Original Article

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DOI: 10.4103/jfcm.JFCM_494_20

Perception and barriers to the use of cognitive-behavioral therapy in the treatment of depression in primary healthcare centers and family medicine clinics in Saudi Arabia

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Abstract:

BACKGROUND: General practitioners (GPs) and family medicine physicians (FMPs) have a vital role to play in co-ordinating the care for mental disorders. The objective of this study was to determine the perception of GPs and FMPs on the use of cognitive-behavioral therapy (CBT) for depression in Saudi Arabia, and the barriers against the implementation of CBT in such settings.

MATERIALS AND METHODS: All physicians working in Primary Healthcare Centers and Family Medicine Clinics in Saudi Arabia were targeted and invited to participate in this cross-sectional study. A self-administered online questionnaire was sent via E-mail through the Saudi Commission for Health Specialties and the Saudi Society of Family and Community Medicine. Data was collected using an existing validated questionnaire and was modified to fit the objectives of current study.

RESULTS: A total of 469 FMPs and GPs completed the survey; the mean age of respondents was 38 years. More than half of the FMPs' and GPs' (53%) showed a positive perception of the use of CBT in primary healthcare settings. Most participants (91.9%) were willing to use CBT if they had adequate education and training. More than half of the participants (59.5%) thought it was time-consuming, while 39% thought that CBT training was a very time-intensive process.

CONCLUSION: We conclude that more than half of the physicians clearly had a good perception of the effectiveness of CBT administration in primary healthcare settings. Younger physicians were more perceptive. The most agreed-on barrier to CBT implementation was the lack of training and education.

Keywords:

Arab, cognitive-behavioral therapy, family medicine, mental health, primary healthcare

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Received: 18-11-2020
Revised: 13-01-2021
Accepted: 31-01-2021
Published: 08-05-2021

Introduction

Depression is a common mood disorder, described as a persistent feeling of low mood and loss of interest in activities that a person normally likes, which interferes with daily activities for a minimum of 14 days. It can also affect a person's thought processes, behavior, motivation, and sense of guilt.[1] Depressive disorders are known as a leading cause of disability worldwide.[2] In Saudi Arabia, 49.9% of patients attending to primary healthcare center (PHC) show depressive symptoms,[3-5] but only 20% of PHCs in Saudi Arabia assess and treat mental health conditions.[6]

Cognitive-behavioral therapy (CBT) is a type of psychosocial intervention that

How to cite this article: AlHadi AN, AlGhofili HH, Almujaiwel NA, Alsweirky HM, Albeshr MF, Almogbel GT. Perception and barriers to the use of cognitive-behavioral therapy in the treatment of depression in primary healthcare centers and family medicine clinics in Saudi Arabia. J Fam Community Med 2021;28:77-84.

focuses on improving mental health and is recognized as an effective treatment strategy in the management of different psychiatric disorders such as mood disorders, anxiety disorders, eating disorders, and addiction disorders. CBT's main goal is to explore the maladaptive thinking and behavior and realign the distortive way of thinking toward certain problems. Furthermore, it enhances emotional regulation and establishes coping strategies for solving current and future problems. CBT is largely a problem-based intervention that is obtained from learning and cognitive theories, guided by the principles of applied science.[7-9] Studies on the use of CBT for managing depressed patient in primary care showed improved outcomes in contrast to standard care.[10,11] Furthermore, a comparison of the efficacy of standard care alone with standard care combined with CBT or psychiatric follow-up in treating patients with major depression in primary healthcare settings demonstrated that the combined treatment was better accepted by the patients.[11] Consequently, teaching family medicine residents mental healthcare is very important.[12] In this context, a survey of the perceptions of primary healthcare providers and family physicians can provide a comprehensive understanding of perception and barriers, and provide insight into the reasons behind the struggle to use this practice. This study was conducted to determine the perception of family medicine physicians (FMPs) and general practitioners (GPs) and barriers regarding the implementation of CBT in primary healthcare and family medicine clinics (FMC).

