



www.ajbrui.org

Afr. J. Biomed. Res. Vol. 24 (January, 2021); 75- 80

Research Article

The Knowledge and Perception of Medical Students About Psychotherapy as A Treatment Modality for Psychiatric Disorders: Implications for Medical Education and Practice.

Ogunmodede A.J.¹, Buhari O.I.², Ogunmodede J.A.³

¹*Department of Behavioural sciences, University of Ilorin Teaching Hospital, Ilorin, Kwara state, Nigeria*

²*Department of Behavioural sciences, University of Ilorin, Ilorin, Kwara state, Nigeria*

³*Department of Medicine, University of Ilorin Teaching Hospital, Ilorin, Kwara state, Nigeria*

ABSTRACT

Psychotherapy as a treatment modality for mental illness is recognized worldwide, however there are different perceptions and opinions about its practice and usefulness in treating mental illness in medical students. In this study, the knowledge and perception of final year medical students about psychotherapy is assessed. It was a cross sectional survey done amongst final year Medical students of the University of Ilorin during their psychiatry posting, using a semi-structured questionnaire designed by the researchers. A total of one hundred and thirty students participated fully in the study. More than half of students (58.5%) who participated in the study reported that they first heard about psychotherapy during the psychiatry posting, while about 26.1% of them first heard of psychotherapy from the media. Sixty percent of respondents believed everybody needs some form of psychotherapy, while 18.5% believed only the mentally ill needs psychotherapy. Sixty out of the 130 respondents considered psychotherapy to be better than medications in the treatment of mental illness, while 23% of respondents still thought psychotherapy involved some form of brain-washing. However, 95% of them would consider a research in to the field of psychotherapy in the future, while 73% will consider training in psychotherapy if opportunity arises. The knowledge and perception of medical students about psychotherapy is important in order to gauge the quality of medical education concerning this treatment modality as well as help to suggest possible areas of additional focus for medical tutors.

Keywords: *Psychotherapy, Knowledge of medical students, Perception, medical education*

*Author for correspondence: Email: busolajane@yahoo.com; Tel: +2348035307683

Received: March, 2019; Accepted: December, 2020

Abstracted by:

Bioline International, African Journals online (AJOL), Index Copernicus, African Index Medicus (WHO), Excerpta medica (EMBASE), CAB Abstracts, SCOPUS, Global Health Abstracts, Asian Science Index, Index Veterinarius

INTRODUCTION

It has been documented that one out of every four persons worldwide will suffer from a psychiatric illness in their lifetime (WHO, 2001). Psychiatric illnesses rank among the leading causes of morbidity worldwide, affecting people of both sexes, of all ages and nationalities (WHO, 2008). Treatment options for the psychiatrically ill include pharmacotherapy which includes the use of medications, social treatment measures such as environmental modification, psychotherapy which is regarded as the ‘Talking cure’ as well as physical therapies such as electroconvulsive therapy (Lake & Turner, 2017). Despite the fact that all these treatment options exist, the most used and perhaps the most

recognized among doctors as well as even the patients is the drug treatment for the mentally ill (Angemeyer *et al*, 1999). Most times, psychotherapy is used in combination with drug treatment to alleviate patients’ symptoms and aid recovery. Psychotherapy has been defined as a treatment modality for psychiatric disorders in which the psychiatrist and patients work together to relieve psychopathology and functional impairments through a focus on therapeutic relationship, patients’ attitudes, thoughts and behavior as well as social context and development (Seligman *et al*.2006). Its use stems from the fact that psychological illnesses do not have just the biological cause, but psychological and social factors play a role in their etiology. There are about 250 various types of psychotherapy and they include supportive psychotherapy, cognitive and behavioral psychotherapy, intensive

psychodynamic psychotherapy and psychoanalysis amongst others (Angus *et al*, 2015). The advantages of psychotherapy against other modes of treatment for the mentally ill includes the fact that it doesn't include the actual use of medications which may have physical side effects and it addresses internal conflicts and psychic distress (Brent & Kolko, 1998). The Abstract Consumer Reports in 1995 stated that patients benefited very substantially from psychotherapy and that psychotherapy alone did not differ in effectiveness from medications plus psychotherapy (Neville *et al*, 2000)

