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Research Article

**IMPACT OF PHYSICIAN'S CHARACTERISTICS TOWARDS  
PSYCHIATRIC ASSESSMENT, A CROSS-SECTIONAL STUDY  
AMONG FAMILY MEDICINE RESIDENTS IN RIYADH,  
SAUDI ARABIA**

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**Article Received:** October 2021**Accepted:** October 2021**Published:** November 2021**Abstract**

**Background:** Family medicine physicians are serving a useful role in providing psychiatric treatment to many of their patients. In fact, family physicians become the primary psychiatric care physicians (PPCPs) for many of their patients. There are many factors that affect physician's beliefs toward psychiatric assessment. Therefore, in this study we will determine the effect of physician's gender knowledge, and beliefs towards psychiatric assessment.

**Objective:** To assess the impact of physician's gender, knowledge, and beliefs on psychiatric assessment among family medicine residents in Riyadh

**Method:** A cross-sectional study using the Physician Belief Scale (PBS) will be conducted on Family medicine residents in Riyadh. Data will be collected from March 2020 until April 2021 through a self-reported questionnaire. Statistical software package state will be used for data entry and analysis at a significance level of < 0.05.

**Result:** There was no statistically significant difference when measuring physician's knowledge and beliefs on psychiatric assessment in regards to the physician's characteristics.

**Conclusion and recommendation**

Family physicians must collaborate with psychiatric professionals in order to provide effective services. Moreover, family physicians should receive more education about mental health, and effective communication should be encouraged in order to deliver better care to psychiatric patients in primary healthcare settings.

**Key words:** physician's gender, psychiatric assessment, Riyadh- Saudi Arabia.

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**INTRODUCTION:**

Mostly, patients with mental health conditions are seen by their family physician first.(1) Mental health issues are often intertwined with physical health issues which further complicate the initial approach, since a certain percentage of the population could benefit from psychiatric or specialized treatment, but many do not need such specialized care, making the primary care setting a sensible environment for the diagnosis and management in many cases.(2) Which sheds the light on the importance of family physicians, who are the first line in health care ladder, and adds value to the widespread agreement that an improvement in the recognition of mental illnesses by family physicians is required.(3)

The nature of doctor–patient communication may influence the consultations, which may ultimately affect the clinical activity rates of doctors, and given that women and men do communicate differently, and that gender is one factor that contributes to developing the nature of doctor-patient communication, there may be important lessons related to tailoring the training of men and of women and implications for improving the quality and quantity of consultations. However, there are no studies specifically looking at the impact of physicians’ gender on his/her perception and approach towards mental health assessment. The aim of this study is to determine the impact of physicians’ gender on his/her perception and approach towards mental health assessment.

The communication that takes place during medical consultations is integral to the care that patients receive, and research suggests that it may relate to a number of patient outcomes including patient satisfaction, recall, treatment adherence, understanding of information and health outcomes. (4,5)

Despite considerable studies, the extent to which physician-patient sex concordance influence health outcomes remains unclear. Interest in this question stems from the notion that factors such as “sex”, are illustrative for unmeasured psychological characteristics. (6)

One study showed that compared with female physicians, male physicians tend to be more active and controlling in communications. (7) Another study illustrated that in some cultures, patients talk more, disclose more private information and make more

positive statements to female physicians than to male physicians.(8) Harbinder (9) found that the gender of medical practitioners is associated with length of consultation, agendas elicited, and the content and style of communications. Cypress (10) reported that female doctors spend more time with female patients than with male patients. Studies in Western countries revealed that a female-sex role congruent communication style leads to a higher degree of patient satisfaction when women see a female physician. (11,12) Several studies have also shown that gender concordance between physicians and patients in the out- patient setting affects patient assessment of physician performance. (13–15)

In our research, we aim to assess the impact of physician’s gender, knowledge, and beliefs on psychiatric assessment among family medicine residents in Riyadh.

**STUDY DESIGN AND METHODS:****Study design:**

This was a cross sectional study conducted between March and April 2021. The authors involved 8 family medicine training centers in Riyadh: KFMC, KSMC, KKHU, KFSH-RC, PSMC, KAMC, SFH with all family medicine residents (518 resident) in Riyadh. Ethics approvals was obtained from the Institutional Review Board, Research Unit, King Fahad Medical City. Participants’ information kept confidentiality. The questionnaire distributed to all family medicine residents in Riyadh, Saudi Arabia. Each resident received the questionnaire with informed consent and a guarantee for his/ her confidentiality.

