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RESEARCH ARTICLE

PERCEPTIONS, ATTITUDE AND PRACTICES TOWARD ELDERLY DEPRESSION AMONG PRIMARY HEALTH CARE PHYSICIANS, RIYADH, SAUDI ARABIA 2021

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Abstract

Background: Elderly people need care services in particular to maintain a high quality of life and health status. Managing the health needs of geriatric patients is part of the continuity of care family physicians provide to their patients. Aims: to assess physicians' attitude, perception and practice toward depression in elderly in primary care sitting.

Methodology: A cross- sectional study to assess primary health care physicians' attitude and perceptions and practices toward depression in elderly patients in primary health care centers of King Saud medical city in Riyadh, kingdom of Saudi Arabia using self-administrated questionnaire

Results: We received 210 responses to our questionnaire with response rate of 100 % where 51 % of them were females. Furthermore, 37 % of them have experience in PHC less than 5 years while 32 % have experience for more than 10 years. PHC physicians routinely screen for sleep disturbance (79 %), loss of interest or pleasure (79 %), sad mood (72 %), and decreased energy (63 %) in order to diagnosis of depression. Moreover, we found that 56 % of physicians would use clinical guidelines for diagnosis and treatment of geriatric depression where PHQ-9 was the most reported used tool (28 %) followed by geriatric depression scales (24%). Moreover, 71 % of physicians would refer patients with depression to psychiatry and 65 % to CBT instead to prescribe medications including SNRI (29 %), TCA (17 %) and SSRI (2 %). Moreover, the main barriers to adequate diagnosis and treatment of elderly depressed patients were rejection of patients to treatment (22 % of them indicated it as major problem) and difficulty for access to mental health care in our community (19 % of them indicated it as major problem).

Conclusion: we found that most of physicians in Riyadh show high positive attitude toward depression of elderly however, there is some limitations in knowledge about symptoms of depression and restriction to guideline. Main barriers to adequate diagnosis and treatment of elderly depressed patients were rejection of patients to treatment and difficulty for access to mental health care in our community.

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Introduction:-

According to the World Health Organization (WHO), health is defined as a state of complete physical, mental and social well-being and not restricted to absence of disease and therefore, mental health is an inherent component of health (Mulango *et al.*, 2018). Moreover, it is known that population is aging rapidly and it is estimated that by the year of 2050, the percentage of elderly over 60 will double from 12 % to 22 % (Karlin, Weil and Felmban, 2016) and Saudi Arabia is not an exception with an increase in percentage of elderly from 3.48 % in 1993 to 6.7 % un 2004 (M Al Qahtani, 2014). Generally, mental illness is responsible for 10 % of all disabilities among elderly (Alamri, Bari and Ali, 2017) where depression is the most common mental condition (Al-Sabahi, Al-Hinai and Youssef, 2014) with a prevalence between 10-15 % among elderly (Karlin, Weil and Felmban, 2016). In Arab countries, prevalence of depression among elderly is much higher as 24.3 % in Jordan, 16.9 % in Oman, 38.9 % in Iraq, 25 % in Kuwait and 17.5 % in Saudi Arabia (Al-Sabahi SM, Al-Hinai SS and Youssef RM., 2014; M Al Qahtani, 2014; Alamri, Bari and Ali, 2017).

Primary care physicians have a significant role in management of depression in elderly starting with diagnosis of depression (Qureshi, AlHabeeb and Koenig, 2013). Ability of primary care physicians to reduce the stigma of depression and easier access of patients to these physicians encourage patients to ask primary care physicians other than psychologists (Wijeratne and Harris, 2009; Lino *et al.*, 2014; Shah *et al.*, 2018) and thus depression is managed more effectively when there is collaboration between primary care physician and psychiatrist (Park and Unützer, 2011).

Depression in elderly is different than depression in adults where elderlies usually present with somatic symptoms rather than emotional symptoms and thus some physicians could face difficulties as they may refer these symptoms for being aged leading to being depression without proper diagnosis (Park and Unützer, 2011). However, there are many tools that are used to screen for depression including PHQ-9 and Geriatric depression scale (Phelan *et al.*, 2010). However, a comprehensive clinical interview is essential for all patients to confirm the diagnosis before starting treatment (Colasanti *et al.*, 2010).

