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Assessment of telepsychiatry services provided by Okasha Institute of Psychiatry during COVID-19 pandemic

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Abstract

Background Telemedicine has a great role in delivering clinical services when distance and time are critical factors. Although this tool does not replace a medical examination, it was inevitably needed service during COVID-19 pandemic as it avoided the need for a patient's visit, particularly at times when confinement measures are being enforced. As technology is sweeping the earth, the role of telemedicine should be evaluated precisely as an ongoing service with great emphasis on patient's satisfaction.

Patients and methods Participants of telepsychiatric services using Ain Shams University platform for three consecutive months (July, August, and September 2021) were enrolled in the study. Data were collected using Google form, and patients were approached via telephone calls. De novo questionnaire for assessing patient's satisfaction was conducted in Arabic to assess patient satisfaction.

Results A total of 104 participants receiving video consultation. Positive attitude towards remote consultations was concluded, where 80.8% (84) of the patients were satisfied from telepsychiatry services.

Conclusion Our study highlights high degree of satisfaction among patients receiving telepsychiatry consultations provided by Okasha Institute of Psychiatry, Ain Shams University, Egypt.

Keywords Telemedicine, Telepsychiatry, Remote consultation, COVID-19, Satisfaction, Ain Shams University, Okasha Institute of Psychiatry

Introduction

COVID-19 pandemic had a major impact on health care systems, it caused a major disruption in routine care for non-COVID-19 patients [1].

Loss of access to mental health support, especially with the lockdown, might have affected vulnerable groups such as those with pre-existing mental or physical health issues (including those with severe mental illnesses), recovered individuals, and those who become mentally unwell during COVID-19 lockdown [2].

Hence, Telemedicine, particularly video consultations, has been promoted and scaled up to reduce the risk of transmission [3] and to help patients get the supportive care they need while minimizing their exposure to COVID-19 virus [4].

A recent survey demonstrated that patients are willing to use telehealth, but some barriers still exist [4].

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Most studies of telepsychiatry report high levels of satisfaction among patients and their relatives as well as among clinicians [5].

Patient satisfaction is a growing concern in all aspects of healthcare because the patients are the only source that can report how they were treated and if the treatment met the patients' expectations of care [6].

Providers' opinions about telemedicine are also important, the competency of the practitioner on the other end of the system and the completeness of the patient records both comprise important considerations for providers. Trust among healthcare workers influences and directly affects their attitudes toward the telemedicine set-up [7].

Efforts were made by the officials of psychiatric institute and other departments of Ain Shams University to initiate a service for all patients in general and psychiatric patients. Telemedicine services were initiated by June 2020. In the form of a triage system using telephone consultations available 24 h per day, online sessions across online website where patients could reserve a session with a consultant in psychiatry and online addiction groups therapy, therefore assessment of patients' satisfaction with this newly introduced service was mandatory.

Aim of the study

To evaluate Patient's satisfaction with Telepsychiatry services provided by Okasha Institute of Psychiatry, Ain Shams University during COVID- 19.

Methods

Study design

This is a descriptive cross-sectional study among patients who received telepsychiatry consultations over 3 months duration (July, August, and September 2021).

Study setting

Okasha Institute of Psychiatry as a part of Ain Shams university conducted a virtual hospital hosting multiple specialties among which were psychiatry clinics (general, psychosexual, adolescent, child, addiction, and sleep clinics) operated by psychiatry consultants who had more than 6 years of expert in this field.

Okasha's Institute offered a triage system using WhatsApp service, available 24 h per day, answered by specialists in psychiatry to direct patients to the service needed, in addition to psychological support line to health care workers experiencing psychological difficulties, online addiction group therapy to support addicts in recovery during the pandemic and liaison psychiatric services to acutely ill patients with co-morbid mental illness.

The patient simply creates an account using minimal data, as their phone number and name. Once logged in

on the web-based platform, they can book any convenient time slot on any of the specialty clinics.

Study population

One hundred four patients who received video-consultation at Ain Shams university hospitals within (July–August and September 2021) were enrolled in the study. Three patients refused to be enrolled in the study procedure.

Sampling method

A convenience sample was used.

Study tools

Data were collected using Google form, and patients were approached via telephone calls. Sociodemographic data was collected as age, sex, educational level, marital status, and occupation.

De novo questionnaire for assessing patients' satisfaction was conducted in Arabic.

The questionnaire was created by experts in psychiatry and public health statisticians in Ain Shams University constituting 32 questions.

