

DETERMINANTS AND PREVALENCE OF DEPRESSION AMONG ELDERLY PATIENTS ATTENDING PRIMARY HEALTH CARE CENTER IN MAKKAH AL-MUKARRAMAH ,2019

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Abstract:

Background:

Psychiatric disorders in Saudi Arabia, mainly depression are estimated to have high prevalence. More than 6 decades ago, the World Health Organization (WHO) defined health as “a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity.” Bircher, 2005 defined health as “a dynamic state of well-being characterized by a physical and mental potential, which satisfies the demands of life commensurate with age, culture, and personal responsibility”. Health has been defined by various authors, who have always emphasized its mental component. In recent years, there has been a sharp increase in the number of older persons worldwide. Globally, more than 350 million people of all ages suffer from depression. Elderly persons are more vulnerable to depression. By the year 2020 depression would be the second major cause of disability adjusted life years lost, as reported by the World Health Organization. Depressive symptoms are common among older people and are associated with disability, morbidity and mortality. Depression is a mental illness which causes persistent low mood, a sense of despair, and has multiple risk factors.

Aim of the study: To assessment the determinant and prevalence of depression among elderly attendees in primary health Care center in Makkah Al-Mukarramah.

Methods: Methods: A cross-sectional study was conducted among elderly patients attending to clinic in PHC at Makkah, Saudi Arabia, during the October to December, 2019, validated questionnaires concerning demographic data and knowledge scores on depression among elderly. Our total participants were (400).

Results: show that the Family history of depression (70.0%) is the most common clinical variables also show that of the (45.0%) participants have negative depression, (23.0%) have moderate depression, and the data ranged from (0 to 16) by mean + SD (7.254 + 2.88).

Conclusion: Depression is associated with a deficiency in the cognitive state, with familial partner risk being an influential factor that may be preventable. Depression constitutes a health problem among Saudi geriatrics in Makkah Al-Mukarramah, especially among elderly, those having history of chronic diseases and those having sensory impairment. These results provide insight for all health care workers caring for the elderly, researchers in the field of Geriatrics, and health educators into the particular care needs of elderly patients in Makkah, KSA.

Keywords: determinants, Prevalence, depression, elderly, patients, primary health care center

1. INTRODUCTION:

1.1 Background

The increase in life expectancy is one of the most important social changes in this century. [1] It brings with it an increase in older adults around the world who, due to ageing, suffer affective, physical and social losses that mostly lead to negative attitudes about themselves or life, [2,3] so it is important to evaluate the physical and mental condition of this population. Older people are often perceived as lonely, hopeless, and sad. [4] Although many elderly are facing mounting physical ailments, psychological stress, social losses, and increased dependency at the very end of life, most older people are well adjusted emotionally for the bulk of their later years. [5] Mood disorders in the elderly are common, adversely affect other medical conditions, and may lead to cognitive and functional decline. [6] Depression is characterized by the presence of sadness, loss of interest and low self-esteem, which can be persistent and not caused by an external factor, and can lead from impaired quality of life to suicide. [7,8]

Comprehensively, in excess of 350 million individuals of any age experience the ill effects of depression. Old people are progressively powerless against depression. [9] We conducted this study to assessment the determinant and prevalence of depression among elderly attendees in primary health Care center in Makkah Al-Mukarramah, there is restricted information regarding commonness of depression among grown-ups. The globe health association evaluated that the quantity of depression issue in Saudi Arabia is around 1,339,976 patients, which speaks to about 6.5% from Saudi population [10].

The prevalence of comorbid depression was seen as a few times higher among patients with diabetes mellitus (DM) when contrasted with non-diabetics. [11] Life expectancy has increased drastically over the previous century, and therefore the world can presently have additional more elderly individual than children. [12]

In a worldwide systematic review, the global prevalence of depression in older adults is 13.5 %, [13] very similar to a primary study such as the EURODEP (Depression among Older People in Europe), which found a global prevalence of depression of 12.3 % (women, 14.1 %; men, 8.6 %). [14] These studies are mainly of European and developed countries, but these prevalence may vary compared to other regions such as South America.