Medical students are students admitted into the university to study medicine. They are essentially the doctors of tomorrow. In Nigeria, Medicine and surgery as a course, spans six years, three of which are spent for clinical experience (Kazdin, 1986). During the clinical years, (which is from the fourth year to the sixth year) medical students are usually required to undergo tutorship in the psychiatry department where they come in contact with the art of psychotherapy. Positive attitudes of final year medical students towards a particular treatment modality may predict greater acceptability and usage in patients when they eventually qualify as doctors, whereas poor knowledge and reservations about its use, efficacy, clinical utility and cost-effectiveness by doctors may hinder usage of its services (Hill *et al*, 2012). It should also be borne in mind that medical students themselves form an integral part of the society they live in and though they have acquired some basic medical knowledge, their attitudes may be influenced by the prevalent general attitude of the environment they reside in (Voracek *et al*, 2001).

Medical students have been shown in previous studies to have varying degrees of knowledge and perceptions about psychotherapy as a treatment. While some view it positively some students have been reported to have negative perception about the practice of psychotherapy. In a Ten-year comparison of medical students' attitudes towards Psychiatry at the McGill Teaching Hospital, it was reported that about thirty-two percent of students found psychotherapy to be the most useful treatment modality for mentally ill patients (Constantinou *et al*, 2017).

Many studies all over the world have explored the perception of medical students on other treatment modalities in psychiatry such as Electroconvulsive therapy, with students mostly reporting negative perceptions to ECT (irrespective of whether it was straight or modified ECT) (James *et al*, 2009). However, very few studies worldwide and indeed in Nigeria has explored the knowledge and perception of medical students about psychotherapy as a treatment modality for mental disorders. Understanding what these students know and how they perceive psychotherapy will go a long way in modifying how they are tutored about psychotherapy during the course of medical education as well as dictate the need for increased exposure to psychotherapy as a talking cure for the mentally ill.

This present study therefore aimed to assess the knowledge and perception of final year medical students about psychotherapy with the objective of assessing the perception and level of knowledge of students about psychotherapy after their rotation in the Department of Behavioral Sciences of the University of Ilorin Teaching Hospital, Ilorin, North central Nigeria.

MATERIALS AND METHODS

This study is a cross sectional survey amongst final year Medical students undergoing the statutory eight-week rotation in Psychiatry at the Behavioral sciences Department of the University of Ilorin Teaching hospital. During their rotation, they are exposed to lectures about psychotherapy as well as several hours of sit in- sessions with the psychologists during group and individual psychotherapy with patients.

Study Location: The University of Ilorin is one of the foremost universities in Nigeria and offers Medicine as one of the courses of discipline (University of Ilorin, 2020). The University of Ilorin Teaching Hospital is the sister institution where all clinical postings and training of medical students take place. It is a tertiary health institution located in Ilorin, the capital city of Kwara State, one of the states in the North-Central geopolitical zone of Nigeria (Kwara state Government, 2020).

Inclusion And Exclusion: All consenting final year Medical students who are undergoing the statutory eight weeks posting in psychiatry were included in the study. Students who are too ill to participate in the study were excluded from the study.

Ethical Approval: The study was conducted in compliance with the Ethical principles for medical research involving human subjects of Helsinki declaration (World Medical Association, 2014). Any identifying information was not obtained from the participants, and a written informed consent was taken from all participants.

Materials: A Semi-structured questionnaire designed by the author was used to obtain information from the participants. The questionnaire consisted of 36 questions divided into three sections. The first section was to obtain the bio-data of the patient such as age, marital status, and religious affiliation *e.t.c*. The second section contained questions to assess the knowledge of the participant about psychotherapy such as where they first learnt about psychotherapy, what kind of people need psychotherapy, what type of psychotherapy have they witnessed before amongst others. The third section contained questions to assess the perception of the participants about psychotherapy such as if they regarded psychotherapy as a form of brain washing, if they saw patients undergoing psychotherapy as being weak and if they would ever refer a patient for psychotherapy when they become certified doctors . Questions for sections two and three were gleaned from previous similar studies done by other authors. The questionnaire was then pretested among twenty-two hundred level medical students for consistency and to identify ambiguous or poorly understood questions which were then modified appropriately.

Procedure: A Non-probability total sampling method was used to recruit participants for this study. All Final year medical students of the University of Ilorin who were about to complete their eight-week posting in psychiatry who gave their informed consent for the study were required to complete the semi-structured questionnaires. Coded questionnaires

were distributed at the end of their lectures by the researcher and respondents were asked to fill these questionnaires while being seated with sufficient space between each respondent to ensure privacy of each respondent in order to ensure full disclosure without undue influence from other respondents. No self-identifying information was included in the questionnaire.

