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DOES TREATMENT ADHERENCE EFFECT HRQOL IN PATIENTS WITH SEVERE MENTAL ILLNESS IN QUETTA, PAKISTAN

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ABSTRACT

Objective:

This study aims to evaluate the level of medication Adherence and Health Related Quality of life (HRQOL) of patients with severe mental illness attending tertiary care public hospitals of Quetta, Pakistan.

Method:

This study was designed as a questionnaire-based cross sectional analysis. A cross sectional study was conducted among the patients with severe mental illness attending public tertiary care hospitals i-e Bolan Medical Complex Hospital (BMCH) and Sandman Provincial Hospitals (SPH) of Quetta, Pakistan. Urdu developed version of Moriskey Medication Adherence Scale (MMAS-8) was used to assess Adherence and European Quality of Life (EQ-5D) was used for assessment of HRQOL and Descriptive statistics were used to describe demographic and disease characteristics of the patients. Percentage and Frequencies were used to categorize the categorical variables, while means and standard deviations were calculated for the continuous variables. Inferential statistics was done by using Pearson

correlation to correlate among adherence and HRQOL with significance level (0.05). All the analyses were performed using SPSS 20.0.

Result:

Out of all registered patients a total of 566 patients were agreed to participate and included in the study. The study population was dominated 330 (58.3%) by females. Majority of the respondent (n=151, 26.7%) belong to the age group 25-34. Having marital status as married (n=362, 63.9%) and house wife (n=321, 56.7%). A large population having no-education with 449 (79.3%) and have no-income 387 (68.4%). Majority (n=444, 78.4%) of the respondents were diagnosed with depression as major severe mental disorder. With disease duration of more than 2 years 375 (66.3%). Majority (n=324, 57.2%) of the patients were moderately adhere to the medication, while only 120 (21.2%) were of poor adherence. EQ-5D means score is 0.26±0.3 and VAS mean is 50.36±21.61. Pearson correlation was performed among Adherence and VAS which was found to be significant ($p<0.01$) with moderate positive correlation among Adherence and EQ5D.

Conclusion:

The study result concluded that the health-related quality of life in patients with severe mental illness was poor however they are somewhat adhered to their medication. Study also concluded that there is positive correlation among Adherence and EQ5D so it is concluded that improving adherence will definitely improve Health related Quality of Life.

INTRODUCTION

Quality of life (QOL) refers to the multidimensional concept and also the assessment of specific components of QOL i-e physical, psychological and social wellbeing. Features of QOL are: "Concepts such as physical, psychological and social dimensions is a subjective phenomenon of quality of life dimensions [1].

The valuation of Health-Related Quality of Life (HRQOL) is a vital component of healthcare assessment. Number of generic and specific HRQOL tools established so far. Generic HRQOL tools are proposed to be applicable across widespread. Definite HRQOL methods is intended to stay applicable to specific interventions or in certain condition, may be any disease condition [2]. HRQOL measures used in psychiatry differ somewhat from traditional measures used in physical illnesses. In its broadest sense, HRQOL is a multi-dimensional construct defined as the subjective assessment of the impact of disease and treatment on domains of physical, psychological, and social functioning. As with approaches used in evaluating HRQOL in physical illness, models of HRQOL in psychiatry may

include physical, psychological, and social functioning. However, they also often add occupational function, living situation, degree of independence, life satisfaction, treatment adherence, and treatment tolerability [3].

In chronic diseases adherence rates among patients are commonly low as compared to those who are affected by acute diseases. It made the condition worsen in prognosis of the disorders and leading to the li long treatment [4].In people with psychiatric disorders, medication adherence reported to be in range of 24% to 90% treated with antipsychotic medicine besides those who are treated with antidepressants are 40% - 90% [5].

In developed countries, previous studies recognized the reasons for non-adherence to antipsychotic medicines having incomplete vision, low therapeutic association, comorbid substance abuse, adverse effects and poor social functioning [6, 7].