**Data collection tool:**

After an extensive review upon the published literature regarding psychiatric assessment, physician characteristics, and their effect on physician belief and approach, several valid and reliable surveys were found in regard to our objectives. The questionnaire we will be using in this study consists of three main sections. The first section includes demographics information of the participant (age, gender and occupation, years of experience). In section two, we are going to use the Patient Health Questionnaire (PHQ)-2 (16) (which targets the frequency of a depressed mood and/or anhedonia). We aim through this section to establish physician knowledge about psychiatric assessment. The third section we will use the Physician Belief Scale (PBS) (17). This is a reliable and valid measure of physicians’ psychosocial beliefs. It has 32 items across three categories: beliefs concerning the professional’s role, beliefs about what the patient wants or does not want,

and beliefs concerning professionals' reactions to their patients as people. Lower scores indicate greater focus on psychosocial care. This section is intended to assess physician's beliefs about psychosocial aspects of patient care.

### Statistical Methods

Statistical software package state (SPSS version 25) was used for data entry and analysis. Statistics are descriptive in nature and compare physician gender, age, and training level. Student's paired and independent t test were used to compare means and chi-square or Fisher exact tests were used when appropriate to compare dichotomous variables. Testing at a significance level of  $< 0.05$ .

### RESULT:

#### Participants' socio-demographics:

It was possible to approach 102 physician participants, among which, 81 (response rate: 80%) completed the survey. Of these 81 physicians, 43 (53%) were male, and 38 (47%) were female, 42% physicians had completed their psychiatric rotation with Family medicine program, and 58% have yet to take their psychiatric rotation. Physicians were classified per residency year, 47 (58%) physicians were junior residents; either in first year or second year, and 34 (42%) physicians were senior residents; either in third or fourth year. Physicians' characteristics are summarized in Table-1.

#### Participants' measure of knowledge:

To test physicians' knowledge regarding psychiatric assessment, we used PHQ-2 questionnaire, physicians' response details shown in Table-2

#### Participants' belief scale analysis:

To test physicians' belief concerning psychiatric assessment, we used the physician belief scale. A total of 18 items were selected for the measurement the Physician belief scale, items were subgrouped across three categories: beliefs concerning the physician's role, beliefs about what the patient wants or does not want, and beliefs concerning physicians' reactions to their patients as people. Then, each item was tested in a duplicated manner, first, it was tested in the context of dealing with a male patient, and after that; in the context of dealing with a female patient. This method was created to spot out any disparities in dealing with both contexts.

Descriptive analysis was done for each item, then, Concordance was measured individually for each item, measurement was aimed to compare the

participant's response to male vs female context, hence, detecting any disparities between the two contexts, additionally, the level of agreement; represented in Kappa value was measured individually for each item, and using McNemar Test, p value could be extracted for each item as well.

Three items as depicted in Table 3a; were selected to test beliefs concerning the physician's role, The three items; attained higher levels of concordance 80.2%, 87.7% and 88.9% in each sequential item. Besides, the internal consistency (ICC) between the Male or the Female physician's perception for those three sequential items predicted by the Kappa was 0.722, 0.835 and 0.847. Henceforth the respective p values 0.351, 0.197 and 0.176 as per Mc Nemar test conclude that level of agreement across Physician's Gender was almost equivalent. As such there were no statistically significant difference.

Six items as depicted in Table 3b; were selected to test beliefs concerning the physician's belief about what the patient wants or does not want, The Six items; attained higher levels of concordance 80.2%, 80.2%, 82.7%, 75.3%, 98.8%, 85.2% in each sequential item. Besides, the internal consistency (ICC) between the Male or the Female physician's perception for those three sequential items predicted by the Kappa was 0.711, 0.719, 0.746, 0.664, 0.98, and 0.774. Henceforth the respective p values of (0.306) in item 1, (0.025) in item 4, (0.317) in item 5 and (0.053) in item 6, as per Mc Nemar test. Item 4 represented the only statistically significant result, with a concordance rate of less than 80% (75.3%) and a p value of (0.025). Otherwise, across other items, we can conclude that level of agreement across Physician's Gender was almost equivalent. As such there were no statistically significant difference.