Depression in older adults should always be diagnosed, evaluated and treated to improve the quality of life of these patients. [15]

The deterioration in health status that is associated with ageing increases the risk of depression. Depressive symptoms and depressive disorders in elderly patients are associated with significantly higher health care costs, even after adjustment for chronic medical illness. [16] It is considered as a serious health concern leading to unnecessary suffering, impaired functional status and increased mortality. Late-life depression remains under diagnosed and inadequately treated. [17]

Depression could be a psychological state that causes persistent low mood and a way of despair within the suffering person [2]. The all out number of individuals living with depression in the world is 322 million [18]. By 2050, 80% of the world's older individuals will be living in low- and middle-income countries. [19] Older people are especially inclined to mental issues; depression is the commonest mental turmoil revealed in the elderly. [20]. It causes an individual to feel tragic, baffled, sad, have low confidence, and lose enthusiasm for things one typically enjoys. [2]

More elderly folk's individuals are alive these days than whenever in history. [21] By the year 2025, it is normal that the world will have 1.2 billion individuals aged and ascending to 1.9 billion in 2050. [22]

In late years, there has been an expanding universal familiarity with medical problems regarding aging populations. Older individuals are regularly seen as lonely, hopeless, and sad. Although numerous old are confronting mounting physical afflictions, mental pressure, social misfortunes, and expanded reliance at the finish of life, most more established individuals are well adjusted emotionally for the majority of their later years. [23]

1.2 Literature Review

In Saudi Arabia there are few research led to consider depression among older patients as indicated by analyst information, each of these research each of GDS short structure as instrument to assess for depression. An research conducted in Abha city by Eisa Y. Ghazwani et al. in 2013 among four hundred older patients, demonstrated that the assessed commonness of depression among members, paying little mind to depression seriousness, was 63.7% [24]. Another research led likewise in Abha city in 2001 by M An Aboalfotouh et al. among 810 old people, evaluated the prevalence of depression as 17.5% among participant [25]. A third research was led in Riyadh in 2014, by Abdulaziz U. Joury et al., and was not restricted to Saudi populace including individuals who communicate in Arabic or English matured 15 years or more, indicated that 59% of member were characterized between moderate to extreme depression [26]

A systematic review by Barua et al. in 2012 revealed that chronic disorders, impairment of special senses and limitation of functional abilities significantly increased the risk of depression among elderly people [27]. Depression among the elderly is often undetected because it is manifested by executive dysfunction [28] and is viewed as part of the ageing process [29], resulting in further deterioration of health status [24], low quality of life and greater use of health services [30]

While there are measure several instruments accessible to quantify depression, the Geriatric Depression Scale (GDS), first made by Yesavage, et al., has been tried and utilized widely with the elder age population [31]

In another research directed by Mulugeta Girma et al. in Ethiopia in 2016 about geriatric depression prevalence among 352 patients. By utilizing GDS-15 the pervasiveness of sadness was 28.5% among participant [32]. Additionally, in study directed in Sudan by S.M. Assil et al. in 2011 about commonness of depression among 300 older patients. The research found the prevalence of depression was 47.5%. Depression was altogether connected with age ($P = 0.002$), level of training ($P = 0.015$), occupation ($P < 0.001$), the issues of living ($P = 0.026$), and social issues ($P < 0.001$) [33].

1.2 Rationale

Depression is common among elderly persons and the point prevalence of depression is high in primary care visitors in Saudi Arabia. Depression is a major problem in our society and most patients don't seek medical advice. By conducting this study, it will help us to estimate the level of this problem in Makkah Al-Mukarramah since there is no recent studies conducted to evaluate this problem. In addition to that, depression is a disease that affecting the quality of patient's life physically and emotionally especially among the elderly population, individuals providing healthcare to elderly persons must be to identify depression and take appropriate action; elderly persons with chronic diseases impairment deserve special attention.

1.3 Aim of the study

To assessment the determinant and prevalence of depression among elderly attendees in primary health Care center in Makkah Al-Mukarramah.