Materials and Methods

This cross-sectional study was conducted in February 2018 over a 3-week period. Ethical approval was obtained from the Institutional Review Board of the College of Medicine at King Saud University vide letter No. CMED305-MB6-2017-18 dated 11/12/2017, and informed written consent was taken from all participants.

All physicians working in PHC and FMC in Saudi Arabia were targeted and asked to participate. An anonymous, self-administered online survey using the Survey Monkey platform was sent via E-mail through the Saudi Commission for Health Specialties (the regulatory body for health professions in the country) and the Saudi Society of Family and Community Medicine. To avoid duplication of responses, we activated the "No repeated response" option. We included all physicians working in PHC or FMC in Saudi Arabia, including residents, registrars, and consultants, regardless of the number of years of practice. We excluded other working staff (e.g., nurses and dentists) and physicians working in other departments or rotating in those two clinical settings.

Data was collected using an existing validated questionnaire and was modified to fit the objectives of current study.[13] It had 28 questions: 6 items for demographics, 2 items to assess depression and anxiety diagnosis and treatment skills, 8 items for perception, and 12 items for barriers. Consent was incorporated into the survey which also indicated the purpose of the study, and the right of the participant to withdraw at any time without any obligation. Participants' anonymity was assured; they were informed that no incentives or rewards would be given for participating in the study. Questions were selected purposefully to reproduce the latent variables to be measured. The questionnaire contained demographic information, perception, and questions on barriers. After the survey instrument was selected, it was pilot tested on ten physicians, (later excluded from the actual sample), particularly regarding language and the physician's receptivity. No changes were required on the adjusted questionnaire. The time needed to complete the survey was estimated to be 5 minutes. A Cronbach's alpha of perception items was 0.754 and for barrier items was 0.615.

The demographic information consisted of basic information, including age, years of experience, gender, nationality, practice specialty, and highest scientific degree. The perception was assessed using eight questions; the total perception score was calculated. Agreement on perception items was considered as a positive perception, except for the third item: "Using CBT to treat my depressed patients will help shorten office visits." We considered "disagree" as a positive perception for that question since office visits tend to be longer if CBT is applied. Barriers were assessed by 12 questions. To identify the most important barrier, we selected one question from each division under the barriers for comparison with the others: the selected ones were based upon the formulation of the question; it was direct and clear, and therefore, a graph can be done to represent the barriers. The question "I would be willing to use CBT if the leadership personnel in my practice established expectations about the use of CBT for the treatment of depression" reflected the leadership support as a barrier, while "I have a lot of other practice-related priorities before CBT is added to my practice" indicated that other higher priorities created a barrier. "I would be willing to use CBT in the treatment of depression if I had more education and training in the use of CBT" was the main question reflecting the training as a barrier, "I would be willing to use CBT in the treatment of depression if I had enough time on my schedule" reflected time-constraints as a barrier. Finally, "I would be willing to use CBT to treat depression if I had access to a mental health professional in my practice setting" was

the only question that reflected the accessibility to mental health professionals as a barrier. Based on answers to those questions, we plotted Figure 1.

The sample size was calculated using a standard sample size equation $n = Z^2 P (1 - P)/d^2$,[14] for an assumed proportion of 50% ($P = 0.5$). Using a 95% confidence interval ($Z = 1.96$) and a 5% margin of error ($d = 0.05$), the required sample size was estimated as 385 and was adjusted to 462 to compensate for a 20% nonresponse rate.

IBM SPSS AMOS 21 (Arbuckle, 2011) was used to perform the data analysis.[15] We calculated the frequencies and percentages for nominal variables and mean ± standard deviation for all numerical variables (measurable variables). We used a student *t*-test for two independent groups to compare the different physician factors (gender, nationality, practicing specialty, and age group) with respect to the total score of the perception. We assumed a significant difference when the $P < 0.05$. We also used the Chi-square test to compare the perception of participants regarding the use of CBT. Furthermore, we used the Chi-square test to compare the barriers against the use of CBT in primary healthcare and family medicine settings.