RESULTS

SOCIODEMOGRAPHIC VARIABLES

The class of medical students consisted of 136 students, all consented to participate in the study. However, 6 questionnaires were incompletely filled, leaving 130 questionnaires for analysis.

The results from this study showed that 72.3% of respondents were between ages 21 to 25, while 26.2% were between 26 to 30 years and only 1.5% were above 30 years of age. About 52.3% were males, while 47.7% were females. Also, about 89.2% of respondents were Yoruba by ethnicity. All of the respondents were final year medical students. (See Table 1)

Table 1:

Sociodemographic Characteristics of Respondents Knowledge of Psychotherapy

	VARIABLE	FREQUENCY (%)
Age	21-25	94 (72.3)
	26-30	34 (26.2)
	31-35	2 (1.5)
Gender	Male	68 (52.3)
	Female	62 (47.7)
Academic Level	600L	130 (100.0)
	Yoruba	116 (89.2)
Ethnicity	Igbo	2 (1.5)
	Others	12 (9.3)
	Christianity	74 (56.9)
Religion	Islamic	56 (43.1)

More than half of students (58.5%) who participated in the study reported that they first heard about psychotherapy during the psychiatry posting, while about 26.1% of them first heard of psychotherapy from the media. About 75% of the respondents had witnessed some of psychotherapy before, 34 out of 130 of them had witnessed a group therapy, while about 31 had witnessed a cognitive behavioral therapy, while only 2 had seen a psychoanalysis done. Sixty percent of respondents believed everybody needs some form of psychotherapy, while 18.5% believed only the mentally ill needs psychotherapy. Almost 80% of respondents believed that a psychiatrist, psychotherapist or clinical psychologist can perform psychotherapy and over 80% believed that psychotherapy led to the relief of psychological symptoms, while 92% of respondents were of the opinion that many mentally ill patients had a poor understanding of what psychotherapy is all about. (See Table 2).

Table 2:

Knowledge of Psychotherapy

VARIABLE	Frequency (%)	
Where did you first learn about psychotherapy	The media	34 (26.1)
	The public fora and discussions	4 (3.1)
	Medical lectures and texts	14 (10.8)
	Scientific Journals	2 (1.5)
	Psychiatry posting	76 (58.5)
Seen any form of Psychotherapy before	Yes	130(100)
	No	0(0)
Type witnessed before	Cognitive Behavioral Therapy	31 (23.8)
	Family therapy	5 (3.8)
	Group therapy	34 (26.2)
	Psychoanalysis	2 (1.5)
	Insight oriented	21 (16.2)
	Motivational interview	2 (1.5)
	Social skill training	4 (3.2)
Other types known	Existential therapy	4 (3.1)
	Only the mentally ill	24 (18.5)
	Sometimes those without mental illness	28 (21.5)
People who need Psychotherapy	Everybody	78 (60.0)
	Depression	14 (10.8)
	Phobia	6 (4.6)
	schizophrenia	48 (36.9)
	Anxiety Disorder	18 (13.8)
	Substance use	7 (5.4)
	Post traumatic stress disorder	14 (10.8)
	Obsessive Compulsive Disorder	4 (3.1)
	Obesity	2 (1.5)
	Somatoform Disorder	3 (2.3)
Kind of professionals that can perform psychotherapy	Clinical psychologists alone	18 (13.8)
	Psychotherapists alone	8 (6.2)
	Psychiatrists alone	2 (1.5)
	All of the above	102 (78.5)
	Yes	108 (83.1)
Do you think psychotherapy is Effective in the relief of psychopathology	No	2 (1.5)
	Possibly	20 (15.4)
	Is Psychotherapy done individually or in group	
Is Psychotherapy done individually or in group	Individually	118 (90.7)
	Group	4 (3.1)
	Both	8 (6.2)
Heard of psychotherapy techniques developed by Africans	Yes	14 (10.8)
	No	116 (89.2)
Does Psychotherapy assists mentally ill patients to get better	Yes	116 (89.2)
	No	4 (3.1)
	Not sure	10 (7.7)
Is psychotherapy done as singular or Multiple session	Singular sessions	68 (52.3)
	Multiple sessions	62 (47.7)
Would you consider the art of psychotherapy well understood by patients	Yes	10 (7.7)
	No	120 (92.3)