1.4 Objectives

- To determine the prevalence of depression among elders attending primary health care center in Makkah Al-Mukarramah, 2019.

2. Methodology

2.1 Study area:

The study has been carried out in Makkah Al-mukarramah is the holy city of every Muslim in the world. It is the main place of the pilgrims to perform Umrah and Hajj. Makkah is a modern city and there is a continuous working to improve the infrastructure of Makkah for the sake of both Makkah citizens and pilgrims. Makkah has many hospitals in addition to King Abdullah Medical city which is tertiary center. Also, it has 85 PHC centers under supervision of Directorate of Health Affairs of Makkah Al-Mukarramah. These centers distributed under 7 health care sectors and each sector contains around 10 – 14 primary health care centers. Three health care sectors inside Makkah Al-Mukarramah city (urban) with 37 primary health care centers underneath and four sectors are outside Makkah (rural) with 48 primary health care centers. The three healthcare sectors inside Makkah Al-Mukarramah are Al-Ka'akya with 11 primary healthcare centers, with 12 primary healthcare centers with 14 primary healthcare centers.

2.2 Study population:

Elderly patients (60 years old or older) attending Al-Zahir primary health care center in Makkah Al-Mukarramah, throughout the period of the study and accept to participate in the study, 2019.

2.3 Study design :

Cross-sectional, analytic study.

2.4 Inclusion criteria:

All Saudi elderly patients (males and females) attending Al-Zahir primary health care center in Makkah Al-Mukarramah.

Patients who can write and read in Arabic Language.

2.5 Exclusion criteria:

- Patients who refuse to participate in the study
- Persons who have reported severe mental disabilities.

2.6 Sample size:

The total number of elderly patients attending Al-Zahir primary health care center (under Al-Adl health care sector) in one month is 1890. Based on this information sample size was calculated using a website (raosoft.com). The resulted estimated sample size is 400 elderly patients. The confidence interval is 95% and margin of error is 5%. The estimated prevalence used is 50% to calculate maximum sample size.

2.7 Sampling technique

Regarding health care center selection, there are three health care sectors inside Makkah Al-Mukarramah which are Al-Ka'akya, Al-Zahir and Al-Adl. By using simple random sample technique (by using randomizer.org), Al-Zahir health care sector was selected. There are 12 primary health care centers under Al-Zahir health care sector which was enumerated from 1 to 12. Again, by using simple random sample technique primary health care center was selected (by using randomizer.org website). Regarding patients' selection, the total number visiting Al-Zahir PHC is 1890 per month and the sample size is 400. The data collection period is 20 days (four weeks minus weekends). Every day there are nearly 400 patients attending in PHC in both section (male and female sections). To collect data from sample size, the researcher needs nearly 30 patients per day to collect desired sample size. The researcher has been selecting every 4th patient to cover the sample size during data collection period.

2.8 Data collection tool:

The researcher has been use geriatric depression scale (GDS) which is tool designed first by Yesavage et al., to study the depression among geriatrics. The researcher was use the Arabic version of this tool since there is study conducted to validate the Arabic version[34] There are two types from this tool the long version with 30 questions and short form with 15 questions. The researcher has been use the short form with the 15 questions. The questionnaire has been having three parts. The first part has been containing questions about socio-demographic data. The second part has been the short-translated form of GDS. The third part has been about possible risk factors.

2.9 Data collection technique:

The researcher has been use Arabic version of the questionnaire since the target population are Saudi elderly [34]. The questionnaire has been distributed to all patients attending primary health care center during the data collection period (which is 20 days initially). The questionnaire has been distributed equally between male and female section because it is separate departments. The researcher was train 2 nurses in order to optimize the inter rater reliability. The researcher has been select the patients in the waiting area and give them the questionnaire in the waiting area in male section then waiting them to complete it and after that I has been

collecting it from them while in female section, has been trained nurse was do the same in female waiting area. After that, the researcher was collecting the paper daily from the nurse for data entry and analysis after thanking the participants for their precious time and effort

The services:

The researcher has been providing the participants with gifts as an appreciation for their participation in the study, after collecting questionnaire from them.