Seven questions for socio-demographic data and 25 questions assessing the service and satisfaction in terms of

- 1-Technical quality.
- 2-General Satisfaction with the service.
- 3-Patients' compliance to the service.
- 4-Communication.
- 5-Financial aspects.
- 6- Time spent with the doctor.
- 7-Accessibility and convenience.
- 8-Future plans.

Validation of the tool was conducted using face and construct validity by experts in the field of psychiatry.

Cronbach's alpha of the used tool was (0.671).

Pilot study was conducted to test the feasibility and the acceptability of the questionnaire, also to calculate the time needed to complete the questions. Modifications were done to some of the questions to be more suitable for data collection accordingly.

Diagnoses of patients receiving video consultation were done by consultants of psychiatry at the Okasha Institute of Psychiatry, Ain Shams University.

Ethical considerations

Oral consent was given across telephone calls for patients. Information about patients was collected from the officials of the telemedicine service.

Data management and analysis

The collected data were revised, coded, tabulated, and introduced into PC using Statistical Package for Social Science (SPSS version 20).

Student’s *t* test was used to assess the statistical significance of the difference between two study group means. Chi-square test was used to examine the relationship between two qualitative variables, Pearson chi-square and likelihood-ratio chi-square. Fisher’s exact test and Yates’ corrected chi-square are computed for 2×2 tables.

Cronbach alpha was performed to test the reliability and consistency of the questions responses by the patients.

Results

One hundred ninety-seven video consultations were recorded in the duration from July 2021 till end of September 2021, 122 calls were not duplicated, approached across telephone calls where 104 answered and

completely fulfilled patient’s questionnaire, and 3 refused to fulfill the questionnaire and 15 could not be reached.

Regarding demographic data of the patients, 78.8% (82 patients) ranged from 19 to 45 years of age, the majority were females 66.3% and 77.9% were from urban areas as shown in Table 1.

Descriptive analysis of the 104 patient’s demographic data (Table 1).

Regarding preference of patients to either remote or physical consultations, 39.4% of patients (41) found no difference between remote and physical consultations as shown in Fig. 1.

Regarding reasons for choosing remote consultation (RC), there were varieties of choices and more than one reason to choose RC where 92.3% of patients (96) have chosen RC as it is more feasible from home, 26.9% of patients and only 7.7% (8) chosen RC to avoid social stigma of psychiatric illnesses as shown in Table 2.

As regards the main drive/symptom for patients to seek RC, mood symptoms constitute 47.1% of patients’ complaints as shown in Table 3.

61.5% of patients (64) found the duration of the RC session was enough. 84.6% of patients (88) were comfortable during the online sessions, 77.9% of the patients (81) believed that confidentiality was maintained during the online session.

85.6% (89 patients) agreed that the physicians provided information about their symptoms and disorders, 87.5% of the patients (91) were satisfied with the way the physicians explained the treatment plan. 89.4% of the patients (93) were satisfied with physicians explaining the benefits of the treatment plan. 52.9% of the patients (55) agreed that the physicians have explained well what to do in psychiatric emergencies or crisis. Overall satisfaction

Table 1 Demographic data of patients

Patients data		Frequency	Percent
Age groups	= < 18	13	12.5
	19–45	82	78.8
	46–60	7	6.7
	> =61	2	1.9
	Total	104	100.0
Gender	Male	35	33.7
	Female	69	66.3
Residence	Urban	81	77.9
	Rural	23	22.1

■ No difference ■ remote consultation better ■ physical consultation better

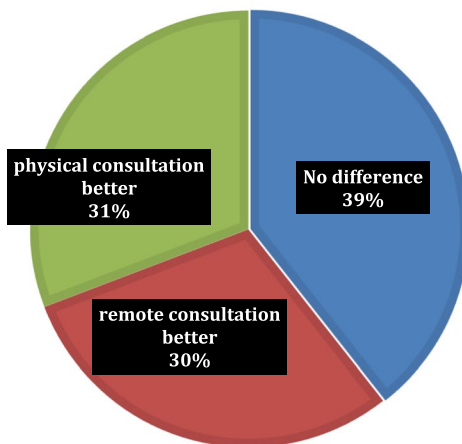


Fig. 1 Regarding preference of patients to either remote or physical consultations

Table 2 Reasons for remote consultation preference

	Frequency	Percent
Feasibility of consultation from home	96	92.3
Better service	32	30.8
Avoidance of traffic and corona	28	26.9
Remote consultation free of charge	27	26
Avoidance of clinics and corona	26	25
Avoidance of social stigma	8	7.7

Table 3 Main reason for seeking remote consultation

	Frequency	Percent
Mood symptoms	49	47.1
Anxiety symptoms	46	44.2
Behavioral symptoms	40	38.5
Sleep disorders	35	33.7
Other symptoms	16	15.4
Eating disorders	7	6.7
OCD	4	3.8
Suicidal ideation	4	3.8