Table 3:
Perception about Psychotherapy

VARIABLE	FREQUENCY (%)	
Prefer psychotherapy to Medications for mental disorders	Yes	88 (67.7)
	No	42 (32.3)
Consider psychotherapy the same as counseling	Yes	46 (35.4)
	No	84 (64.6)
Consider Medication better than psychotherapy in treatment	Yes	60 (46.2)
	No	70 (53.8)
Psychotherapy is all about revisiting painful memories in the past	Yes	12 (9.2)
	No	118 (90.8)
Psychotherapy entails some brain washing	Yes	30 (23.1)
	No	100 (76.9)
Patients who go through psychotherapy are weak and cant solve problems	Yes	12(9.2)
	No	118 (90.8)
Psychotherapy is unnecessary once patient can tell friends their problems	Yes	6 (4.6)
	No	124 (95.4)
Psychotherapy is unnecessary once MI Patients belong to a strong Religious group	Yes	2 (1.5)
	No	128 (98.5)
Clerics (Imams and Pastors) can perform structured psychotherapy	Yes	68 (52.3)
	No	62 (47.7)
Is Pastoral counseling part of psychotherapy	Yes	84 (64.6)
	No	46 (35.4)
Would you consider training in psychotherapy if opportunity arise	Yes	96 (73.8)
	No	34 (26.2)
Consider it an expensive treatment modality	Yes	10 (7.7)
	No	102 (78.5)
	Possibly	18 (13.8)
Would you recommend psychotherapy for any patient who may need them in your future practice	Yes	122 (93.8)
	No	8 (6.2)
Consider Psychotherapy suited for The African Culture	Yes	114 (87.7)
	No	16 (12.3)
Consider research in to the field of psychotherapy in the future	Yes	124 (95.4)
	No	6 (4.6)
If Yes, who are they	Currently unconscious patients	2 (1.5)
	Normal healthy individuals	2 (1.5)
	Patients with only medical condition	2 (1.5)
	Cultural belief	20 (15.4)
	Lack of knowledge of the public about psychotherapy	47 (36.2)
What would you consider a major drawback for practice	Illiteracy	6 (4.6)
	Religious belief	4 (3.1)
	Lack of skilled professionals	15 (11.5)
	Language barrier	1 (0.8)
	Non compliance	10 (7.7)
	Societal stigma	5 (3.8)
	Negative attitude of the psychiatrists	2 (1.5)
Psychotherapy will remain relevant in the future	Yes	130 (100.0)

Perception about Psychotherapy: The results of this study showed the following about the perception of the respondents about psychotherapy. About 88 out of 130 medical students interviewed would prefer psychotherapy to medications if they were to choose one for their patients and 60 out of the 130 respondents actually considered psychotherapy to be better than medications in the treatment of mental illness. Majority of respondents considered that psychotherapy was entirely different from just counseling, while 23% of respondents still thought psychotherapy involved some form of brain-washing . More than half of the medical students interviewed believed religious clerics can also do structured

psychotherapy and 95% of them would consider a research in to the field of psychotherapy in the future, while 73% will consider training in psychotherapy if opportunity arises.(See Table 3).

DISCUSSION

The result of this study revealed that the mean age of final year medical students who participated in the study was similar to what was reported in a study of final year medical students by Bakare. (Bakare, 2015) done to assess demographic characteristics of over 700 final year medical students from 10

universities in Nigeria. This may be reflective of the recent trend of a relatively young age of secondary school completion and university enrolment in the country.