2.10 Variables:

➤ **Dependent variables:**

Prevalance of depression among elderly patients

➤ **Independent variable:**

1. Age
2. Gender
3. Marital status
4. Educational level
5. Monthly income
6. Presence of chronic disease
7. Presence of disabilities (cognitive, motor)
8. Social problems (e.g. separation, neglect)
9. Living condition (with family, alone)
10. Losing a close person
11. Drug history
12. Family history of depression

2.11 Data entry and analysis

Statistical analysis has been performed using SPSS software program (Statistical Package for Social Sciences), version 24.0. Descriptive using listing and frequency and analytic statistics using chi-square test and t-test to analyse the association and the difference between two categorical variables or using other statistical tests if needed. P value less than 0.05 as level of significance.

2.11 Pilot Study

A pilot study on 35 participants representing 10% of study sample size (out of study area) has been conducted to explore methodology tool and environment and plan to overcome these problems.

2.12 Ethical considerations

- Permission from research committee in the joint program of family medicine in Makkah Al-Mukarramah has been obtained
- Permission from the Makkah joint program of family medicine has been obtained.
- Permission from the Directorate of Health Affairs of the Holy Capital Primary Health Care has been obtained.
- Permission from administration of public health in Makkah Al-Mukarramah has been obtained.
- Permission from health care sectors administrator has been obtained.
- Permission from health care center administrator has been obtained
- Written consents from all participants in the questionnaire has been obtained.
- All information will be confidential, and a result has been submitted to the department.

2.13 Budget

The research has been self-funded.

3. Results:

Table 1: description the socio-demographic details of study participants of depression among elderly patients attending to primary health care center (n=400)

	N	%
Age		
60-65	76	19.00
65-70	120	30.00
70-75	152	38.00
>75	52	13.00
Gender		
Male	268	67.00
Female	132	33.00
Level of education		
Illiterate	136	34.00
Primary	72	18.00
Preparatory	132	33.00
Secondary	60	15.00
Marital status		
Married	288	72.00
Not married	112	28.00
Economic level		
Low	120	30.00
Average	188	47.00
High	92	23.00

There were 400 participants, and the majority age was (38.0%) in (70-75) years, while the age (65-70) were (30.0%). The majority of them were male (67.0%), while female (33.0%). The most of the participants was married (72.0%) while not married (28.0%), have no education illiterate (34.0%) while preparatory education were (33.0%).

Figure 1 Distribution of the socio-demographic details of study participants of depression among elderly patients attending to primary health care center (age)

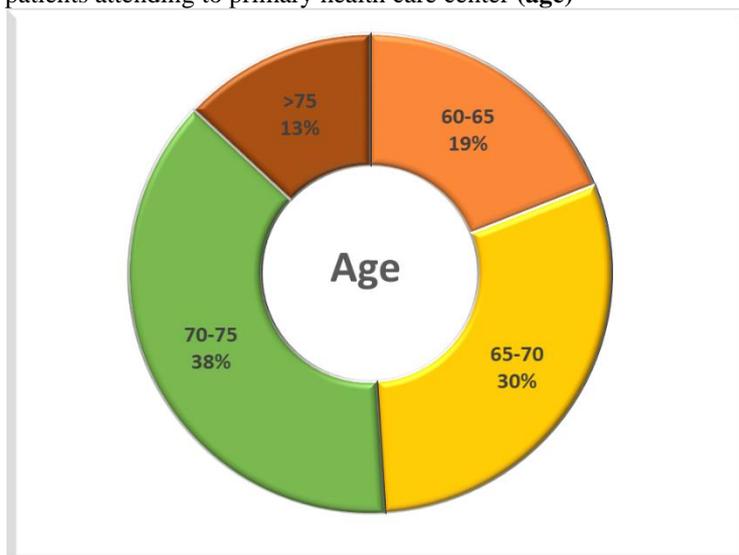


Figure 2 the socio-demographic details of study participants of depression among elderly patients attending to primary health care center (**level of education**)