Nine items as depicted in Table 3c; were selected to test beliefs concerning the physicians' reactions to their patients as people. The nine items; attained higher levels of concordance 95.1%, 95.1%, 81.5%, 96.3%, 90.1%, 93.8%, 93.8%, 93.8%, 90.1% in each sequential item. Besides, the internal consistency (ICC) between the Male or the Female physician's perception for those three sequential items predicted by the Kappa was 0.935, 0.913, 0.758, 0.945, 0.86, 0.92, 0.91, 0.916 and 0.845. Henceforth the respective p values 0.572, 0.513, 0.156, 0.392, 0.615, 0.558, 0.558, 0.506 and 0.149 as per Mc Nemar test conclude that level of agreement across Physician's Gender was almost equivalent. As such there were no statistically significant difference.

Characteristic	Description	n (%)
sex	Male	43 (53.1)
	Female	38 (46.9)
Have you done psychiatry rotation	yes	34 (42.0)
	no	47 (58.0)
Residency level	R1	16 (19.8)
	R2	31 (38.3)
	R3	29 (35.8)
	R4	5 (6.2)
Place of origin	Rural	11 (13.6)
	urban	70 (86.4)
Age (year)	mean $\pm$ SD	28.5 $\pm$ 3.6
	Median (min - max)	27.0 (25 - 45)

Characteristic	Description	always	most times	occasionally	rarely
Having Little interest or pleasure in doing things	always	14 (17.3)	20 (24.7)	31 (38.3)	16 (19.8)
Feeling down depressed or hopeless	always	4 (4.9)	9 (11.1)	39 (48.1)	29 (35.8)

**Table 3A: Beliefs concerning the professional's role: (M.PR-01, F.PR-01)**

	Characteristic	Description	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Concordance (%)	Kappa	p value †
Q1	I cannot treat psychosocial problems	Male	3 (3.7)	11(13.6)	21 (25.9)	36(44.4)	10(12.3)	80.2	0.722	0.351
		Female	4 (4.9)	7 (8.6)	26 (32.1)	32(39.5)	12 (14.8)			
Q2	I do not focus on psychosocial problems until I have ruled out organic cause	Male	14 (17.3)	30(37.0)	22 (27.2)	13(16.0)	2 (2.5)	87.7	0.835	0.197
		Female	16 (19.8)	25(30.9)	20 (24.7)	18(22.2)	2 (2.5)			
Q3	There are so many issues to be investigated when seeing a patient that i do not always c	Male	6 (7.4)	26 (32.1)	28 (34.6)	19 (23.5)	2 (2.5)	88.9	0.847	0.176
		Female	7 (8.6)	24 (29.6)	25 (30.9)	22 (27.2)	3 (3.7)			

