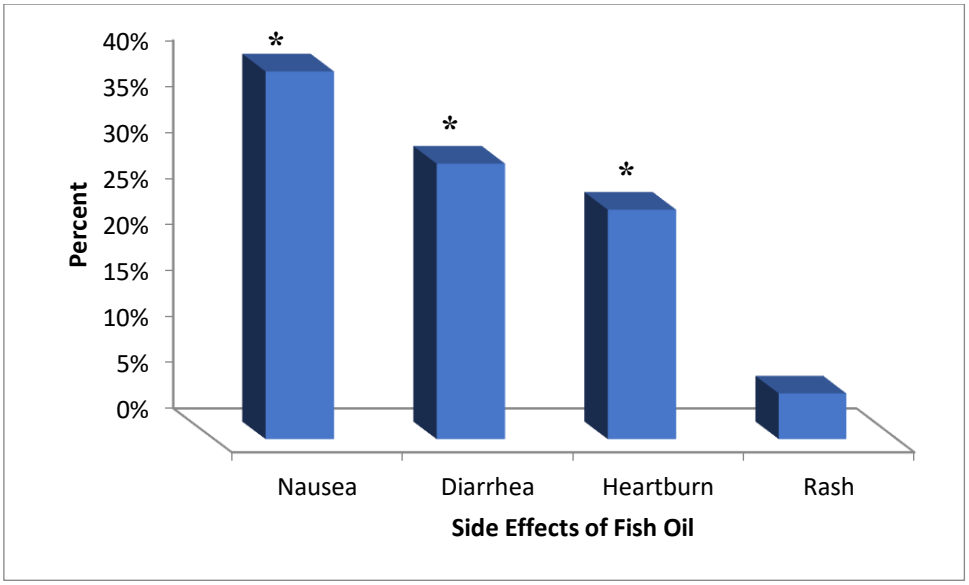
Figure(3.9.):-distribution of marital status among study population



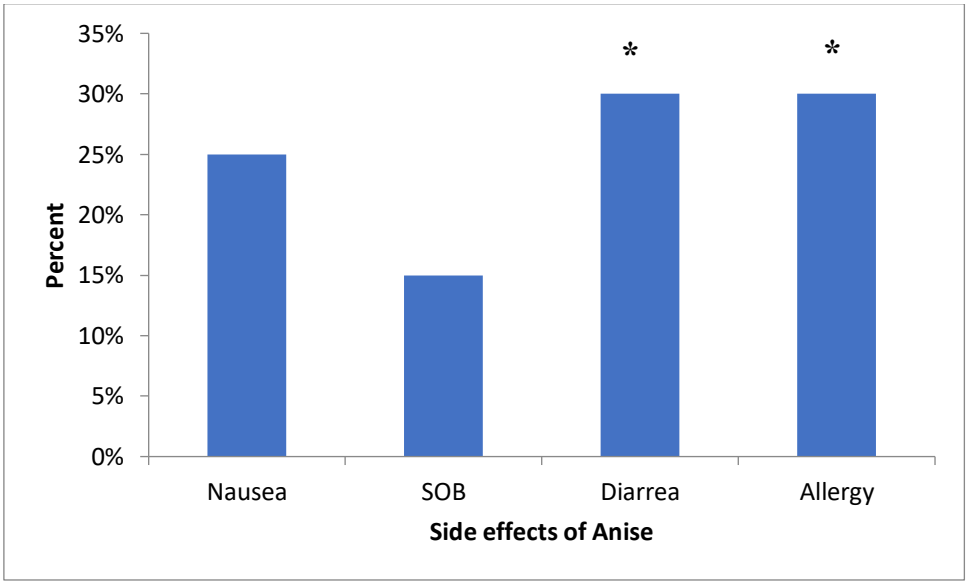
Figure(3.10.):- Distribution of side effects caused by garlic among study population