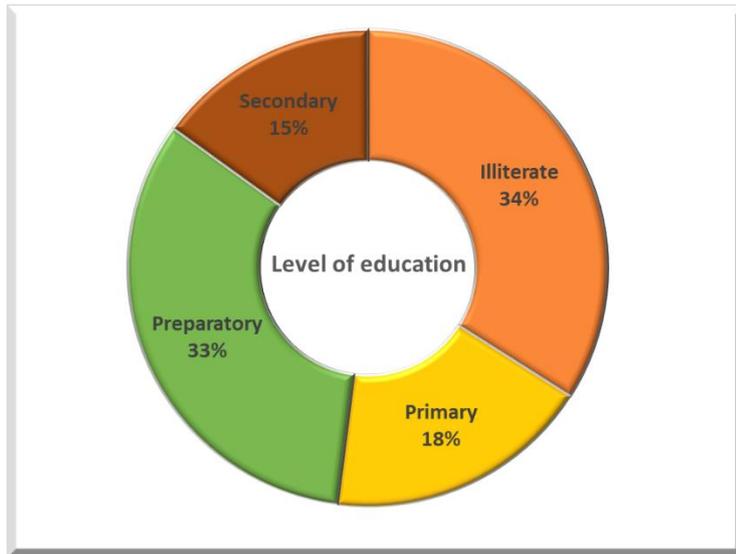


Figure 3 the socio-demographic details of study participants of depression among elderly patients attending to primary health care center (**economic level**)

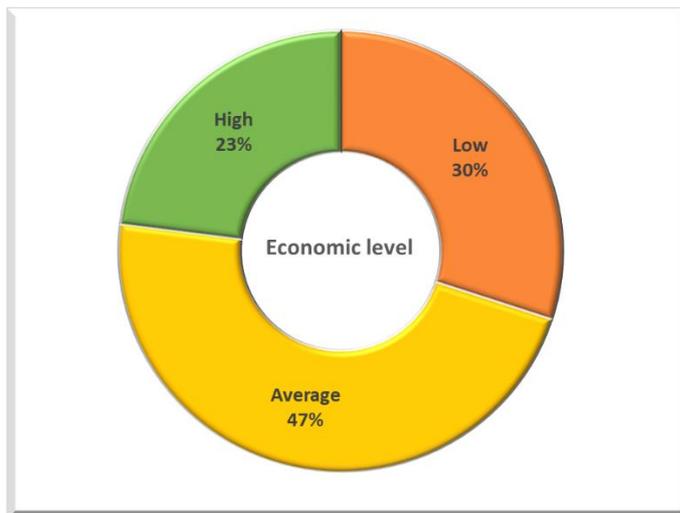


Figure 4 the socio-demographic details of study participants of depression among elderly patients attending to primary health care center (**gender**)

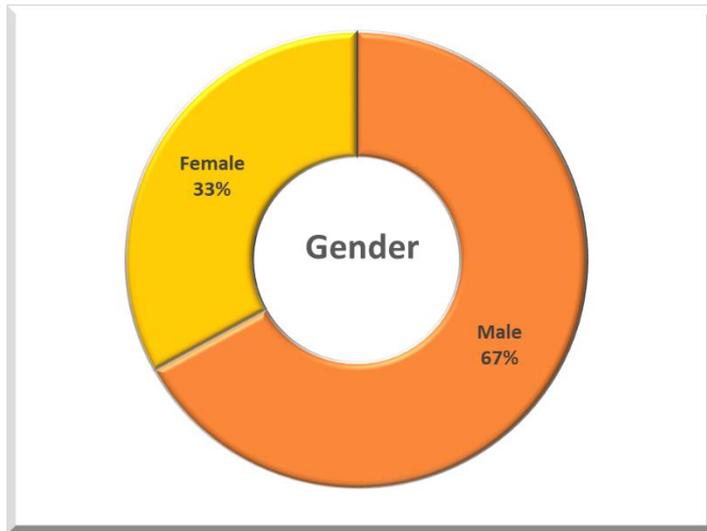


Figure 5 the socio-demographic details of study participants of depression among elderly patients attending to primary health care center (marital status)



Table 2: Distribution of participants by clinical variables (Chronic diseases, physical or mental disabilities, social problems, family history of depression and medicines continuously).