Adherence of medication is well-defined "the degree in which patient is agreed to the recommendations provided by health care professional and patient corresponds to it" [8]. WHO defines as it "a person's conduct, taking medicine, ensuing a regime, and/or performing routine alterations, agrees with established recommendations as of provided by health care expert". About 50 percent of patients naturally taking their medications as prescribed, explained by WHO [9]. Dr. Morisky plus his associates put out the tool that was first validated in out-patient setting in 1986 with the use of antihypertensive medicines which was called Morisky Medication Adherence Scale (MMAS) [10] Morisky with dichotomous answer categories through yes or no has four items scale [10, 11].

This study aims to evaluate the level of medication Adherence and Health Related Quality of life (HRQOL) of patients with severe mental illness attending tertiary care public hospitals of Quetta, Pakistan.

METHODOLOGY:

Study Design, duration and settings

Cross-Sectional study was carried in two tertiary care hospitals of Quetta, Pakistan. Bolan Medical Complex Hospital (BMCH) and Sandeman Provincial Hospital (SPH).The duration of the study from October 2015 to December 2015.

Study tool:

Two tools used for this study

1. MMAS-8 for medication adherence
2. EQ-5D 3L for HRQOL

Morisky Medication Adherence Scale of eight-item a self-report study scale that was also used [12] MMAS-8: Dichotomous Scale.The Euro-Qol (EQ-5D-3L) health questionnaire was used meant for HRQoL. The EQ-5D-3L consists of two parts EQ-5D-3L descriptive or expressive system (with five dominions i-e motion, self-care,

usual activities, pain/comfort and anxiety/ depression) [13-15]. Since the study had been carried in the population of psychiatric patients, who were Urdu language speaking, convert versions of both tools in Urdu was used for study [16, 17]

Procedure for the Sampling and Techniques:

Study sample Size:

All registered psychiatric patients above age of 15 years with severe mental illness visited psychiatric department in the months from October 2015 to December 2015 through out-door departments in the public tertiary care hospitals of Quetta, Pakistan i-e SPH and BMCH.

Study Patients:

Assessment of the psychiatry patients with severe mental illness attended public tertiary care hospitals in Quetta i-e SPH and BMCH, out-patient department of psychiatry.

Inclusion and exclusion criteria:

All the adult registered psychiatric patients with severe mental illnesses above age of fifteen (15) years through department of out-door in public tertiary care hospitals of Quetta, Pakistan i-e SPH and BMCH.All the registered participants agreed and had been able to filling the questionnaire included in the research studies.

All the admitted patients having severe mental disorders were omitted during the studies for the period of three months' data collection.

Ethical Approval:

For research study approvals from medical superintendent of the respective hospitals in Quetta, Pakistan. Written consent form from the patients about informing the initiatives of research and their confidentiality relating to the responses. Also, the withdrawal from the study having no penalty or any special effects on behavior and treatment.

Study Procedure:

The Questionnaires was given to the patients and these questionnaires were explained to them voluntarily, so that patients could fill it easily. The procedure was carried randomly and in one time one patient was interviewed for filling the questionnaires.

Statistical Analysis:

Statistical description was used to characterize the data.Categorical data was presented by frequency and percentage.For making relationship between different study variables differential inferential statistical tool was used.All these statistical measures were done by using Statistical Package for the Social Sciences (SPSS) Software.

RESULTS:

Demographic Characteristics

As shown in the Table No. 1 the description of demographic characteristics

can be explained as, females are the dominant with majority having 330 (58.3%). The respondent's age ranges between 25-34 were 151 (26.7%). Majority of the respondents having marital status were married with 362 (63.9%) and the respondents with majority were house wife with occupation 321 (56.7%) and having no education 449 (79.3%). The majority of the respondent with Pakistani citizenship were 417 (73.7%) and they having no-income with 387 (68.4%).

Diseases Characteristic Description

As shown in table no.2 description of the diseases characteristics with that majority of respondents having depression with 444 (78.4%). Followed by maximum respondents 32(5.7%) having anxiety as major disease.

Correlation between Adherence and HRQOL

Correlations were interpreted using the following criteria [18]. r= 0.10 to 0.29 or r=–0.10 to –0.29 small correlation, r=0.30 to 0.49 or r=–0.30 to –0.49 medium correlation and r=0.50 to 1.0 or r=–0.50 to –1.0 large correlation

The relationship between Adherence and HRQOL was investigated using Pearson product-moment correlation coefficient. There was a small, positive correlation between Adherence and HRQOL[r=0.26, p=0.001] was observed.