Treatment of depression in elderly is challenging for many physicians because of the increased risk of drug interaction, side effect, comorbidities and memory impairment (Ramaswamy *et al.*, 2011). There are many studies that conducted worldwide that showed that physician knowledge and attitude toward depression in elderly would affect the quality of depression management (Park and Unützer, 2011; M Al Qahtani, 2014) where physicians with positive attitude are more likely to participate in depressed patient care (Park and Unützer, 2011). Therefore, in this study we aimed to assess physicians' attitude, perception and practice toward depression in elderly in primary care sitting.

Methodology:-

This was a cross- sectional study to assess primary health care physicians' attitude and perceptions and practices toward depression in elderly patients in primary health care centers of King Saud medical city in Riyadh, kingdom of Saudi Arabia. We included all primary health care physicians working in PHC centers of king Saud medical city, in Riyadh with a total population of 210 physicians working in king Saud medical city Primary health care centers of Ministry of Health (MOH) in Riyadh city. The study was depended on self-administrated questionnaire was adapted from University of Illinois College of Medicine (M Glasser, L Vogels and L Vogels, 2009). The questionnaire was divided into categories: demographic characteristics of physician (age, sex, level of physicians. etc.), attitude and perception section and practice section, then section of barriers and needs of physician for improvement of geriatric care in primary care sitting. Ethical considerations were considered to avoid physical or emotional harm, and to ensure confidentiality and privacy of the collected data. A consent form was given to each subject before filling the questionnaire

Date was collected according to the questionnaire, data was entered using MS Excel 2010 where data was coded, and IBM SPSS was used for data analysis. Percentage and frequency were used to describe the categorical variables and mean and standard deviation were used to describe continuous variables. Chi- test was used to assess the significance of difference in satisfaction level among different categories. Difference was significant when P value is lower or equal to 0.05.

Results:-

We received 210 responses to our questionnaire with response rate of 100 % where 51 % of them were females. Moreover, 42 of physicians where Saudi Arabian while 33 % of them were between 31-39 years old and 29 % of them were younger than 30 years old. Furthermore, 37 % of them had experience in PHC less than 5 years while 32 % had experience for more than 10 years. Most of participants were either a practitioner or residents while 14 % were specialist and 7 % were consultants. 18 % of them indicated that they are psychologists or counselors in primary care office and 33 % of them indicated that they had attended a conferences or CME activities, which specifically focus on the health need of older adults (Table 1).

Table 1:- Baseline Characteristics for participants (N=210).

Variable	**Category**	**N**	**%**
Gender	Male	103	49
	Female	107	51
Nationality	Saudi	88	42
	Non Saudi	122	58
Age	<30	60	29
	31-39	69	33
	40-49	50	24
	≥50	31	15
Years' experience in PHC	<5 YEAR	78	37
	5-10 year	65	31
	>10 year	67	32
Professional level	General practitioner	80	38
	Family medicine resident	86	41
	Family medicine specialist	29	14
	Consultant	15	7
Psychologists or counselors in primary care office	Yes	38	18
	No	172	82
Attended conferences/CME activities which specifically focus on the health needs of older adults	Yes	69	33
	No	141	67

In table 2, we found that in order to diagnosis of depression, PHC physicians routinely screen for sleep disturbance (79 %), loss of interest or pleasure (79 %), sad mood (72 %), and decreased energy (63 %), while only 21 % of physicians would screen patients for sexual complaints, and 27 % for pain in diagnosis for depression. Moreover, 4 % of participants indicated that they did not routinely screen for depression. Experience of physicians in years did not significantly affect the main symptoms that physicians would screen for diagnosis for depression however, they interest in mostly all symptoms are increasing with age.

Moreover, we found that 56 % of physicians would use clinical guidelines for diagnosis and treatment of geriatric depression where PHQ-9 was the most reported used tool (28 %) followed by geriatric depression scales (24%). It was found that older participants with longer experience would be restricted to guidelines more than younger participants. Moreover, most of physicians would ask for comprehensive metabolic panel (72 %) followed by brain CT (39 %) and CBC (38 %). Moreover, 71 % of physicians would refer patients with depression to psychiatry and 65 % to CBT instead to prescribe medications including SNRI (29 %), TCA (17 %) and SSRI (2 %) (Table 3).