Results

Out of 554 physicians who started filling the questionnaire, a total of 469 completed the surveys (response rate of 85%). Their ages ranged from 24 to 65 years with a mean of 37.99 years, and 9.9 ± 7.6 years mean number of practicing years. The nationalities of the participants were Saudi (53.3%) or non-Saudi (46.7%). The respondents' gender was almost equally distributed with 51.0% females, and 49% males and were primarily FMPs (86%) [Table 1].

The respondents varied significantly in their response to questions that assessed their perception of and competence in using CBT for the treatment of depression [Table 2]. The percentage of perception items reported by the FMPs and GP was statistically significant, where 53% ($P < 0.0001$) had a positive perception regarding the use of CBT in such settings, whereas 25%, $P < 0.0001$ were negative in their perception. Most of the physicians (64.2%, $P < 0.0001$) agreed that CBT was effective for the treatment of depression in primary healthcare settings. Three-quarters of the physicians (75.9%, $P < 0.0001$) agreed that CBT should be recommended as a first-line treatment option for depression, 13.4% ($P < 0.0001$) were neutral, and 10.7% ($P < 0.0001$) disagreed. Most (75.3%, $P < 0.0001$) thought CBT would shorten the office visits, 14.3% ($P < 0.0001$) were neutral, and 10.4% ($P < 0.0001$)

Table 1: Sociodemographic characteristics and clinical practices of primary care and family medicine physicians in Saudi Arabia (*n*=469)

Variable	*N* (%)
Age years (mean±SD)	37.99±8.6
Number of practicing years (mean±SD)	9.9±7.6
Gender	
Male	230 (49.0)
Female	239 (51.0)
Nationality	
Saudi	250 (53.3)
Non-Saudi	219 (46.7)
Practice specialty	
FMP	403 (86.0)
GP	66 (14.0)
Highest scientific degree	
FMP	
PhD in medicine	6 (1.5)
Board in medicine	245 (60.8)
Master's degree in medicine	40 (9.9)
High diploma in medicine	57 (14.1)
Bachelor degree in medicine	55 (13.6)
GP	
PhD in medicine	0
Board in medicine	1 (1.5)
Master's degree in medicine	5 (7.6)
High diploma in medicine	11 (16.7)
Bachelor degree in medicine	49 (74.2)

GP=General practitioners, FMP=Family medicine physician, SD=Standard deviation

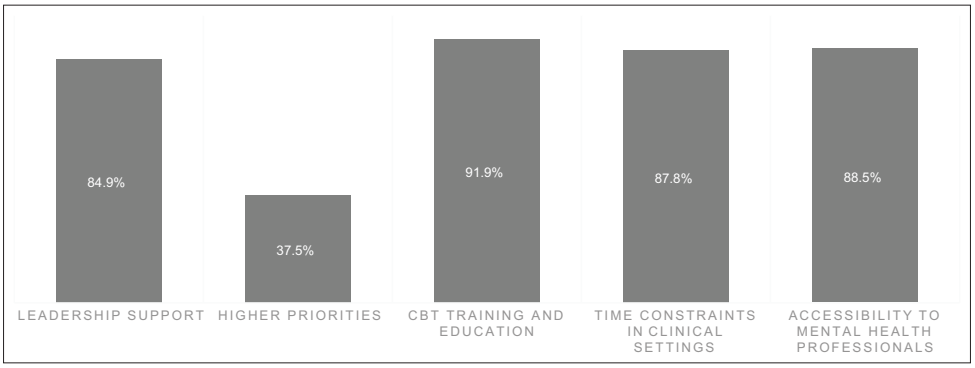

Figure 1: Major barriers toward the use of cognitive-behavioral therapy in primary healthcare centers and family medicine clinics