† McNemar Test

**Table 3B: Beliefs concerning professionals' reactions to their patients as people: (M.BC.01, F.BC.01)**

	Characteristic	Description	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Concordance (%)	Kappa	p value
Q4	My own psychological problems do not interfere with my ability to treat patients	Male	22(27.2)	23(28.4)	17(21.0)	15(18.5)	4 (4.9)	95.1	0.935	0.572
		Female	22(27.2)	24(29.6)	16(19.8)	14(17.3)	5 (6.2)			
Q5	I cannot help patients with problems I have not experienced myself	Male	1 (1.2)	7 (8.6)	13(16.0)	37(45.7)	23(28.4)	95.1	0.913	0.513
		Female	1 (1.2)	6 (7.4)	13(16.0)	38(46.9)	23 (28.4)			
Q6	Exploring psychological issues with the patient often causes me pain	Male	7 (8.6)	17(21.0)	23(28.4)	26(32.1)	8 (9.9)	81.5	0.758	0.156
		Female	9 (11.1)	23(28.4)	18(22.2)	23(28.4)	8 (9.9)			
Q7	It is difficult to deal with psychosocial problems when I have many of the same problems	Male	3 (3.7)	15(18.5)	13(16.0)	42(51.9)	8 (9.9)	96.3	0.945	0.392
		Female	4 (4.9)	15(18.5)	13(16.0)	40(49.4)	9(11.1)			
Q8	I am intruding when I ask psychosocial questions	Male	1 (1.2)	9(11.1)	20(24.7)	35(43.2)	16(19.8)	90.1	0.86	0.615
		Female	2 (2.5)	8 (9.9)	22(27.2)	33(40.7)	16(19.8)			
Q9	Evaluating and treating psychosocial problems will cause me to be more overburdened more	Male	6 (7.4)	19(23.5)	15(18.5)	27(33.3)	14(17.3)	93.8	0.92	0.558
		Female	7 (8.6)	19(23.5)	15(18.5)	26(32.1)	14 (17.3)			
Q10	I feel guilty probing the psychological concerns of my patients	Male	3 (3.7)	8 (9.9)	15(18.5)	38(46.9)	17(21.0)	93.8	0.91	0.558
		Female	2 (2.5)	7 (8.6)	17(21.0)	38(46.9)	17(21.0)			
Q11	I am too pressed for time to routinely investigate psychosocial issues	Male	6 (7.4)	26(32.1)	29(35.8)	14(17.3)	6 (7.4)	93.8	0.916	0.506
		Female	7 (8.6)	26(32.1)	27(33.3)	15(18.5)	6 (7.4)			
Q12	If I deal with psychosocial issues I will lose patients	Male	0 (.0)	4 (4.9)	15(18.5)	40(49.4)	22(27.2)	90.1	0.845	0.149
		Female	0 (.0)	2 (2.5)	14(17.3)	40(49.4)	25(30.9)			

**Table 3C: Beliefs about what the patient wants or does not want: (M.BW.01, F.BW.01)**

	Characteristic	Description	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Concordance (%)	Kappa	p value
Q13	Patients with psychosocial concerns tend to become dependent on me	Male	4 (4.9)	13(16.0)	37(45.7)	21(25.9)	6 (7.4)	80.2	0.711	0.306
		Female	6 (7.4)	10(12.3)	40(49.4)	19(23.5)	6 (7.4)			
Q14	My patients do not want me to investigate psychosocial problems	Male	0 (.0)	18(22.2)	25(30.9)	30(37.0)	8 (9.9)	80.2	0.719	
		Female	1 (1.2)	10(12.3)	25(30.9)	36(44.4)	9 (11.1)			
Q15	If I address psychosocial issues Patients will reject them and never return	Male	1 (1.2)	10(12.3)	21(25.9)	36(44.4)	13(16.0)	82.7	0.746	
		Female	0 (.0)	9(11.1)	18(22.2)	40(49.4)	14 (17.3)			
Q16	My patients feel questions about the psychosocial aspects of their lives are irrelevant	Male	4 (4.9)	22(27.2)	33(40.7)	14(17.3)	8 (9.9)	75.3	0.664	0.025
		Female	3 (3.7)	17(21.0)	29(35.8)	24(29.6)	8 (9.9)			
Q17	Patients blame me for psychological problems	Male	0 (.0)	0 (.0)	14(17.3)	40(49.4)	27 (33.3)	98.8	0.98	0.317
		Female	0 (.0)	0 (.0)	13(16.0)	41(50.6)	27 (33.3)			
Q18	Patients will reject the idea of my dealing with psychosocial issues	Male	0 (.0)	6 (7.4)	30(37.0)	34(42.0)	11 (13.6)	85.2	0.774	0.053
		Female	0 (.0)	6 (7.4)	22(27.2)	43(53.1)	10 (12.3)			

**DISCUSSION:**

In Saudi Arabia, the Ministry of Health (MOH) is the major government agency entrusted with providing preventive, curative and rehabilitative healthcare for the population of Saudi Arabia. The MOH with its chain of primary health care (PHC) centers provides medical care to the citizens and residents of the Kingdom. The total number of PHC centers has increased from 1925 in 2007 to 2259 by 2012. The highest growth in number of PHC centers were in Makkah (23%) and Riyadh (20%). In the year 2012, physicians in MOH hospitals included 766 Family Medicine experts. (18,19) The primary function of PHC centers is to provide primary care services, both preventive and curative, referring cases that require more advanced care to public hospitals while cases that need more complex level of care are transferred to central or specialized hospitals. (18,20)

The World Health Organization (WHO) recommend all countries to make PHC centers the point of first contact for those with mental disorders. In situations where PHC physicians cannot provide adequate care to these patients, recommendation is to refer to psychiatrists in general hospital. (21)