Table 2:- Symptoms that PHC physicians routinely screen for depression.

Symptom	**N (%)**	**Years of practice in PHC**		
		<5 YEAR	**5-10 year**	**>10 year**
		N (%)	**N (%)**	**N (%)**
Sad mood	153 (72)	57 (73)	53 (82)	43 (64)
Pain (headache, abdominal pain)	57 (27)	19 (24)	19 (29)	19 (28)
Decreased energy	133 (63)	44 (56)	36 (55)	53 (79)
Anxiety/irritability	120 (57)	42 (54)	34 (52)	44 (66)
Sexual complaints	44 (21)	9 (12)	13 (20)	22 (33)

Weight loss/Weight gain	77 (37)	24 (31)	25 (39)	28 (42)
Loss of interest or pleasure	165 (79)	60 (77)	50 (77)	55 (82)
Numerous unexplained symptoms	108 (51)	34 (44)	34 (52)	40 (60)
Work or relationship dysfunction	85 (41)	22 (28)	26 (40)	37 (55)
Sleep disturbance	165 (79)	62 (80)	45 (69)	58 (87)
Multiple worries and distress	105 (50)	34 (44)	26 (40)	45 (67)
Do not routinely screen for depression	9 (4)	3 (4)	3 (5)	3 (5)
Others	1 (1)	0 (0)	1 (2)	0 (0)

Table 3:- Practice of PHC physicians with elderly patients.

Variable	**Category**	**N (%)**	**Years of practice in PHC**		
			<5 YEAR	**5-10 year**	**>10 year**
			N (%)	**N (%)**	**N (%)**
Using clinical guidelines for diagnosis and treatment of geriatric depression		118 (56)	48 (62)	35 (54)	35 (52)
Which standard screening tests or interviews do you use to diagnose depression in the elderly?	PHQ 9	59 (28)	18 (23)	17 (26)	24 (36)
	Geriatric Depression Scale	51 (24)	16 (21)	17 (26)	18 (27)
	No standard test used	5 (2)	2 (3)	3 (5)	0 (0)
	Other	132 (63)	55 (71)	38 (59)	39 (58)
In establishing a new diagnosis of depression in an elderly patient, what lab tests or imaging /special examinations do you routinely order?	CBC	80 (38)	28 (36)	23 (35)	29 (43)
	Comprehensive metabolic panel	152 (72)	54 (69)	47 (72)	51 (76)
	TSH	24 (11)	7 (9)	11 (17)	6 (9)
	Brain CT	82 (39)	41 (53)	17 (26)	24 (36)
Which one medication do you most often prescribe for depression in elderly patients?	SSRI	5 (2)	2 (3)	1 (2)	2 (3)
	SNRI	61 (29)	20 (26)	24 (37)	17 (25)
	TCA	36 (17)	14 (18)	14 (22)	8 (12)
	Referral to CBT	136 (65)	43 (55)	46 (71)	47 (70)
	Referral to psychiatry	150 (71)	58 (74)	42 (65)	50 (75)

Moreover, we found that most of participants were agreed that psychotherapy is less efficacious for the older patient compared to younger patients (96 %) while 91 % of them would not focus on depression before excluded possible organic cause, 84 % reported having high confident in diagnosis of depression in elderly patients, 83 % felt comfortable dealing with the family members of depressed patients and 81 % of them thought that is important to help depressed patients. On the other hand, 85 % of physicians did not thought that elderly patients would expect their primary care physician to deal with depression, while 55 % of them did not think that there is nothing to do with depression, 53 % denied that they were pressured for time to routinely investigate depression in elderly patients (Table 4).

Table 4:- Attitudes and Perceptions of PHC Physicians.