	N	%
Chronic diseases	244	61
Physical or mental disabilities	176	44
Social problems	104	26
Family history of depression	280	70
Medicines continuously	256	64

Regarding clinical variables show that the Family history of depression (70.0%) is the most common clinical variables followed by Medicines continuously were(64.0%) while Chronic diseases were(61.0) and the Physical or mental disabilities were (44.0%) while Social problems were (26.0%)

Figure 6 Distribution of participants by clinical variables(Chronic diseases, physical or mental disabilities, social problems, family history of depression and medicines continuously).

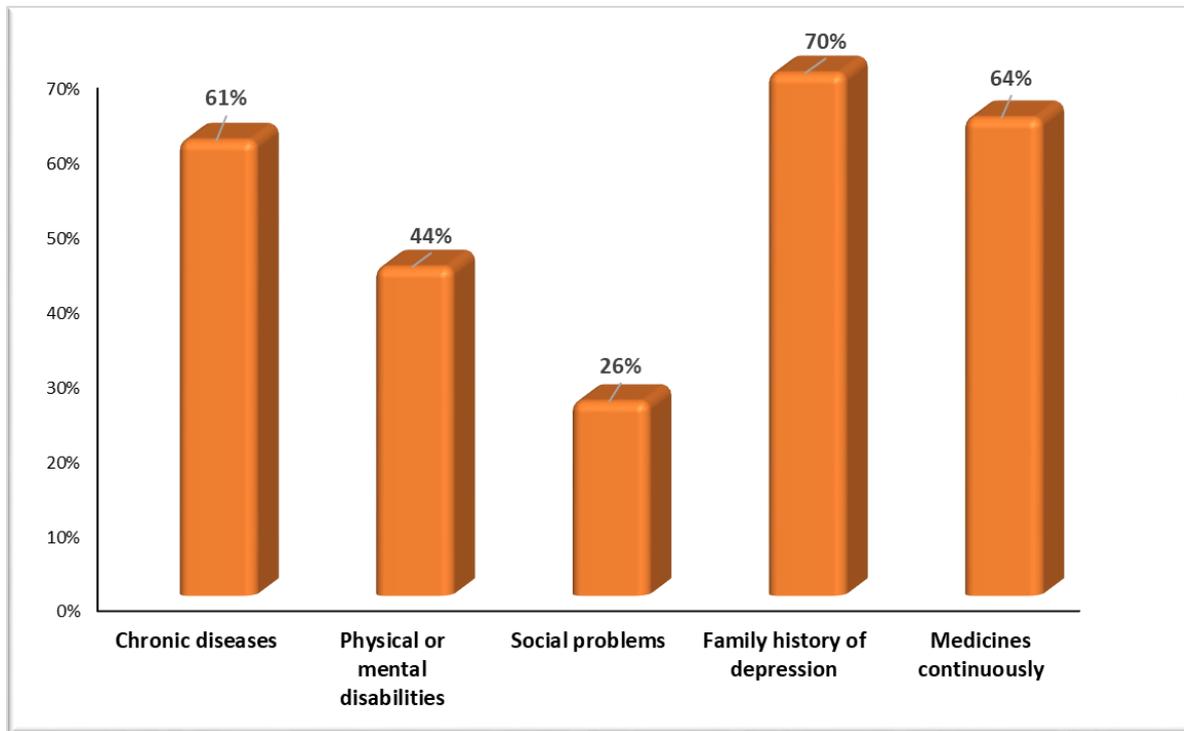


Table 3:Distribution of depression in participants by the score .

	Depression		Score	
	N	%	Range	Mean±SD
Negative	180	45	0-16	7.254±2.88
Mild	72	18		
Moderate	92	23		
Severe	56	14		
Total	400	100		

Table 3 and figure 1 show that of the(45.0%) participants have negative depression , (23.0%) have moderate depression, and the data ranged from(0to 16)by mean+ SD (7.254±2.88).