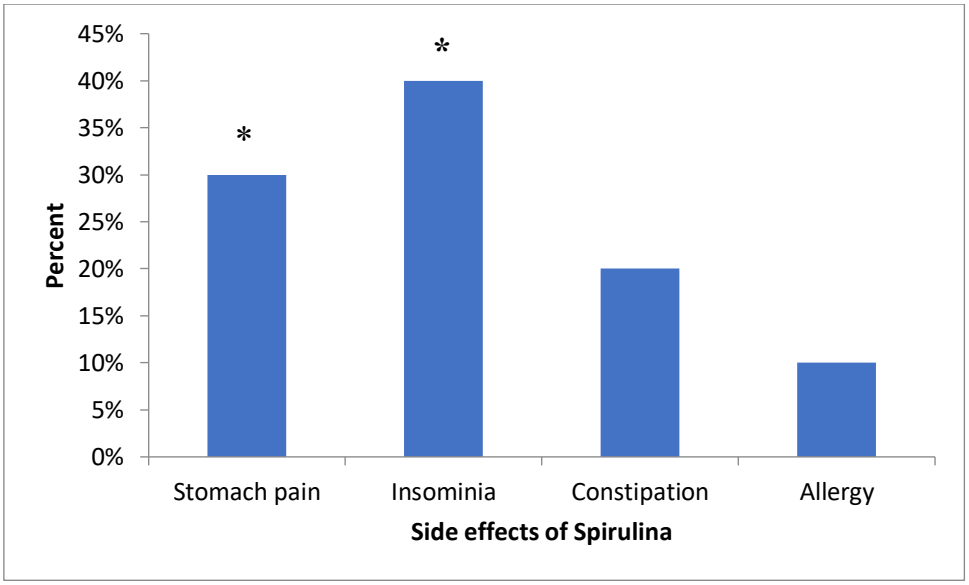
Figure(3.11.):- Distribution of side effects caused by green tea among study population



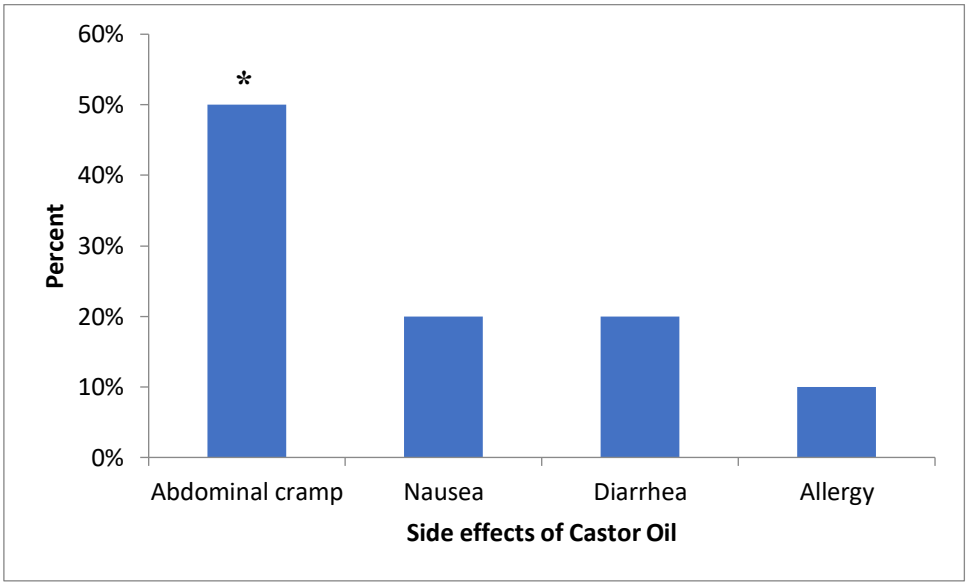
Figure(3.12.):- Distribution of side effects caused by fish oil among study population



Figure(3.13.):- Distribution of side effects caused by anise among study population



Figure(3.14.):- Distribution of side effects caused by spirulina among study population



Figure(3.15.):- Distribution of side effects caused by castor oil among study population

Chapter Four
Discussion

4.1. Discussion:

Herbs are widely used by Iraqi patients to treat many diseases, especially the Elderly. The finding shows that the prevalence of herbs used in Iraqi patients with chronic diseases in the (20-39) age group was the lowest (8.6%), while the highest prevalence was seen with (40-49) and 60+ age groups (60%) and age group (50-59) is (18%) so it is highly used in patients with old age. The use of herb among female was significantly higher than man (female 63.8%, male 36.2%).