Variable	**Category**	**N**	**%**
Helping depressed patients is important to me.	Agree/Strongly agree	169	81
	Disagree/Strongly disagree	41	20
I feel confident that I can accurately diagnose depression in elderly	Agree/Strongly agree	176	84

patients.	Disagree/Strongly disagree	34	16
Treating depressed patients is an aspect of practicing medicine that I find rewarding.	Agree/Strongly agree	157	75
	Disagree/Strongly disagree	53	25
I do not focus on depression as a diagnosis until I have ruled out organic disease.	Agree/Strongly agree	190	91
	Disagree/Strongly disagree	20	10
Family members are included in my decisions and plans regarding treatment and management of depression in the older patient.	Agree/Strongly agree	121	58
	Disagree/Strongly disagree	89	42
I am too pressured for time to routinely investigate depression in elderly patients.	Agree/Strongly agree	98	47
	Disagree/Strongly disagree	112	53
I have confidence in my ability to prescribe antidepressants for elderly patients	Agree/Strongly agree	166	79
	Disagree/Strongly disagree	44	21
When depression and dementia co-exist, depression should still be treated.	Agree/Strongly agree	130	62
	Disagree/Strongly disagree	80	38
I consider my knowledge of diagnosis and treatment of depression up to date.	Agree/Strongly agree	114	54
	Disagree/Strongly disagree	96	46
Elderly patients have so many problems that I don't always have time to consider depression	Agree/Strongly agree	160	76
	Disagree/Strongly disagree	50	24
I think psychotherapy can help my elderly patients who are depressed.	Agree/Strongly agree	145	69
	Disagree/Strongly disagree	65	31
I consider diagnosing and treating depression in elderly patients to be my responsibility.	Agree/Strongly agree	126	60
	Disagree/Strongly disagree	84	40
I will send an elderly patient for a psychiatric consult rather than diagnose and treat myself.	Agree/Strongly agree	160	76
	Disagree/Strongly disagree	50	24
Elderly patients expect their primary care physician to deal with depression.	Agree/Strongly agree	32	15
	Disagree/Strongly disagree	178	85
There is generally nothing that can be done for geriatric patients with depression.	Agree/Strongly agree	95	45
	Disagree/Strongly disagree	115	55
My priority is to treat medical problems first then to investigate psychological problems.	Agree/Strongly agree	135	64
	Disagree/Strongly disagree	75	36
Older adults with depression likely experienced episodes of depression when they were younger adults.	Agree/Strongly agree	164	78
	Disagree/Strongly disagree	46	22
I feel comfortable dealing with the family members of depressed patients.	Agree/Strongly agree	175	83
	Disagree/Strongly disagree	35	17
Management of elderly people with depression is different from management of younger adults.	Agree/Strongly agree	121	58
	Disagree/Strongly disagree	89	42
It is preferable not to use the term "depression" to avoid labeling or stigmatizing the patient.	Agree/Strongly agree	100	48
	Disagree/Strongly disagree	110	52
Psychotherapy is less efficacious for the older patient compared to younger patients.	Agree/Strongly agree	201	96
	Disagree/Strongly disagree	9	4
In my experience, family members" information is useful in the identification and diagnosis of depression in the older patient.	Agree/Strongly agree	105	50
	Disagree/Strongly disagree	105	50

Moreover, the main barriers to adequate diagnosis and treatment of elderly depressed patients were rejection of patients to treatment (22 % of them indicated it as major problem) and difficulty for access to mental health care in our community (19 % of them indicated it as major problem). On the other hand, all of physicians agreed that patients' concern about medication side effects would be a barrier in treatment. Experience of physicians did not have a significant effect on thought of physicians about barriers except in one factor of that treatment of depression is stigmatizing where older participants thought that this is not considered a barrier compared to less experienced participants (P=0.045) (Table 5).

Table 5:-Relationship between barrier to adequate diagnosis and treatment of geriatric depression and years' experience in PHC.