Figure 7 Distribution of depression in participants by the score

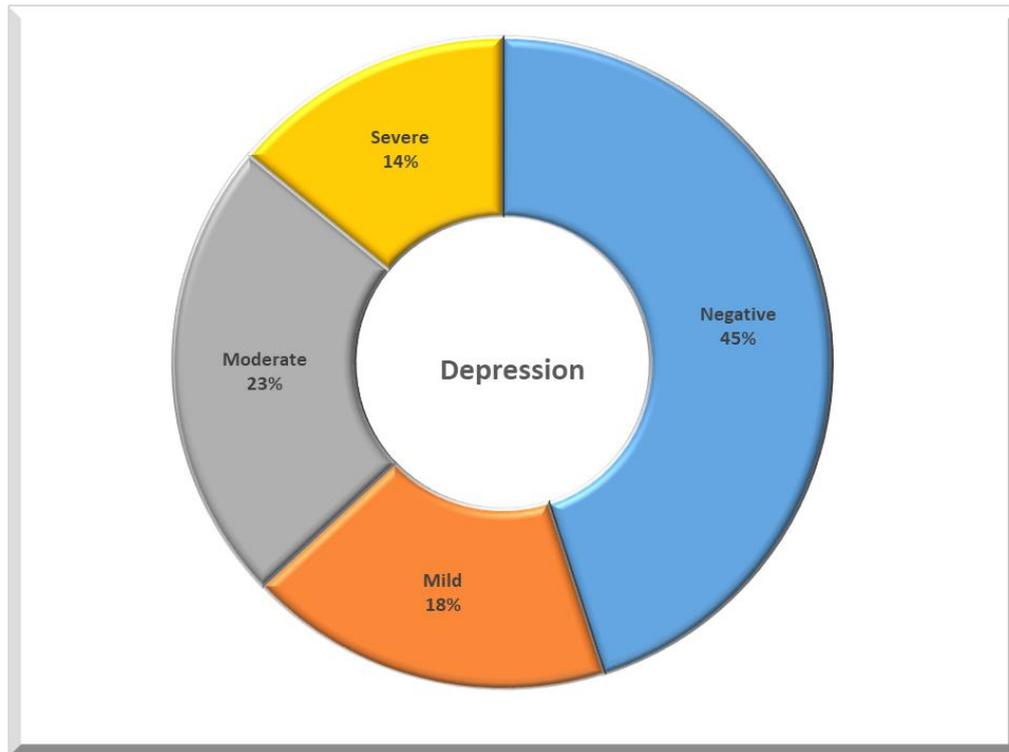


Table 4: Distribution the relation between depression and socio-demographic data(age, Gender , Marital status and education)among elderly patients.

		N	Depression		T or F	T-test or ANOVA	
			Mean	SD		test value	P-value
Age	60-65	76	10.645	1.663	F	258.026	<0.001*
	65-70	120	7.425	3.777			
	70-75	152	0.605	2.078			
	>75	52	4.846	3.262			
Gender	Male	268	3.052	4.366	T	-19.008	<0.001*
	Female	132	9.288	2.195			
Level of education	Illiterate	136	1.265	3.750	F	154.501	<0.001*
	Primary	72	9.347	0.479			
	Preparatory	132	4.432	4.035			
	Secondary	60	10.233	1.711			
Marital status	Married	288	3.101	4.023	T	-24.565	<0.001*
	Not married	112	10.277	1.807			
Economic level	Low	120	9.775	0.921	F	208.583	<0.001*
	Average	188	1.814	4.257			
	High	92	5.761	3.276			

Table 4 show that is a significant relation between depression and age (increase in aged between 60 - 60 years by the mean+ SD (10.645±1.663)than aged 65-70 by the mean+ SD(7.425±3.777), where F=258.026 and P-value=0.001. A significant relation between depression and age . Regarding the gender is a significant relation between depression and gender(increase in female gender by the mean+ SD (9.288±2.195)than male where T=-19.008 and P-value=0.001. A significant relation between depression and gender. Regarding the Marital status show that is a significant relation between depression and marital status(increase in Not married by the mean+ SD (10.277±1.807)than married where T=-24.565 and P-value=0.001. A significant relation between depression and not marital status . Regarding the education is a significant relation between depression and education(increase in illiterate by the mean+ SD (136±1.265)than primary where F=154.501 and P-value=0.001