Morisky Medication Adherence Score Description

As shown in table no. 4, MMAS score description of each individual question, with majority of the respondent's replies are as follows:

Respondents in majority sometimes forget to take their pill 382 (67.5%). Mostly of the people sometimes miss taking their medication for reasons other than forgetting, thinking over the past two weeks, were there any days when you did not take your medicines 299 (52.8%). Majority of the respondents that you ever cut back or stopped taking your medicines without telling your doctor because you felt worse you took it 396 (70.0%). Majority of respondents when leave to travel or leave home, do they sometimes forget to bring along their medicine 499 (88.2%). Did you take all your medicine yesterday majority of the respondents were 296 (52.3%). When you feel like your symptoms are under control, do you sometimes stop taking your medicines, majority of the respondents 366 (64.7%). Taking medicines every day is a real in convenience for some people. Do you ever feel hassled about sticking to your treatment plan? Majority of the respondents having reply 485 (85.7%). How often do you have difficulty remembering to take all your medicine? Majority of the respondents having never/ rarely 292 (51.6%).

Adherence Score:

Adherence score demographic description as shown in table no.5 having poor adherence, moderate adherence and good adherence. In which majority of the respondents were having moderate adherence 324 (57.2%).

EQ 5D Score Description

As shown in table no.6 EQ-5D score description, Majority of the respondents in having no problem in walking with 371 (65.5%), respondents with having majority of no problem in self-care were 353 (62.4%). Respondents with majority having no problem in performing usual activities were 280 (49.5%), having some pain and dis comfort majority of the respondents were 368 (65.0%). Those respondents having majority extremely anxious or depress were 431 (76.1%).

Table No.01: Demographic Characteristics

Demographic characteristics	Frequency	Percentage (%)
Age		
15-24	96	17.0
25-34	151	26.7
35-44	140	24.7
45-54	94	16.6
55-64	64	11.3
65 And Above	21	3.7
Gender		
Male	236	41.7
Female	330	58.3
Citizenship		
Pakistani	417	73.7
Refugee	149	26.3
Marital Status		
Married	362	63.9
Unmarried	112	19.8
Divorced	24	4.2
Widow/Widower	67	11.8
Not necessary to disclose	01	0.2
Education		
No Education	449	79.3
Religious	16	2.8
Primary	39	6.9
Matric	31	5.5
Intermediate	10	1.8
Graduate	15	2.7
Masters	06	1.1
Occupation		
Housewife	321	56.7
Government Employee	13	2.3
Private Employee	25	4.4
Own Business	123	21.7
Un-Employee	47	8.3
Student	18	3.2
Not Necessary To Disclose	19	3.4
Monthly Income		
No Income	387	68.4
Less Than 5000	1	0.2
5001-10000	8	1.4
10001-20000	11	1.9
More Than 20000	19	3.4
Not Necessary To Disclose	140	24.7

Table No.02: Diseases Characteristic Description

Disease		
Schizophrenia	07	1.2
Bi-Polar Disorder	01	0.2
Depression	444	78.4
Obsessive Compulsive Disorder	12	2.1
Generalized Anxiety Disorder	20	3.5
Anxiety	32	5.7
Epilepsy	11	1.9
Drug Abuse	11	1.9
Conduct Disorder (CD)	06	1.1
Cluster Headache	02	0.4
Others	20	3.5

Table No. 03: Correlation between Adherence and HRQOL

Variable	Correlation coefficient	P Value
Adherence-HRQOL	0.263	0.001

Reference: Cohen, J. (1992). A power primer. *Psychological bulletin, 112*(1), 155.