Variable	Category	Total sample	Years' experience in PHC			P-value
			<5 YEAR	5-10 year	>10 year	

			N (%)	N (%)	N (%)	
Psychiatric treatment is stigmatizing	Major barrier	24 (11)	14 (18)	6 (9)	4 (6)	0.048
	Often barrier	69 (33)	28 (36)	21 (32)	20 (30)	
	Somewhat barriers	91 (43)	27 (35)	34 (52)	30 (45)	
	Not barriers	26 (12)	9 (12)	4 (6)	13 (19)	
Patients will reject psychotherapy	Major barrier	46 (22)	22 (28)	15 (23)	9 (13)	0.154
	Often barrier	86 (41)	29 (37)	25 (39)	32 (48)	
	Somewhat barriers	67 (32)	26 (33)	19 (29)	22 (33)	
	Not barriers	11 (5)	1 (1)	6 (9)	4 (6)	
Co-morbidity in depressed elderly	Major barrier	22 (11)	9 (12)	6 (9)	7 (10)	0.783
	Often barrier	95 (45)	38 (49)	30 (46)	27 (40)	
	Somewhat barriers	69 (33)	24 (31)	19 (29)	26 (39)	
	Not barriers	24 (11)	7 (9)	10 (15)	7 (10)	
Reluctance to discuss emotional problems	Major barrier	41 (20)	16 (21)	11 (17)	14 (21)	0.929
	Often barrier	75 (36)	28 (36)	26 (40)	21 (31)	
	Somewhat barriers	66 (31)	25 (32)	18 (28)	23 (34)	
	Not barriers	28 (13)	9 (12)	10 (15)	9 (13)	
Access to mental health care is a problem in our community	Major barrier	40 (19)	14 (18)	14 (22)	12 (18)	0.41
	Often barrier	99 (47)	35 (45)	34 (52)	30 (45)	
	Somewhat barriers	59 (28)	26 (33)	15 (23)	18 (27)	
	Not barriers	12 (6)	3 (4)	2 (3)	7 (10)	
Patients are concerned about medication side effects	Major barrier	0 (0)	0 (0)	0 (0)	0 (0)	NA
	Often barrier	0 (0)	0 (0)	0 (0)	0 (0)	
	Somewhat barriers	0 (0)	0 (0)	0 (0)	0 (0)	
	Not barriers	210 (100)	78 (100)	65 (100)	67 (100)	

Moreover, we found in table 6, that experience of physicians has no significant effect on their attitude or perception except in three statements. Less experienced physicians thought that their knowledge of diagnosis and treatment of depression is up to date in a significantly more manner than physicians with higher experience are (P=0.002). Furthermore, a higher percent of low experience physicians would agree that they preferred not to use the term of depression than high-experienced participants (P=0.005). Finally, 66 % of physicians with experience between 5-10 thought that family members' information is useful in diagnosis of depression compared with 46 % of physicians with experience lower than 5 years and 39 % of physicians with experience of more than 10 years (P=0.005) (Table 6).

Table 6:- Relationship between Attitudes and Perceptions of PHC Physicians and years' experience in PHC.

Variable	Category	Years' experience in PHC			P-value
		<5 YEAR	5-10 year	>10 year	
		N (%)	N (%)	N (%)	
Helping depressed patients is important to me.	Agree	60 (77)	57 (88)	52 (78)	0.209
I feel confident that I can accurately diagnose depression in elderly patients.	Agree	70 (90)	50 (77)	56 (84)	0.117
Treating depressed patients is an aspect of practicing medicine that I find rewarding.	Agree	55 (71)	52 (80)	50 (75)	0.429
I do not focus on depression as a diagnosis until I have ruled out organic disease.	Agree	65 (83)	61 (94)	64 (96)	0.024
Family members are included in my decisions and plans regarding treatment and management of depression in the older patient.	Agree	49 (63)	32 (49)	40 (60)	0.24
I am too pressured for time to routinely investigate depression in elderly patients.	Agree	35 (45)	29 (45)	34 (51)	0.719
I have confidence in my ability to prescribe	Agree	66 (85)	49 (75)	51	0.311