Regarding the Economic level is a significant relation between depression and Economic level (increase in low by the mean+ SD (120±9.775) than high where F=208.583 and P-value=0.001

4. Discussion

Growth in the average life expectancy of people in the KSA is increasing with 5 percent of the population (1.2 million individuals) classified as being elderly [35]. This indicates that the elderly population in the country is increasing every year, with all the economic and social implications this has. In our study there were 400 participants, and the majority age was (38.0%) in (70-75) years, while the age (65-70) were (30.0%). The majority of them were male (67.0%), while female (33.0%). The most of the participants was married (72.0%) while not married (28.0%), have no education illiterate (34.0%) while Preparatory education were (33.0%) (See table 1)

Ageing is affected by the development of a variety of psychiatric illnesses, the most prevalent among them being depression. The proportion of depression among elderly patients attending the primary health care center in Makkah Al-Mukarramah, 2019. Setting in this study was found to be show that of the (45.0%) participants have negative depression, (23.0%) have moderate depression, and the data ranged from (0 to 16) by mean+ SD (7.254±2.88). (see table 2,3). Similar findings were reported by Charles et al 36.5% [36] whereas Bodhare TN et al reported it as 45% [37]. The possible explanation for this variation could be attributed to differences in the screening instruments used and social and cultural factors.

Of the five rural Indian community-based studies, three reported a high prevalence of depression among elderly persons. All these studies used the shorter version of the Geriatric Depression Scale-15 (GDS-15) for diagnosis of depression, which has a high sensitivity but low specificity. Therefore, there is a possibility of overestimating the true prevalence due to high false-positive results. [38]

A cross-sectional community-based study conducted by Maulik et al. among 82 persons aged over 60 years in a rural area of Hooghly district of West Bengal estimated the prevalence of depression as 53.7% [39]. This high prevalence may be explained by a small sample size and the tool (Bengali version of the GDS-15) used to identify depression. Reddy et al. estimated the prevalence of depression as 47% from the rural area of Valid of Tamil Nadu. [40] Deshpande et al. conducted a community-based study among elderly persons in six villages in Maval Taluka of Pune, Maharashtra and estimated the prevalence as 41.1%. [32]

Relation between depression and socio-demographic data is. A significant relation between depression and age. A significant relation between depression and gender. A significant relation between depression and marital status. (see table 4)

The Saudi culture and traditional social values dictate high respect for and care of the elderly by members of the extended family [34]. The association between more privacy and depression can be explained by the tendency of the elderly in the extended family system of Saudi Arabia to associate more privacy with alienation and neglect by other family members. The finding of more depression in the widowed is in keeping with numerous other studies. [40] In the present study, age was a significant predictor for depression in multivariate analysis. This finding differs with other support by other studies reporting no effect of age on depressive symptomatology. [39] Depression was higher among illiterates compared to literates in this study. Similar findings were reported by Stanley P et al and Sidik MS et al. [35]. These observations strengthen the fact that poor educational background is an important risk factor for depression. Though the prevalence of depression decreased with increase in educational level, it is a statistically significant.

5. Conclusions

The prevalence rate of depression and anxiety among PHC attendees was relatively high. Therefore, screening of mental illnesses, especially depression and anxiety should be implemented by PHC physicians during their routine activities. So promoting health and a better social and family environment should be started at an early age, as well as stimulating older adults to improve their cognitive development and carry out physical activities. Depressive symptoms are prevalent among elderly attending the health centers. Family physicians should be trained to screen for and to manage depression in highly susceptible groups.

Depression in elderly females attending these centers was high and associated with multiple medical and socioeconomic characteristics, which is a cause of concern we conclude that depressive symptoms are common and higher in Saudi elderly women and are associated with significant physical, psychological, and socioeconomic risk factors

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