Table No. 4: Morisky Medication Adherence Score Description

MMAS-Questionnaire	YES	NO
01-Do you sometimes forget to take your pills?	382 (67.5)	184 (32.5)
02-People sometimes miss taking their medications for reasons other than forgetting. Thinking over the past two weeks, were there any days when you did not take your medicine?	299 (52.8)	267 (47.2)
03-Have you ever cut back or stopped taking your medicine without telling your doctor because you felt worse when you took it?	170 (30.0)	396 (70.0)
04-When you travel or leave home, do you sometimes forget to bring along your medicine?	67 (11.8)	499 (88.2)
05-Did you take all your medicine yesterday?	296 (52.3)	270 (47.7)
06-When you feel like your symptoms are under control, do you sometimes stop taking your medicine?	200 (35.3)	366 (64.7)
07-Taking medicine every day is a real inconvenience for some people. Do you ever feel hassled about sticking to your treatment plan?	81 (14.3)	485 (85.7)
08-How often do you have difficulty remembering to take all your medicine?	N (%)	
Never/ rarely	292 (51.6)	
Once in a while	101 (17.8)	
Sometimes	27 (4.8)	
Usually	95 (16.8)	
All the time	51(9.0)	

Table No. 5: Adherence Score

Adherence Group	Frequency	Percentage
Poor Adherence	120	21.2
Moderate Adherence	324	57.2
Good Adherence	122	21.6

Table No.06: EQ 5D Score Description

EQ-5D Domain	Frequency	Percentage
First Domain(Mobility)		
No Problem in walking about	371	65.5
Some Problem in walking about	181	32.0
Confined to bed	14	2.5
Second Domain(Self-Care)		
No Problem in self-care	353	62.4
Some Problem in self-care (washing and dressing myself)	197	34.8
Unable to self-care (Wash and dress myself)	16	2.8
Third Domain (Usual Work)		
No Problem in performing usual activities	280	49.5
Some Problems in performing usual activities	212	37.5
Unable to perform usual activities	74	13.1
Forth Domain (Pain and Discomfort)		
No pain and discomfort	97	17.1
Some pain and discomfort	368	65.0
Extreme pain and discomfort	101	17.8
Fifth Domain (Anxiety and Depression)		
Not anxious or depress	01	0.2
Moderately anxious or depress	134	23.7
Extremely anxious or depress	431	76.1

DISCUSSION:

In the present study, we used a reliable measure of adherence by using questionnaire in the patients of mental severe illness for the assessment of medication adherence. In the earlier studies in past we have observed on views about adherence and medication in patients with severe mental illness and found that patients having problems about medication need and due to this they were less adhere to the medication [19].

The present study showed that the majority having a moderate adherence and somewhat they were adhere to their medication and thus study explains that prescription prescribed by the consultant (psychiatrist) and taking a proper doses, which majority do not follow necessary treatment recommendations [20]. Various reasons for moderate adherence or poor adherence came into view in this study; important factors contributing to moderate or poor adherence may include various social and cultural myths and beliefs regarding psychiatric medication [4].

In the present study it was found that gender differences in patients having severe mental illnesses dominated by females and reported to be significantly having lower level of mental health as compared to men with the high level of psychological distress [21]. The study results showed that females with the majority are affected by severe mental illnesses. This occurrences was also explained in the studies carried out in the past in which females face gender-based discriminations at every phase of their lives resulting in stress and this stress leads to the psychiatric illness in South Asian cultural background [22].

Furthermore the study explains the socio-demography of Females in the developing countries for example by explaining that Pakistan, being a strict cultural, tribal customs and family strength, women to be live in submission and anxiety [21].

The majority of the respondents were women with the marital status of being married that are mostly affected by the mental illness. Which was also explained by another study conducted in Pakistan in which females with majority having mental illness, in which it also explained that the behavior of their husbands is the main cause and about 56% of them were the victims [23].

In the present study, there were further findings in the results which showed that females having married marital status were mostly housewives and having no education. This is also explained in another study defining the poor socio-economic and no-education in females and its effect on their mental health [24]. This study concluded by explaining that wherever having greater educational level in the

women there will be lesser level of threat in having a mental illnesses [25].

CONCLUSION:

The study result concluded that the health-related quality of life in patients with severe mental illness was poor however they are somewhat adhered to their medication. Study also concluded that there is positive correlation among Adherence and EQ5D so it is concluded that improving adherence will definitely improve Health Related Quality of Life.

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