antidepressants for elderly patients				(76)	
When depression and dementia co-exist, depression should still be treated.	Agree	42 (54)	40 (62)	48 (72)	0.089
I consider my knowledge of diagnosis and treatment of depression up to date.	Agree	54 (69)	33 (51)	27 (40)	0.002
Elderly patients have so many problems that I don't always have time to consider depression	Agree	56 (72)	51 (79)	53 (79)	0.514
I think psychotherapy can help my elderly patients who are depressed.	Agree	53 (68)	46 (71)	46 (69)	0.933
I consider diagnosing and treating depression in elderly patients to be my responsibility.	Agree	43 (55)	40 (62)	43 (64)	0.516
I will send an elderly patient for a psychiatric consult rather than diagnose and treat myself.	Agree	56 (72)	47 (72)	57 (85)	0.117
Elderly patients expect their primary care physician to deal with depression.	Agree	8 (10)	12 (19)	12 (18)	0.302
There is generally nothing that can be done for geriatric patients with depression.	Agree	38 (49)	33 (51)	24 (36)	0.167
My priority is to treat medical problems first then to investigate psychological problems.	Agree	46 (59)	42 (65)	47 (70)	0.374
Older adults with depression likely experienced episodes of depression when they were younger adults.	Agree	56 (72)	54 (83)	54 (81)	0.223
I feel comfortable dealing with the family members of depressed patients.	Agree	67 (86)	54 (83)	54 (81)	0.693
Management of elderly people with depression is different from management of younger adults.	Agree	44 (56)	36 (55)	41 (61)	0.767
It is preferable not to use the term "depression" to avoid labeling or stigmatizing the patient.	Agree	44 (56)	35 (54)	21 (31)	0.005
Psychotherapy is less efficacious for the older patient compared to younger patients.	Agree	71 (91)	65 (100)	65 (97)	NA
In my experience, family members" information is useful in the identification and diagnosis of depression in the older patient.	Agree	36 (46)	43 (66)	26 (39)	0.005

Discussion:-

Depression is one of diseases that is considered a disabling condition in elderly and have a significant negative effect on the quality of life (Ashwaq Al-ghamdi *et al.*, 2018). Generally, most of elderly with mental problem do not seek help from specialist mental health service providers; therefore, their care will fall upon non-psychiatrists (Liu, Lu and Lee, 2008). Therefore, primary care physicians play a great role in management of depression in elderly patients as they considered the primary access to elderly with depressive symptoms (Qureshi, AlHabeeb and Koenig, 2013). Therefore, it is important for primary care physicians to have the correct knowledge, adequate attitude and practice toward depression in elderly patients. In this study, we aimed to assess physicians' attitude, perception and practice toward depression in elderly in primary care sitting.

In this study, the response rate was 100 % which is higher than response rates reported by other studies of 43.7 % (Ashwaq Al-ghamdi *et al.*, 2018), 79 % (Abdulrahman A. Al-Atram, 2017), 80 % (James *et al.*, 2012), 56.7 (Mulango *et al.*, 2018) and 23 % (Kashini Andrew *et al.*, 2017) respectively. Moreover, 37 % of them have experience in PHC less than 5 years while 32 % have experience for more than 10 years. Most of participants were either a practitioner or resident while 14 % were specialists and 7 % were consultants. These results are slightly different than results of the study of Ashwaq, in which 41.6 % of participants had experienced lower than 5 years and 19 % of them had experienced over 10 years (Ashwaq Al-ghamdi *et al.*, 2018). Moreover, results of this study showed that most of physicians depend on sleep disturbance, loss of interest and sad mood as symptoms of depression in elderly patients while only 21 % and 27 % would ask for sexual complaints or pain. In study of Ashwaq, the author found that majority of PHC physicians asked about sad mood (87.6%) and loss of interest (91.2%) as the main symptoms of depression while more than one-third (38.7%) asked about pain and more than half (53.3%) asked for decreased energy (Ashwaq Al-ghamdi *et al.*, 2018). Moreover, these results showed a lack in

knowledge of physicians toward depression in elderly where most of literature showed that somatic complaint including pain are the most common symptom of depression in elderly patients (Volkers *et al.*, 2004; Shah *et al.*, 2018) however, only 27 % of our sample would ask for pain and 51 % for unexplained symptoms and this could be a reason for delaying of diagnosis of depression in elderly (Volkers *et al.*, 2004). Moreover, we found that 4 % of physicians indicated that they did not routinely screen for depression which is higher than reported by Ashwaq of 2.9 % (Ashwaq Al-ghamdi *et al.*, 2018).