Several studies(17), (18) found that being a woman and younger or older age were associated with herbal medicine use, while in this study only in bivariate analysis women had a higher prevalence of herbal medicine use than men had.

The findings align with the research conducted in Saudi Arabia(19), the mean age of the participants was 56.6 ± 9.7 years (55 male and 162 female). The rate of herbal medicine use was 29%. Herbal medicine use among female gender was significantly higher.

The finding shows that the prevalence of herbs used in Iraqi patient with hypertension (30%), diabetes (20%) and hyperlipidemia (15%) .

However, a study was conducted in Thailand(20) shows that hypertension (61.0%), diabetes mellitus (34.9%), dyslipidemia (29.7%) used the herbs among Thailand patients and thus we concluded that the patients with hypertension then diabetes then hyperlipidemia are more users of the herb along with their medicines use.

Additionally, another finding in this study is patients living within rural is more in using herbs than patients living in urban and this may be linked with less knowledge about the dangerous of overdose and its side effects if taken in a concentrated dose.

Consistent with some studies on traditional and complementary medicine utilization(18), (21) this study found that rural residence increased the odds for herbal medicine use.

Herbal medicines were commonly recommended to the users by their families or friends (55.2%), by herbalist description (31.4%), and by the doctor decision (10.5%) and when compared this study with another study happened in 2015 (22)we find almost similar resalt.

The finding shows that the prevalence of garlic oil used in Iraqi patient with hypertension (30%), The average reduction in SBP of 8–10 mmHg induced by garlic supplements.

However, a study was conducted in Thailand shows that hypertension (61.0%) with use garlic oil for hypertension.

The finding shows that the prevalence of green tea used in Iraqi patient with diabetes (10%) helps sensitize cells so they are better able to metabolize sugar.

However, a study was conducted in Thailand shows that diabetes mellitus (34.9%), used the herbs among Thailand patients and thus we concluded that the patients with hypertension then diabetes are more users of the herb along with their medicines use.

The finding show that anise use for migraine is (15%) among another herps and in another study show that this herp is very effective in reducing headache associated with migraine.(23)

And for spirulina is used among (15%) of patient in treating hyperlipidemia, Spirulina has also been shown to indirectly modify the total cholesterol and high-density lipoprotein cholesterol values as shown in other study(24)

The study shows castor oil was used among (25%) in patients with rheumatoid arthritis as shown in another study that Essential oil therapy is a complementary

treatment technique, defined as the ancient art and science of mixing natural extracted essential oils to balance, harmonize, and promote the body, mind, and spirit health.

Conclusion and Recommendation

5.1 Conclusions:

The study found a high prevalence of herbal medicine use among chronic disease patients in Iraq. Several factors (education, rural residence, age, low quality of life and multiple chronic conditions) associated with herbal medicine use were identified. This knowledge will support health care providers and policy makers in decision making on the use of herbal medicine.

5.2 Recommendations:

1. Additional research is required to investigate a broader range of chronic diseases and medicinal plants that were not included in the current study.

2. The sample size of the study could be expanded to include more than 100 participants.

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ملخص:

خلفية البحث :

هدفت الدراسة الحالية إلى الكشف عن مدى انتشار استخدام النباتات الطبية بين المرضى العراقيين المصابين بأمراض مزمنة من خلال إنشاء استبيان للشعب العراقي. هذه الدراسة مهمة لتقييم المعرفة والممارسات الحالية للاستخدام الآمن للأعشاب بين المريض ونسبة مستخدمي تلك الأعشاب.

الهدف من الدراسة:

لتقييم مدى انتشار استخدام النباتات الطبية بين المرضى العراقيين المصابين بأمراض مزمنة ومقارنتها بدراسة أخرى في نفس البلدان أو دول مختلفة.