Table 2: Comparison of participants' responses to the perception of cognitive behavioral therapy use in primary healthcare centers and family medicine clinics in Saudi Arabia

Perception questions	Agree *N* (%)	Neutral *N* (%)	Disagree *N* (%)	χ^2	*P*-value
"CBT conducted in the primary care setting is efficient for the treatment of depression"	301 (64.2)	90 (19.2)	78 (16.6)	147.36	<0.0001
"CBT is suggested as a first-line treatment choice for depression"	356 (75.9)	63 (13.4)	50 (10.7)	280.22	<0.0001
"Providing CBT as a treatment for my depressed patients will help shorten clinic visits" (reversed)	353 (75.3)	67 (14.3)	49 (10.4)	285.74	<0.0001
"I have the knowledge to use CBT to treat depression"	222 (47.3)	135 (28.8)	112 (23.9)	121.82	<0.0001
"I was acquainted with the use of CBT in my training facility"	205 (43.7)	92 (19.6)	172 (36.7)	74.21	<0.0001
"I currently use CBT in the management of some situations"	183 (39.0)	116 (24.7)	170 (36.2)	95.32	<0.0001
"Studies certainly denote that CBT provided in the primary care setting is efficient in the treatment of depression"	328 (69.9)	123 (26.2)	18 (3.8)	317.66	<0.0001
"As a primary care provider, I have the proper qualification to become eligible in the delivery of CBT for the treatment of depression"	253 (53.9)	109 (23.2)	107 (22.8)	132.57	<0.0001
Total	53.4	21.2	25.4	19.5011	<0.0001

CBT=Cognitive behavioral therapy

Table 3: Comparison of the mean perception scores by demographic characteristics of study participants

Variables	Perception score		
	Mean±SD	t	*P*-value
Age (years)			
≤37	20.26±5.19	3.400	0.001
>37	18.66±4.99		
Practicing years			
0-9	20.30±5.15	3.831	<0.0001
10+	18.50±4.99		
Gender			
Male	19.76±5.26	1.054	0.292
Female	19.25±5.04		
Nationality:			
Saudi	20.52±5.06	4.698	<0.0001
Non-Saudi	18.33±5.01		
Practicing specialty			
FMP	19.24±5.15	2.777	0.006
GP	21.12±4.88		

FMP=Family medicine physicians, GP=General practitioners, SD=Standard deviation, CI=Confidence interval

thought office visits would be longer with CBT. Only 47.3% ($P < 0.0001$) were knowledgeable about the use of CBT to treat depression.

A significant number of the participants (36.7%, $P < 0.0001$) had not been introduced to the use of CBT in their training and 19.6%, $P < 0.0001$ was neutral. Even though most of the physicians were positive in their perception of CBT, only 39% ($P < 0.0001$) stated they currently used CBT in the management of depression. About half (53.9%, $P < 0.0001$) of the physicians stated that they had the background and would be competent in the use of CBT for the treatment of depression. This surprisingly, was higher than the number who had been introduced to the use of CBT.

There was a statistically significant difference ($P = 0.001$) between the younger physicians (≤37) and those who were older (>37). The younger physicians had a better perception than the older physicians (20.26 ± 5.19 vs. 18.66 ± 4.99, respectively) [Table 3], which is consistent with the difference in the number of practicing years (20.3 ± 5.15 vs. 18.5 ± 4.99, $P < 0.0001$, fewer years of practice vs. more years of practice). A comparison of FMPs to GPs showed a statistically significant ($P = 0.006$) difference between their perceptions, the GPs scoring more on perception items than FMPs (21.12 ± 4.88 vs. 19.24 ± 5.15, respectively). Gender was not a differentiating factor with regard to perception (19.76 ± 5.26 vs. 19.25 ± 5.04, $P = 0.292$, male vs. female).