In this study, more than half of the respondents reported that they first learnt about psychotherapy during their psychiatry posting. This finding is surprising and may be linked to the fact that psychotherapy as a form of talking cure for emotional problems may not have been mentioned or emphasized by other medical teachers at the students' earlier years of medical education. This could be a window to the level of knowledge, perception and attitude of non-psychiatrist doctors to the medical use of psychotherapy. For instance, in a qualitative survey of General practitioner's opinion about psychotherapy in France (Binitie, 1984) it was reported that French GPs rarely mentioned psychotherapy spontaneously and had very non-specific discussions about the subject of psychotherapy, this concept has however not been examined by most studies in the Nigerian setting. This report also showed that many others of the students first heard about psychotherapy from the media, despite being medical students who were exposed to the medical environment. This finding further emphasizes the role of the media in health education and promotion and the need for the media to be involved in the passage of the right kind of medically related information to the public. Three (3%) of the respondents still believed strongly that psychotherapy did not help individuals with mental illness to get better and more than 10% were even unsure if psychotherapy works at all, despite having been exposed to several live sessions and lectures on psychotherapy and its importance in the treatment of the mentally ill. This finding is at variance with findings from a study by (Constantinou *et al*, 2017) in London which reported that all the one hundred and twenty-four year four medical students who participated in their study agreed that psychotherapy was very useful for patients with mental illness and helped them get better. This is an important finding as it underscores the general belief about psychotherapy in the Nigerian society as the medical student is himself is a reflection of the strongly held beliefs of the society in which he resides, despite being a student of medicine. This finding may also suggest an inadequate exposure of medical students to mentally ill patients who have undergone structured psychotherapy and recovered, thereby casting a doubt as to the clinical outcomes of patients who undergo psychotherapy. Also in this study, many of the respondents had never heard of psychotherapy techniques developed by Africans, despite that such exist (Dumesnil, 2018) and they school and live and are likely to practice in the African setting. This finding again buttresses the need for a wider scope of study of psychotherapy in Nigerian medical schools, with appropriate emphasis on techniques developed for Africans, which take specific cognizance of the African culture and context and may be better understood by Africans. This is additionally important as this study also found that more than ninety percent (90%) of medical student respondents felt that most mentally ill patients in this setting had a poor understanding of what psychotherapy is all about and its usefulness even though some of them had undergone one form of psychotherapy or the other in the course of their treatment.

More than 67% of respondents said they would prefer psychotherapy as a treatment modality for patients with mental illness than drugs. This view is in keeping with that expressed by respondents in similar studies done in other parts of the world (Zafar *et al*, 2017) This may be linked to the fact that psychotherapy may be viewed as less harmful and easier to use than psychotropic medications (Awanitefe, 2017) which are associated with physical side-effects and as such would prefer that patients with mental illness have psychotherapy rather than these medications, if possible. This demonstrates a somewhat positive perception and attitude towards psychotherapy by these students. Interestingly, it was found in this study that strong negative perceptions and beliefs were still being held by some of the respondents as regards psychotherapy, despite being taught the rationale for psychotherapy and having witnessed psychotherapy sessions as final year medical students. For instance, about 30% of them opined that psychotherapy involved some level of brain-washing, 9.2% believed that those who agree to have psychotherapy are emotionally weak and can't solve their problems by themselves, while 9.2% also believed that psychotherapy was all about relieving very painful memories and can therefore re-traumatize the patients. This negative perception, though not held by a majority of respondents, strongly underscores the need for a more intense and positive approach tutoring of medical students on psychotherapy as well as a longer and broader approach to the subject of psychotherapy in order to erase these negative perceptions about this treatment modality. Furthermore, about 5% believed that psychotherapy is unnecessary once an individual can talk to friends; about 2% expressed belief that once patients belong to a strong religious group, they would not need psychotherapy when suffering from a mental illness. This again goes to show that some of the respondents still equated structured psychotherapy to a form of counseling that can be performed by close friends, relatives or religious leaders for the mentally ill who need them, and not necessarily a form of psychological intervention to be delivered by a trained professional. This perception is important as it may set a template for a negative attitude towards seeking training opportunities related to psychotherapy in the future.

This study revealed that the highest number of respondents viewed cultural beliefs and lack of proper knowledge about psychotherapy as two serious barriers to the practice of psychotherapy in Nigeria. Although, there are few studies in this environment which has explored this theme, it can be postulated that a lack of proper knowledge of psychotherapy by the general public may stem from a lack of adequate exposure to the practice of psychotherapy, the lack of an exact word for psychotherapy in all the 250 Nigerian languages (Awanitefe, 2017), a poor media representation of the practice of psychotherapy as well as the African belief that personal matters should hardly be discussed with strangers. Therefore a proper education and enlightenment of the public on this psychological intervention and its uses especially in individuals with mental illness is very much needed. The important findings from this study underscore the need for a more practical, more open and more intense medical education as regards psychotherapy in medical students in this environment. Additionally, to our knowledge, this is the first

study in Nigeria exploring the knowledge and perception of medical students about psychotherapy and its implications for the future prospects of medical education as well as psychotherapy practice and research in Nigeria.