The prevalence of mental health disorders is high, and people can be affected irrespective of age, culture or socioeconomic status. Often in general health facilities, patients suffering from these conditions are usually treated by Primary Care Physician (PCP) while referral to mental health specialist should be considered for severe cases. One reason for this behavior is that patients prefer to receive care from a regular family doctor into a trusting relationship and to avoid stigma related to mental health services access. (18,22-26)

Primary care physicians including family medicine practitioners coordinate their patients' care and therefore need effective training to recognize and treat mental disorders of all types. The American Academy of Family Physicians (AAFP) documents curriculum guidelines for FM residents regarding human behavior and mental health and emphasizes the need to respect the relationship between the patient and the patient's family; be aware of the emotional aspects of organic illness; and acknowledge interrelated biologic, psychological, and social factors. (27,28)

In our research, we aimed to assess the impact of physician's gender, knowledge, and beliefs on psychiatric assessment the among family medicine residents in Riyadh.

In the literature on doctor-patient communication, gender plays a modest but consistent role. Empirical studies have paid attention to gender role performance, role expectations, preferences and the experiences of patients and doctors. Different methodologies have been applied, according to the outcome measure or the target gender (whether doctor or patient, or both), such as interaction analysis systems or expert observer ratings. One recurrent finding regarding doctors' communication style, for example, is that female doctors adopt behavior that is more 'patient-centered' suggesting a gender role performance corresponding to what patients would expect from a female doctor. (29-33)

In Mazzii and her colleagues study the findings showed that female physicians tend to spend more time with patients, pay more attention to relational aspects of care and to be more likely to engage in counselling and conversations about social and family issues, compared to male physicians who seemed to pay more attention to technical aspects of care (physical examinations). (29)

In Turkey study, Benli and his colleagues reported that the responses of complete disagreement to the item, 'I don't see any reason to learn communication skills', and complete agreement with the item, 'Developing communication skills is just as important as developing medical knowledge' were given at a statistically significantly higher rate by the female residents compared to the male residents ( $P=0.01$  and  $P=0.02$ , respectively). (34) Babicki and his colleagues in Poland reported that women show a more favorable attitude towards mental illness than men ( $p = 0.034$ ). (35)

In Jeddah study, by Althubaiti and her colleagues, the findings showed that more male physicians (73.9% versus 56.5%) agreed that their education prepared them well for collaboration with psychiatrists ( $p=0.02$ ). Similarly, more male physicians (59.4% versus 38.7%) agreed that their current collaboration with psychiatrists helped them optimize their client care ( $p=0.007$ ). While more female physicians (81.1% versus 63.8%) believed that mental health physicians should be employed in primary healthcare settings ( $p=0.010$ ). On the other hand, no significant differences between males and females regarding their need to be better educated and trained regarding the identification of mental health problems. (36)

Chaitoff and his colleagues reported that female gender ( $P < .001$ ) was significantly associated with higher empathy scores. Where empathy was correlated with higher scores on multiple CG-

CAHPS items, suggesting improving physician empathy might play a role in improving patient experience. (15)

In our current study, there was no statistically significant difference when measuring physician's knowledge and beliefs on psychiatric assessment, in regard to the physician's characteristics.

#### **Study Limitations:**

Our original work plan for data collection was to distribute questionnaires manually to residents during academic day in different family medicine training programs in Riyadh. Hence, our representative sample will be wider. Due to the Covid-19 circumstances, an alternative electronic version of the questionnaire was developed and distributed, this unfortunately affected our questionnaire's response rate.

#### **CONCLUSION AND RECOMMENDATION:**

Family physicians must collaborate with psychiatric professionals in order to provide effective services. Moreover, family physicians should receive more education about mental health, and effective communication should be encouraged in order to deliver better care to psychiatric patients in primary healthcare settings.

Different physician's characteristics: gender, knowledge and beliefs, etc, play a major role regarding the physician's attitude and assessment toward their patients. and the communication that takes place during medical consultations is integral to the care that patients receive. There was notable lack of literature when researching this topic, and in particular on when researching on a local level in Saudi Arabia. We highly encourage further research in this field.