Moreover, we found that 56 % of physicians would use clinical guidelines for diagnosis and treatment of geriatric depression where PHQ-9 was the most reported used tool (28 %). In the study of Ashwaq, 48.9 % of participants indicated using of PHQ-9 for diagnosis of depression while 28.5 % of them used Geriatric depression scale compared with lesser percent of ours (24 %) (Ashwaq Al-ghamdi *et al.*, 2018). Both PHQ-9 and Geriatric depression scale are important scales for diagnosis of depression (Phelan *et al.*, 2010) however, geriatric depression scale is a part of annual screening tests recommended by Saudi MOH and is available on Geriatric assessment forms in all PHC center (Abdulrahman A. Al-Atram, 2017), therefore, it was interesting that only 24 % of our sample used it indicating that implementation of geriatric clinics in PHC is still suboptimal. Moreover, we found that comprehensive metabolic panel and brain CT for diagnosis of depression. Furthermore, 71 % of physicians in this study would refer patients with depression to psychiatry and 65 % to CBT, which is similar result with results of Ashwaq (Ashwaq Al-ghamdi *et al.*, 2018). This is in line with previously mentioned lack of confidence in management.

Furthermore, we will discuss the main statement-indicating attitude. We found that 81 % of them thought that is important to help depressed patients which is similar with results of Ashwaq (Ashwaq Al-ghamdi *et al.*, 2018), and study of S Liu who indicated that 94.9 % of physicians thought that it is their responsibility to recognize depressed patients (Liu, Lu and Lee, 2008). Moreover, we found that 96 % of physicians in our results agreed that psychotherapy is less efficacious for the older patient compared to younger patients while 91 % of them would not focus on depression before excluded possible organic cause which similar to the results of Ashwaq which also found that only 50 % of physicians had confident to diagnose depression (Ashwaq Al-ghamdi *et al.*, 2018) which in contrast to our results that 84 % of physicians reported having high confident in diagnosis of depression in elderly patients. In addition, J Bawo find that 61.5 % of physicians have difficulties in diagnosis of depression (James *et al.*, 2012) where similar results reported by other studies (Chikaodiri, 2010; Park and Unützer, 2011). Moreover, the main barriers to adequate diagnosis and treatment of elderly depressed patients were rejection of patients to treatment and difficulty for access to mental health care in our community. Similar results found in study of S Liu who found that 81.4 % of physicians thought that un-compliance of patients with medications (Liu, Lu and Lee, 2008).

There are some limitations in this study. The first limitation is depending on self- reported questionnaire, which may cause some personal bias where some participants chose answers, which make them more moral or knowledgeable which could affect results of the study. Other limitations include that the study had been conducted in one institution therefore; we could not generalize the results in the entire kingdom. Finally, the study did not study the effect of demographic factors in attitude and practice of physicians.

In conclusion, we found that most of physicians in Al Riyadh show high positive attitude toward depression of elderly however, there is some limitations in knowledge about symptoms of depression and restriction to guideline. Main barriers to adequate diagnosis and treatment of elderly depressed patients were rejection of patients to treatment and difficulty for access to mental health care in our community. We recommended repeating the study in different regions of the kingdom in order to be able to generalize the results.

References:-

1. Abdulrahman A. Al-Atram (2017) “Physicians’ Knowledge and Attitude towards Mental Health in Saudi Arabia,” *Ethiop J Sci*, 28(6), pp. 771–778.
2. Alamri, S. H., Bari, A. I. and Ali, A. T. (2017) “Depression and associated factors in hospitalized elderly: a cross-sectional study in a Saudi teaching hospital,” *Annals of Saudi Medicine*, 37(2). doi: 10.5144/0256-4947.2017.122.
3. Al-Sabahi, S. M., Al-Hinai, S. S. and Youssef, R. M. (2014) “Rate and correlates of depression among elderly people attending primary health care centres in Al-Dakhiliyah governorate, Oman.,” *[Internet]*.