The barriers to the use of CBT in primary healthcare settings are shown in Table 4. Most of the physicians (84.9%) were willing to use CBT if their leadership settled expectations on the use of CBT for the treatment of depression, while (4%) were not willing to do so ($P < 0.0001$). When asked whether the current leadership supported the use of CBT or not, 29.9% agreed that the leadership was supportive, while 38.6% were not sure and 31.6% disagreed ($P < 0.0001$).

The response of the physicians to whether they had a lot of other practice-related priorities that would make the addition of CBT to their practice problematic was not definitive: 37.5% agreed, 33.45% disagreed, while 29% were neutral ($P < 0.0001$). Access to guidelines was not perceived as a barrier by 39.7% of the participants. Most of the physicians (82.8%) were eager to learn to use CBT for the treatment of depression, 10.2% were unsure, and 7% were unwilling. Most participants (91.9%) were willing to use CBT if they had knowledge and practice in the use of CBT. When asked about the barriers to

Table 4: Comparison of participants' responses about the barriers to implementing cognitive behavioral therapy in primary healthcare centers and family medicine clinics in Saudi Arabia

	Agree *N* (%)	Neutral *N* (%)	Disagree *N* (%)	χ^2	*P*-value
Leadership support					
"I would be eager to use CBT if the leadership in my facility settled expectations about the use of CBT for the treatment of depression"	398 (84.9)	52 (11.1)	19 (4.0)	415.85	<0.0001
"Leadership at my facility do not support the use of CBT in the treatment of depression"	140 (29.9)	181 (38.6)	148 (31.6)	163.02	<0.0001
Higher priorities					
"I have a lot of another practice-related priorities precedes the adding of CBT to my practice"	176 (37.5)	136 (29.0)	157 (33.5)	111.10	<0.0001
CBT training and education					
"I am able to reach to the guidelines for the use of CBT to treat depression in the primary care setting"	233 (39.7)	113 (24.1)	123 (26.3)	151.16	<0.0001
"I am currently eager to learn to the usage of CBT for the treatment of depression"	388 (82.8)	48 (10.2)	33 (7.0)	366.43	<0.0001
"I would be eager to use CBT in the treatment of depression if I had more knowledge and practice in the use of CBT"	431 (91.9)	25 (5.3)	13 (2.7)	547.75	<0.0001
"Learning to use CBT is a very troublesome process"	97 (20.7)	160 (34.1)	212 (45.2)	223.44	<0.0001
"Training in the use of CBT is a very time consuming process"	187 (39.9)	155 (33.0)	127 (27.1)	157.86	<0.0001
Time constraints in clinical settings					
"I would be eager to use CBT in the treatment of depression if I had committed time on my agenda"	412 (87.8)	40 (8.5)	17 (3.65)	461.48	<0.0001
"CBT is a very time consuming to use in a busy primary care setting"	279 (59.5)	91 (19.4)	102 (21.1)	141.99	<0.0001
"Introducing CBT into my practice would slow the flow and conflict with productivity"	127 (27.1)	131 (27.9)	211 (45.0)	193.72	<0.0001
Accessibility to mental health professionals					
"I would be eager to use CBT in the treatment of depression if I had access to a mental health professional in my facility"	415 (88.5)	36 (7.7)	18 (3.9)	465.42	<0.0001

CBT=Cognitive behavioral therapy

training on CBT use, only 20.7% felt that learning CBT was difficult, while 39% thought that CBT training was a very time-consuming process. More than half of the participants (59.5%) thought that the use of CBT in a busy clinic would be time-consuming, which was a barrier to the implementation of CBT. Most of the participants (87.8%) were eager to use CBT if a specific time was designated for it in their schedule. Accessibility to mental health professionals was considered a barrier by 88.5% of the participants.

Figure 1 shows the main barriers to CBT implementation: Training and education (91.9%), access to mental health professionals (88.5%), time constraints (87.9%), leadership support (84.9%), and having higher priorities over CBT (37.5%).