#### **REFERENCES:**

1. Kates N, Craven M, Bishop J, Clinton T, Kraftcheck D, LeClair K, et al. Shared Mental Health Care in Canada. *Can J Psychiatry* [Internet]. 1997 Oct 1;42(8):i-xii. Available from: <https://doi.org/10.1177/070674379704200819>
2. Kitchener BA, Jorm AF. Mental health first aid training: review of evaluation studies. *Aust New Zeal J Psychiatry*. 2006;40(1):6-8.
3. Gilbody S, Whitty P, Grimshaw J, Thomas R. Educational and organizational interventions to improve the management of depression in primary care: a systematic review. *Jama*. 2003;289(23):3145-51.
4. Hall JA, Roter DL, Katz NR. Meta-analysis of

correlates of provider behavior in medical encounters. *Med Care*. 1988;657-75.

5. Stewart MA. Effective physician-patient communication and health outcomes: a review. *C Can Med Assoc J*. 1995;152(9):1423.
6. Street RL, O'Malley KJ, Cooper LA, Haidet P. Understanding concordance in patient-physician relationships: personal and ethnic dimensions of shared identity. *Ann Fam Med*. 2008;6(3):198-205.
7. Eagly AH, Johnson BT. Gender and leadership style: A meta-analysis. *Psychol Bull*. 1990;108(2):233.
8. Hall JA, Roter DL. Do patients talk differently to male and female physicians?: A meta-analytic review. *Patient Educ Couns*. 2002;48(3):217-24.
9. Sandhu H, Adams A, Singleton L, Clark-Carter D, Kidd J. The impact of gender dyads on doctor-patient communication: a systematic review. *Patient Educ Couns*. 2009;76(3):348-55.
10. Cypress BK. Characteristics of visits to female and male physicians; the national ambulatory medical care survey, United States, 1977. 1980;
11. Mast MS, Hall JA, Roter DL. Disentangling physician sex and physician communication style: their effects on patient satisfaction in a virtual medical visit. *Patient Educ Couns*. 2007;68(1):16-22.
12. Schieber A-C, Delpierre C, Lepage B, Afrite A, Pascal J, Cases C, et al. Do gender differences affect the doctor-patient interaction during consultations in general practice? Results from the INTERMEDE study. *Fam Pract*. 2014;31(6):706-13.
13. Cooper-Patrick L, Gallo JJ, Gonzales JJ, Vu HT, Powe NR, Nelson C, et al. Race, gender, and partnership in the patient-physician relationship. *Jama*. 1999;282(6):583-9.
14. Cooper LA, Roter DL, Johnson RL, Ford DE, Steinwachs DM, Powe NR. Patient-centered communication, ratings of care, and concordance of patient and physician race. *Ann Intern Med*. 2003;139(11):907-15.
15. Chaitoff A, Sun B, Windover A, Bokar D, Featherall J, Rothberg MB, et al. Associations between physician empathy, physician characteristics, and standardized measures of patient experience. *Acad Med*. 2017;92(10):1464-71.
16. Kroenke K, Spitzer RL, Williams JBW. The Patient Health Questionnaire-2: validity of a two-item depression screener. *Med Care*. 2003;1284-92.
17. Ashworth CD, Williamson P, Montano D. A scale to measure physician beliefs about psychosocial aspects of patient care. *Soc Sci*