4. Al-Sabahi SM, Al-Hinai SS and Youssef RM. (2014) " Rate and correlates of depression among elderly people attending primary health care centres in Al-Dakhiliyah governorate, Oman. ," *[Internet]*.
5. Ashwaq Al-ghamdi *et al.* (2018) "PRIMARY CARE PHYSICIANS' PERCEPTION AND PRACTICE TOWARD DEPRESSION ASSESSMENT FOR ELDERLY PATIENTS, IN EASTERN PROVINCE, KSA 2018," *INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH*, 7(7), pp. 5–9.
6. Chikaodiri, A. N. (2010) "Health professionals' familiarity and attributions to mental illness," *Mental Illness*, 2(1). doi: 10.4081/mi.2010.e1.
7. Colasanti, V. *et al.* (2010) "Tests for the evaluation of depression in the elderly: A systematic review," *Archives of Gerontology and Geriatrics*, 50(2). doi: 10.1016/j.archger.2009.04.001.
8. James, B. *et al.* (2012) "Depression in primary care: the knowledge, attitudes and practice of general practitioners in Benin City, Nigeria," *South African Family Practice*, 54(1). doi: 10.1080/20786204.2012.10874176.
9. Karlin, N. J., Weil, J. and Felmban, W. (2016) "Aging in Saudi Arabia," *Gerontology and Geriatric Medicine*, 2. doi: 10.1177/2333721415623911.
10. Kashini Andrew *et al.* (2017) "Knowledge of depression in the elderly among primary health care workers in Kubau, Nigeria," *Ann Trop Med Public Health*, 10(1), pp. 143–148.
11. Lino, V. T. S. *et al.* (2014) "Screening for Depression in Low-Income Elderly Patients at the Primary Care Level: Use of the Patient Health Questionnaire-2," *PLoS ONE*, 9(12). doi: 10.1371/journal.pone.0113778.
12. Liu, S.-I., Lu, R.-B. and Lee, M.-B. (2008) "Non-psychiatric Physicians' Knowledge, Attitudes and Behavior Toward Depression," *Journal of the Formosan Medical Association*, 107(12). doi: 10.1016/S0929-6646(09)60015-2.
13. M Al Qahtani, A. (2014) "Severity of Depression among Elderly Women Attending Holy Quran Memorization Centers in Saudi Arabia," *Journal of Gerontology & Geriatric Research*, 03(04). doi: 10.4172/2167-7182.1000174.
14. M Glasser, L Vogels and L Vogels (2009) "Geriatric depression assessment by rural primary care physicians," *Rural Remote Health.*, 9(4), pp. 1–5.
15. Mulango, I. D. *et al.* (2018) "Knowledge, attitudes and practices regarding depression among primary health care providers in Fako division, Cameroon," *BMC Psychiatry*, 18(1). doi: 10.1186/s12888-018-1653-7.
16. Park, M. and Unützer, J. (2011) "Geriatric Depression in Primary Care," *Psychiatric Clinics of North America*, 34(2). doi: 10.1016/j.psc.2011.02.009.
17. Phelan, E. *et al.* (2010) "A study of the diagnostic accuracy of the PHQ-9 in primary care elderly," *BMC Family Practice*, 11(1). doi: 10.1186/1471-2296-11-63.
18. Qureshi, N. A., AlHabeeb and Koenig, H. (2013) "Mental health system in Saudi Arabia: an overview," *Neuropsychiatric Disease and Treatment*. doi: 10.2147/NDT.S48782.
19. Ramaswamy, R. *et al.* (2011) "Potentially inappropriate prescribing in elderly: assessing doctor knowledge, confidence and barriers," *Journal of Evaluation in Clinical Practice*, 17(6). doi: 10.1111/j.1365-2753.2010.01494.x.
20. Shah, Avani *et al.* (2018) "Older adults' attitudes toward depression screening in primary care settings and exploring a brief educational pamphlet," *International Journal of Geriatric Psychiatry*, 33(1). doi: 10.1002/gps.4713.
21. Volkers, A. C. *et al.* (2004) "The problem of diagnosing major depression in elderly primary care patients," *Journal of Affective Disorders*, 82(2). doi: 10.1016/j.jad.2003.11.003.
22. Wijeratne, C. and Harris, P. (2009) "Late life depression and dementia: a mental health literacy survey of Australian general practitioners," *International Psychogeriatrics*, 21(02). doi: 10.1017/S1041610208008235.