Table 4 Patients' perspective of the service measured by more than aspect

		Frequency	Percent
Duration of the encounter is enough	No	17	16.3
	Yes	64	61.5
	To some extent	23	22.1
Feeling comfortable during the encounter	No	4	3.8
	Yes	88	84.6
	To some extent	12	11.5
Keeping Confidentiality during the encounter	No	1	1.0
	Yes	81	77.9
	Do not know	22	21.2
Explaining of the Nature of the disease	No	4	3.8
	Yes	89	85.6
	To some extent	11	10.6
Ensuring understanding of the TTT plan	No	5	4.8
	Yes	91	87.5
	To some extent	8	7.7
Explaining the benefit of TTT		93	89.4
Explaining side effects		76	73.1
Explaining what to do in case of crisis		55	52.9
Overall satisfaction	Not satisfied	6	5.8
	Satisfied	84	80.8
	To some extent satisfied	14	13.5

was measured in a separate question, where 80.8% of the patients (84) were satisfied completely from the RC as shown in Table 4.

Patients were found to be satisfied with the quality of voice, pictures, and website's usage as shown in Table 5.

No significant association was determined between patient's satisfaction and their sociodemographic data (P value > 0.05) as shown in Table 6.

Table 7 is exploring the reason for RC as a predictor factor for service dissatisfaction. Patients with mood symptoms were significantly more dissatisfied than those without ($p < 0.05$). Again, those suffering from eating disorders were more dissatisfied than those who are not suffering eating disorders ($p < 0.05$). Other conditions did not significantly influence the rate of service satisfaction.

Significant association was found between patient's satisfaction and the total duration of the encounter (P

Table 5 Evaluation of the technical aspects of the remote consultation encounter

	Mean	95% confidence interval for mean
Evaluation of the quality of voice/sound	8.16	7.84–8.49
Evaluation of the picture	7.11	6.62–7.59
Evaluation of internet connection	8.61	8.31–8.90

Table 6 Sociodemographic factors affecting satisfaction by remote consultation

	Satisfaction among two groups		P value
	Satisfied N (%)	To some extent and dissatisfied N (%)	
Gender			
Male	32 (91.4)	3 (8.6)	0.089 NS
Female	52 (75.4)	17 (24.6)	
Residence			
Urban	62 (76.5)	19 (23.5)	0.08
Rural	22 (95.7)	1 (4.3)	
Education			
= < Preparatory	5 (100.0)	0	0.528 NS
Secondary	13 (81.3)	3 (18.8)	
> = University	66 (79.5)	17 (20.5)	
Marital status			
Single	56 (77.8)	16 (22.2)	0.489 NS
Married	23 (88.5)	3 (11.5)	
Others	5 (83.3)	1 (16.7)	
Job/occupation			
No job	53 (77.9)	15 (22.1)	0.420 NS
Full time job	26 (83.9)	5 (16.1)	
Part time job	5 (100.0)	0	

Table 7 Main reason for remote consultation as mentioned by patients

		Satisfaction among two groups		Total
		Satisfied	To some extent and dissatisfied	
Mood symptoms	No	49(89.1%)	6(10.9%)	.042 S
	Yes	35(71.4%)	14(28.6%)	
Anxiety	No	47(81.0%)	11(19.0%)	1.000 NS
	Yes	37(80.4%)	9(19.6%)	
Behavioral symptoms	No	55(85.9%)	9(14.1%)	.151
	Yes	29(72.5%)	11(27.5%)	
Drive for RC–OCD	No	81(81.0%)	19(19.0%)	.580
	Yes	3(75.0%)	1(25.0%)	
Drive for RC–sleep disorders	No	57(82.6%)	12(17.4%)	.685 NS
	Yes	27(77.1%)	8(22.9%)	
Drive for RC–eating disorders	No	81(83.5%)	16(16.5%)	.024 S
	Yes	3(42.9%)	4(57.1%)	
Drive for RC–suicidal ideation	No	81(81.0%)	19(19.0%)	.580 NS
	Yes	3(75.0%)	1(25.0%)	
Drive for RC–other symptoms	No	69(78.4%)	19(21.6%)	.298 NS
	Yes	15(93.8%)	1(6.3%)	

value < 0.001), comfortability of the patients with the service. (*P* value < 0.001), patient’s perspective of confidentiality with the RC (*P* value = 0.05), patient’s satisfaction with the explanation of nature of disease and treatment plan (*P* value < 0.001). Patients’ satisfaction with the explanation of benefits and side effects of the treatment plan with *P* value 0.001 and 0.004 respectively, overall satisfaction with the service and degree of the explanation with the emergency plans (*P* value = 0.000). However, no significant association was found between satisfaction of the clients with the overall service and type of treatment given (*P* value = 0.140) as shown in Table 8.