- Med. 1984;19(11):1235–8.
18. Al-Atram AA. Physicians' Knowledge and Attitudes towards Mental Health in Saudi Arabia. *Ethiop J Sci.* 2018;28(6):771. Doi: <http://dx.doi.org/10.4314/ejhs.v28i6.12>
  19. Health Indicators. Ministry of Health, Department of Statistics. 2006. <https://www.moh.gov.sa/en/Ministry/Statistics/Book/Pages/default.aspx>
  20. Koenig, H.G., et al. Mental Health Care in Saudi Arabia: Past, Present and Future. *Open Journal of Psychiatry*, 2014;4: 113-130.
  21. World Health Organization. Depression. Media Centre fact sheet no. 369. Geneva, Switzerland: WHO; October 2012. [www.who.int/mediacentre/factsheets/fs369/en/index](http://www.who.int/mediacentre/factsheets/fs369/en/index).
  22. Casini F, Sighinolfi C, Tedesco P, Bandieri PV, Bologna M, Colombini N, Curcetti C, Magnani M, Morini M, Serio A, Tarricone I, Berardi D, Menchetti M. Primary care physicians' perspective on the management of anxiety and depressive disorders: a cross-sectional survey in Emilia Romagna Region. *BMC Fam Pract.* 2013 Jun 7;14:75. doi: 10.1186/1471-2296-14-75. PMID: 23758941; PMCID: PMC3688370.
  23. Anseau M, Fischler B, Dierick M, Albert A, Leyman S, Mignon A: Socioeconomic correlates of generalized anxiety disorder and major depression in primary care: the GADIS II study (generalized anxiety and depression impact survey II). *Depress Anxiety* 2008, 25(6):506–513.
  24. Wun YT, Lam TP, Goldberg D, Lam KF, Li KT, Yip KC: Reasons for preferring a primary care physician for care if depressed. *Fam Med* 2011, 43(5):344–350.
  25. Baumeister H, Harter M. Prevalence of mental disorders based on general population surveys. *Soc Psychiatry Psychiatr Epidemiol*, 2007; 42:537-46.
  26. Ndeti DM, Khasakhala, Mutiso V, Mbwayo. Knowledge, attitude and practice (KAP) of mental illness among staff in general medical facilities in Kenya: Practice and policy Implications. *Afr J Psychiatry*, 2011;14:225.
  27. Williamson LB, Major C, Ulzen T, Rubin NJ, Fotopoulos E. Evaluation of Experiences of Family Medicine Residents in an Intensive Outpatient Psychiatry Clinic. *Best Practices in Mental Health*. 2016; 12 (1): 26-42(17)
  28. American Academy of Family Physicians. (2008). Recommended curriculum guidelines for family medicine residents: Human behavior and mental health (AAFP Reprint No. 270). Retrieved from [http://www.aafp.org/dam/AAFP/documents/medical\\_education\\_residency/program\\_directors/Reprint270\\_Mental.pdf](http://www.aafp.org/dam/AAFP/documents/medical_education_residency/program_directors/Reprint270_Mental.pdf).
  29. Mazzi, M. A., Rimondini, M., Deveugele, M., Zimmermann, C., Deledda, G., & Bensing, J. Does gender matter in doctor–patient communication during standard gynaecological consultations? An analysis using mixed methods. *Communication & Medicine*. 2014; 11(3): 285–298
  30. Blanch-Hartigan, D., Hall, J. A., Roter, D. L. and Frankel, R. M. (2010) Gender bias in patients' perceptions of patient-centered behaviors. *Patient Education and Counseling* 80 (3): 315–320. <http://dx.doi.org/10.1016/j.pec.2010.06.014>
  31. Dielissen, P., Bottema, B. J., Verdonk, P. and Lagro-Janssen, T. (2011) Attention to gender in communication skills assessment instruments in medical education: A review. *Medical Education* 45 (3): 239–248. <http://dx.doi.org/10.1111/j.1365-2923.2010.03876.x>
  32. Jefferson, L., Bloor, K., Birks, Y., Hewitt, C. and Bland, M. (2013) Effect of physicians' gender on communication and consultation length: A systematic review and meta-analysis. *Journal of Health Service Research & Policy* 18 (4): 242–248. <http://dx.doi.org/10.1177/1355819613486465>
  33. Thornton, R. L., Powe, N. R., Roter, D. and Cooper, L. A. (2011) Patient-physician social concordance, medical visit communication and patients' perceptions of health care quality. *Patient Education and Counseling* 85 (2): 201–208. <http://dx.doi.org/10.1016/j.pec.2011.07.015>
  34. Benli AR, Kaya R, Cebecik A, Sunay D. (2019). Self-assessment of residents in respect of attitudes to communication. *Attitudes of Residents in Communication* 20(e32): 1–6. doi: 10.1017/S1463423618000920
  35. Babicki, M.; Kotowicz, K.; Mastalerz-Migas, A. The Assessment of Attitudes of Medical Doctors towards Psychiatric Patients—A Cross-Sectional Online Survey in Poland. *Int. J. Environ. Res. Public Health* 2021, 18, 6419. <https://doi.org/10.3390/ijerph18126419>
  36. Althubaiti N, Ghamri R (May 25, 2019) Family Physicians' Approaches to Mental Health Care and Collaboration with Psychiatrists. *Cureus* 11(5): e4755. DOI 10.7759/cureus.4755