In conclusion, psychotherapy also known as the “talking cure” is a globally recognized psychological intervention for the mentally ill. Medical students are future doctors whose knowledge and perception of this treatment modality may affect its use, practice and potential for research in the future. Therefore, it is important to explore the knowledge and perceptual patterns of these medical students. This is with a view to exploring how negative perceptions can be modified through the use of a broader and more practical approach to teaching, training and the practice of psychotherapy.

Acknowledgements

The Authors acknowledge the 600 level medical students who participated in this study and Mr Emmanuel Medubi who assisted with the data collection during this study.

REFERENCES

Angermeyer, M. C., Matschinger, H., & Riedel-Heller, S. G. (1999): Whom to ask for help in case of a mental disorder? Preferences of the lay public. *Social Psychiatry and Psychiatric Epidemiology*, 34(4), 202-210.

Angus, L., Watson, J. C., Elliott, R., Schneider, K., & Timulak, L. (2015): Humanistic psychotherapy research 1990–2015: From methodological innovation to evidence-supported treatment outcomes and beyond. *Psychotherapy Research*, 25(3), 330-347.

Awaritefe, A. (2017): Psychotherapy in Nigeria, *International Journal for Psychotherapy in Africa* 2(1):7-19

Bakare, M. O. (2015). Demography and medical education among Nigerian final year medical students-Implication for regional and human resource development. *Journal of Health Education Research & Development*, 1-5.

Binitie, A. [1984]: Psychotherapy through environmental manipulation. *Nigerian Journal of Psychiatry*, 1, 36-44

Brent, D. A., & Kolko, D. J. (1998). Psychotherapy: Definitions, mechanisms of action, and relationship to etiological models. *Journal of Abnormal Child Psychology*, 26(1), 17-25.

Constantinou, C. S., Georgiou, M., & Perdikogianni, M. (2017): Medical Students' Attitudes and Beliefs towards Psychotherapy: A Mixed Research Methods Study. *Behavioral Sciences*, 7(3), 55.

Dumesnil, H., Apostolidis, T., & Verger, P. (2018): Opinions of general practitioners about psychotherapy and

their relationships with mental health professionals in the management of major depression: A qualitative survey. *PLoS one*, 13(1).

General Assembly of the World Medical Association. (2014): World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. *The Journal of the American College of Dentists*, 81(3), 14.

Hill, C. E., Satterwhite, D. B., Larrimore, M. L., Mann, A. R., Johnson, V. C., Simon, R. E., ... & Knox, S. (2012): Attitudes about psychotherapy: A qualitative study of introductory psychology students who have never been in psychotherapy and the influence of attachment style. *Counselling and Psychotherapy Research*, 12(1), 13-24.

James, B. O., Omoaregba, J. O., & Olotu, O. S. (2009): Nigerian medical students attitudes to unmodified electroconvulsive therapy. *The journal of ECT*, 25(3), 186-18915.

Kazdin, A. E. (1986): Comparative outcome studies of psychotherapy: Methodological issues and strategies. *Journal of Consulting and Clinical Psychology*, 54(1), 95–105

Kwara state Government. About us. <https://kwarastate.gov.ng/> [Accessed May 1, 2020].

Lake, J., & Turner, M. S. (2017): Urgent Need for Improved Mental Health Care and a More Collaborative Model of Care. *The Permanente Journal*, 21, 17–024.

Neville, H. A., Lilly, R. L., Duran, G., Lee, R. M., & Browne, L. (2000): Construction and initial validation of the color-blind racial attitudes scale (CoBRAS). *Journal of Counseling Psychology*, 47(1), 59.

Seligman, M. E., Rashid, T., & Parks, A. C. (2006): Positive psychotherapy. *American psychologist*, 61(8), 774.

University of Ilorin Teaching Hospital, Ilorin. About us. <https://www.uithilorin.org.ng/index> [Accessed May 1, 2020].

Voracek, M., Jandl-Jager, E., & Springer-Kremser, M. (2001): Medical students' attitudes towards psychotherapy: an intervention-based pre-post comparison. *Wiener Klinische Wochenschrift*, 113(11-12), 416-423.

World Health Organization. (2001): The World Health Report 2001: Mental health: new understanding, new hope. World Health Organization.

World Health Organization. (2008): *The Global Burden of Disease:2004 Update*. World Health Organization

Zafar, A. M., Jawaid, A., Ashraf, H., Fatima, A., Anjum, R., & Qureshi, S. U. (2009): Psychotherapy as a treatment modality for psychiatric disorders: Perceptions of general public of Karachi, Pakistan. *BMC Psychiatry*, 9(1), 37