المرضى والمواد والطرق:

مريض:

استبيان عشوائي على الإنترنت ومواقع التواصل الاجتماعي.

طُرق

في هذه الدراسة المقطعية(المستعرضة) ، تم اختيار الأشخاص المصابين بأمراض مزمنة من مختلف الفئات العمرية. كان لدى المشاركين استبيان عبر الإنترنت للإجابة. اشتمل هذا الاستبيان على العمر والجنس والمهنة والحالة الاجتماعية ومستوى التعليم وبعض تفاصيل نمط الحياة كبيانات ديموغرافية ، وكانت نسبة كبيرة من الاستبيان مرتبطة بالأعشاب ، سواء الموصوفة أو بدون وصفة طبية.

النتائج:

التوزيع حسب الجنس: حوالي 70٪ من المرضى من الإناث و 30٪ من الذكور.

مستوى التعليم: غير متعلم 35٪ ، مدرسة ابتدائية 30٪ ، ثانوية 25٪ ، أكاديمي 10٪.

محل الإقامة: 30٪ يعيشون في الحضر و 70٪ في الريف.

توزيع الأمراض: 30٪ يعانون من ارتفاع ضغط الدم ، 20٪ السكري ، 10٪ الربو ، 10٪ الشقيقة ، 15٪ فرط شحميات الدم ، 15٪ التهاب المفاصل الروماتويدي

النباتات الطبية: 10٪ شاي أخضر ، 5٪ زيت سمك ، 15٪ يانسون ، 25٪ زيت خروع و 15٪ سبيرولينا.

دلالة النباتات الطبية: الشاي الأخضر لمرض السكري ، زيت السمك للربو ، الثوم لارتفاع ضغط الدم ، اليانسون للصداع النصفي ، سبيرولينا لفرط شحميات الدم ، زيت المعدة لعلاج التهاب المفاصل الروماتويدي

الآثار الجانبية للثوم: رائحة الفم الكريهة ، حرقة المعدة ، الإسهال ، الحساسية.

الآثار الجانبية للشاي الأخضر: إسهال ، صداع ، يقظة ، فقر دم.

الآثار الجانبية لزيت السمك: الغثيان ، والإسهال ، والحموضة المعوية ، والرشح.

الآثار الجانبية لليانسون: غثيان ، SOB، إسهال ، حساسية.

الآثار الجانبية للسبيرولينا: آلام في المعدة ، والأرق ، والإمساك ، والحساسية.

الآثار الجانبية لزيت المعدة: تقلصات في البطن ، غثيان ، إسهال ، حساسية.

الآثار الجانبية لزيت الخروع: تقلصات في البطن ، غثيان ، إسهال ، حساسية.

الخلاصة: وجدت الدراسة انتشاراً واسعاً لاستخدام الأدوية العشبية بين مرضى الأمراض المزمنة في العراق. تم تحديد عدة عوامل (التعليم ، والإقامة في الريف ، والعمر ، وتدني نوعية الحياة ، والحالات المزمنة المتعددة) المرتبطة باستخدام الأدوية العشبية. ستدعم هذه المعرفة مقدمي الرعاية الصحية و واضعي السياسات في اتخاذ القرار بشأن استخدام طب الأعشاب.

بسم الله الرحمن الرحيم

(اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ (1) خَلَقَ الإِنسَانَ مِنْ عَلَقٍ (2) اقْرَأْ وَرَبُّكَ الأَكْرَمُ (3) الَّذِي عَلَّمَ بِالْقَلَمِ (4) عَلَّمَ الإِنسَانَ مَا لَمْ يَعْلَمْ (5)) سورة العلق

صدق الله العظيم

جمهورية العراق

وزارة التعليم العالي و البحث العلمي

جامعة بابل

كلية الصيدلة

انتشار استخدام النباتات الطبية بين المرضى العراقيين المصابين بأمراض مزمنة

مشروع بحث مقدم الى كلية الصيدلة / جامعة بابل كأحد متطلبات نيل شهادة البكالوريوس في علوم الصيدلة

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2023 1444