Discussion

Our study tried to determine the perception of FMPs and GPs and identify barriers regarding the implementation of CBT in primary healthcare clinics and FMC. The overall percentage of positive perception on the use of CBT for depression was 53%, which was higher than our expectation. However, our study showed that a high number of GPs and FMPs (89.7%) believed that they would be able to diagnose depressed patients. This finding was similar to that reported by Richards *et al*.,[16] but was contradictory to what Pierce and Pearce claimed with the 30%.[17] This contradiction could be due to different study settings (among rural PHCs). These observations can be explained by the lack of training of GPs and FMPs. It was found that less than half of FMPs and GPs had been introduced to the use of CBT in their training programs. A study that explored the provision of psychosocial interventions in the form of counseling in family physicians' practice, showed that CBT was the most commonly learned counseling technique during the residency program (68%).[18] This difference could be the result of demographic variation since 64% of their responses were obtained from residents. Even so, it could correlate with our results since there was a significant difference in perception on the use of CBT when a comparison of both age and the years of practice of the respondents was made; younger physicians had better perception which reflected their training (P = 0.001). Training was the most agreed-on barrier in our study, where 91.9% of the participants stated their willingness to use CBT if they were trained; however, a qualitative study indicated that the lack of time was the most frequently reported barrier cited by trained FMPs.[19] Even with the good knowledge of CBT as a first-line treatment for depression (75.9%), only 39% currently used it to treat depression. This is similar

to two published studies, one of which was conducted in the United Kingdom (London), where 32% of the participants reported using CBT in primary healthcare; the majority of the participants had not had any training in CBT and reported little knowledge of it.[20] That said, studies have shown that untrained health workers can be effectively trained to treat anxiety disorders in the primary healthcare setting even if they had no previous experience in CBT.[21-23] Consequently, training is very important and should be given via accredited programs for better outcomes in mental healthcare.[20] Most participants preferred workshops out of the various training formats suggested in the London study, followed by group instruction and consultation.[24] Another study conducted in Norway also showed that only a minority of GPs used CBT systematically. One of the reasons for the low use was the lack of eligible patients.[24,25] Surprisingly, it has been recognized in many settings that patients could act as a barrier to their own treatment method, such as CBT.[26] Various studies revealed that other reasons for the little use of this therapy is the insufficient number of trained physicians in both primary healthcare and specialized mental health services. Thus, after a course of group supervision for GPs of CBT, there was a marked change in their performance, dependability, and knowledge.[27,28]

Regarding the effectiveness of the administration of CBT for depression, many of the respondents (64.2%) agreed that it was effective. This is supported by a randomized controlled trial conducted in England, which showed the effectiveness of CBT for depressed patients, especially the elderly.[29]

Minimal and conflicting evidence on the adequacy of CBT being delivered by GPs was cited in a systematic review conducted in 2003.[30] However, these conflicting conclusions in the analyzed studies on the adequacy of "psychosocial interventions by GPs" are probably because they are not comparable in numerous ways.

Our study shows the accessibility to mental health professionals as the second most agreed-on barrier besides the implementation of CBT in a primary healthcare setting with 88.5%. This is consistent with other studies that stressed the importance of collaborative care in terms of supervision and accessibility to trained and untrained nonmental health workers in dealing with psychiatric disorders in general.[31,32] This could be the result of the complicated healthcare system, and the scarcity of CBT trained physicians having to cope with a significant number of patients struggling with depression (49.9%) in primary healthcare centers.[3,27,28] The availability of online versions of CBT has helped to improve this situation. Some such are the many accessible programs of evidence-based interventions, tolerable for a great number of patients in primary healthcare, such as the free online CBT program "MoodGym."[33-35] Another advantage is that internet-based treatments are scalable and cost-effective.[36]

The above responses showed other barriers to the use of CBT emanating mainly from the first two questions. A large number of the respondents lacked the knowledge on the use of CBT. This was attributed to their lack of instruction on the use of CBT during their training. Besides, a large number of GPs and FMPs are uncertain of the validity of the use CBT as a useful method for primary care physicians (PCPs). Likewise, around 33% thought that CBT effectiveness was not evidence-based. However, better schooling and training could help overcome these obstacles.