50% of patients would use the service again and 89.4% would recommend it for others as shown in Table 9.

Discussion

This study was conducted among patients receiving remote consultations provided by Okasha Institute of Psychiatry, Ain shams University Hospitals to assess patients’ satisfaction with the service provided.

Studies examining acceptability and patients’ satisfaction were different in their conclusions; some showed that there was no difference between telepsychiatry and in-person care [8, 9]. Others showed more satisfaction with telepsychiatry [10–14].

As regards our results, young urban adults were the major part of the sample size as they were more aware with the technology attributes and knew how to use it. Females used the service the most, this can be explained by the fact that they are having more restraints on mobility and less free time to have access to face-to-face clinics according to the Egyptian traditions.

Most of the participants (92.3%) chose RC as it was more feasible from home, 26.9% of participants chose it to avoid traffic during COVID 19 pandemic, while 26% of participants chose RC as it is fees free, and 25% chose RC to avoid clinics crowd during COVID pandemic, while only 7.7% chosen RC to avoid social stigma of psychiatric illnesses.

Similar to our findings, a Canadian study showed that patients agreed that the telepsychiatry sessions were easier to attend, saved their time, allowed them to get healthcare sooner and reduced their travel requirement in comparison to face to face consultations. Most patients also agreed that telepsychiatry was a convenient form of healthcare [15].

This was also in accordance with previous studies that showed that patients and families reported reduced travel and stress, greater convenience, and the high quality of care provided via telehealth as reasons for their high satisfaction [16, 17].

In this study, patient’s concern or drive to use RC was not based on physician’s diagnosis, yet it was based on

Table 8 Satisfaction of patients by remote consultation in relation to characteristics of the encounter

		Satisfaction among two groups		Total
		Satisfied	To some extent and Dissatisfied	
Duration of the encounter is enough	No	8(47.1%)	9(52.9%)	< 0.001 S
	Yes	60(93.8%)	4(6.3%)	
	Do not know	16(69.6%)	7(30.4%)	
Feeling comfortable during the encounter	No	0	4(100%)	< 0.001 S
	Yes	81(92.0%)	7(8.0%)	
	Do not know	3(25.0%)	9(75.0%)	
Keeping confidentiality during the encounter	No	1(100.0%)	0	0.05 S
	Yes	71(87.7%)	10(12.3%)	
	Do not know	12(54.5%)	10(45.5%)	
Explanation of the nature of the disease	No	0	4(100.0%)	< 0.001 S
	Yes	79(88.8%)	10(11.2%)	
	Do not know	5(45.5%)	6(54.5%)	
Ensuring understanding of the TTT plan	No	0	5(100.0%)	< 0.001 S
	Yes	82(90.1%)	9(9.9%)	
	Do not know	2(25.0%)	6(75.0%)	
Explaining the benefit of TTT	No	4(36.4%)	7(63.6%)	.001 S
	Yes	80(86.0%)	13(14.0%)	
Explaining side effects	No	17(60.7%)	11(39.3%)	.004 S
	Yes	67(88.2%)	9(11.8%)	
Type of treatment-medical TTT	No	27(75.0%)	9(25.0%)	.410 NS
	Yes	57(83.8%)	11(16.2%)	
Type of treatment-psychiatric session	No	7(41.2%)	10(58.8%)	.000 S
	Yes	77(88.5%)	10(11.5%)	
Type of treatment-referral to OPC	No	82(82.0%)	18(18.0%)	.166 NS
	Yes	2(50.0%)	2(50.0%)	
Type of treatment-referral to ER	No	83(80.6%)	20(19.4%)	1.000 NS
	Yes	1(100%)	0	
Explaining what to do in case of crisis	No	32(65.3%)	17(34.7%)	.000 S
	Yes	52(94.5%)	3(5.5%)	

Table 9 Future use and recommending use of RC for others

		Frequency	Percent
Future use of RC	No	12	11.5
	Yes	52	50.0
	May be	40	38.5
	Total	104	100.0
Recommending use of RC	No	6	5.8
	Yes	93	89.4
	May be	5	4.8

participant’s self-reporting of most distressing symptoms as it is crucial to adopt a patient-centered care plan. Among participants’ concerns were mood symptoms which constitute 47.1% of participants’ complaints,

anxiety symptoms constitute second about 44.2% of participants’ complaints, behavioral symptoms in the form of anger management, social problems. Also, sleeping disorders, eating disorders, suicidal ideation and others are patients’ complaints. These findings were in line with a previous study that reported excellent reliability of telepsychiatry compared with in-person interviews for the examination of obsessive–compulsive, depressive, and anxiety symptoms [18]. Another study revealed that psychotic disorders were considered the last appropriate diagnosis to conduct telehealth, whereas anxiety disorders were considered the most adequate [19].

Overall satisfaction with the service was high as 80.8% of the participants were satisfied completely with the service and its regulations, that was in line with an American study involving patients using telehealth services stated that the overall experience was either good

or excellent for more than 80% of respondents [19]. That was in accordance also with a Canadian study reporting patients' opinion in tele-psychiatric consultations, almost all patients were satisfied with the telepsychiatry session overall (96.3%) [15] and the similarity of the results with the previous mentioned studies reflects the great quality of service and dedication offered by well experienced trained consultants.

Most of the participants showed positive attitude towards safety, confidentiality, and the length of the sessions, also 87.5% of the participants were satisfied with the way the physicians explained the treatment plan and that is of no surprise due to the adoption of patient centered plan of care which emphasis the need for information giving and respect for the patient.

No significant association between patients' satisfaction and sociodemographic data of the patients, this could be due to the homogenous nature of the sample consisting of educated patients who could have access to the use of technology.

One of the most interesting findings in this study was that patients complaining of mood symptoms who sought RC service were more dissatisfied than those without mood symptoms ($p < 0.05$). Again, those suffering from eating disorders symptoms were more dissatisfied than those who were not suffering eating disorders ($p < 0.05$). Other conditions did not significantly influence the rate of service satisfaction. This could be attributed to the negative affective bias phenomenon whereby patients with mood disorders had greater salience to negative or unfavorable outcomes [20]. Similarly, patients with eating disorders suffered from dysfunctional cognitions; hence, seeking RC would be unsatisfactory and will not offer any medical help from their point of view [21].

Significant association was found between patient's satisfaction and the length of the RC session, comfortability, confidentiality, and being educated about the nature of the disease, benefits and side effects of the treatment plan, whereas no significant association was found between satisfaction of the patient with the overall service and type of treatment given. These findings emphasize that good doctor-patient relationship, communication, and therapeutic alliance were the most significant predictors of patient's satisfaction regardless of the type of treatment prescribed.

Regarding willingness to use RC in the future, 50.5% of participants reported that they would use the service again, 38% of participants may use the RC service again, while only 11.5% will not use this service again.

Those results were consistent with a previous study assessing patients' perspective towards RC where nearly all the patients agreed that they would use telepsychiatry

again [15]. Moreover, in another study assessing patients' satisfaction with RC, the majority suggested remote assessments should be maintained, due to comfortability, the opportunity of express themselves more freely, saving transportation time and costs, and/or request less time off work. However, a minority expressed dissatisfaction because of feeling disengaged, feeling frustrated with technical difficulties and having a lack of resources to address them (not owning a laptop or smartphone), difficulty finding a quiet setting (children interrupting, shared housing), getting tests done or filling out forms [19].

Strengths of this study

This study is considered one of the earliest studies investigating the telehealth service at Ain Shams University, Egypt. It also highlights Okasha's Institute of Psychiatry efforts during the COVID-19 pandemic and how assessing patient's satisfaction was an important need while implementing this service.

Limitations of this study

Telepsychiatry service needs some technological knowledge so patients who lack access to this technology were not able to use it, also it was difficult to compare patient's satisfaction of the RC with face-to-face consultations as the study was done during the covid pandemic restrictions for fear of the virus transmission.

Conclusion

Our study highlights high degree of satisfaction among patients receiving telepsychiatry consultations provided by Okasha Institute of Psychiatry, Ain Shams University and it can substitute in patients visit when confinement measures are being enforced.

Abbreviations

RC	Remote consultation
SSPS	Statistical Package for the Social Sciences

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Authors' contributions

MS, MG, NM, HF, SK, and NS contributed to the study concept and design, analysis and interpretation of data, and critical revision of the manuscript. MY contributed to the interpretation of results and writing and editing the manuscript. NS recruited and studied the patients and gathered all data. The authors read and approved the final version of the paper.

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Availability of data and materials

The data and material used during the current study are available from the corresponding author on reasonable request.

Declarations**Ethics approval and consent to participate**

Ethical approval for the study was granted by the Ain Shams University, Faculty of Medicine Ethical Committee. The reference number for the committee is FMASU MS 645/2020.

Informed consent for taking part in the study was obtained from each participant.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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