Mood and anxiety disorders are the most common psychological issues in the primary healthcare setting; such disorders are a widely recognized public health issue, and make up for more than 30% of primary healthcare consultations, which for GPs and FMPs are rather tedious and time consuming.[24] Our study revealed that those who would be willing to use CBT for the treatment of depression if they had time dedicated for it were 87.8%, and those who believed that CBT was too time-consuming to be used in a busy primary healthcare setting were 59.5%. In an Australian study, 76% agreed on time as a barrier,[17] the difference possibly due to the small sample size in their study (n = 100). A considerable percentage of GPs had the knowledge and the training, but had little time, excessive workload in the clinic, so the lack of time specially devoted to the application of CBT were issues for them.[26] GPs behavior as regards depression was positively related to their ability to diagnose common mental disorders. Their confidence in assessing and managing depressed patients and acknowledging the obstacles related to the care of these patients, depended on their prior mental health training.[23]

Nevertheless, there was a high percentage of physicians that were willing to use CBT if their leadership established expectations on the use of CBT for the treatment of depression (84.9%).

Our study has four limitations. First, the study included many FMPs from all over the country, but few GPs, the majority of whom were from Riyadh. Therefore, a comparison between the two groups is untenable. Secondly, it would have been better to include the region/city in our study, which might have improved the outcomes with a comparison of rural and urban differences. Third, we did not include the reimbursement and insurance aspects since it was not applicable in Saudi Arabia, where most healthcare services are free. Fourth,

more complementary research on this topic is required with the study of more variables and barriers in order to get wider specific results. We expect that our study will encourage more physicians and researchers to carry out further studies in Saudi Arabia. Nonetheless, it is unclear what types of education and training that might be most effective (e.g., whether the training should be in an academic environment or a practice setting). Further research and population-based studies on FMC and PHC with a larger sample size are now needed to validate our research and find answers to these questions. The Saudi Arabian healthcare system is currently undergoing a huge change generating possibilities for improvement . It is clear that CBT is a promising method for treating mental health disorders. Therefore, the use of CBT should be included in training programs since only half of the participants had been introduced to it during their training. We also found in our study that 82.8% were willing to learn to use CBT for the treatment of depression but they had multiple issues such as time constraints (87.8%) and lack of support from the leadership (84.9%). Consequent on the foregoing, we advocate the implementation of CBT in PHCs, and recommend the establishment of policies to support and provide physicians access to mental health professionals to assist as necessary and guarantee better care for patients. This would ensure competent, accessible and equitable health services, prevent putting patients on antidepressant medications (ADMs) "drug-loops" and minimize the overcrowding of psychiatry clinics with patients who can be managed at the PHCs.

Conclusion

We conclude that our study revealed that around half of the physicians clearly had a good perception of the effectiveness of CBT administration in primary healthcare settings for the treatment of depression, and three-quarters of the physicians endorsed the recommendation for its use as a first-line treatment option. Younger physicians were more perceptive. However, the most agreed-on barrier to CBT implementation was the lack of training and education, followed by access to the advice of mental health professionals and time constraints.

Acknowledgment

We would like to thank Ms. Dina M. AlDussary and Ms. Maha A. AlGhamdi for their participation in data collection, and Mr. Amir S. Marzouk for his participation in data analysis. Also, we would like to thank all the people who participated in the research for their patience and kindness.

Financial support and sponsorship

This research was funded by the SABIC Psychological Health Research and Applications Chair, Department of Psychiatry, College of Medicine, Deanship of Postgraduate Teaching, King Saud University. The funding body had no role in the design of the study and collection, analysis, and interpretation of data nor in writing the manuscript.

Conflicts of interest

There are no conflicts of interest.

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