ORIGINAL ARTICLE

The Quantitative Study on Psychological Distress of patients regarding Hospital Management

FARWA SHAFIQUE[1], MUHAMMAD FAHIM QASIM[2], ASIF KAMAL[3], FATIMA AMIR KHAN[4], NAVEED GANI[5], MUDASSAR NAZAR[6]
[1]Clinical & Educational Psychologist, Department of Psychology, International Islamic University, Islamabad
[2,4]Associate Professor, Department of Psychiatry, Wah Medical College, WahCantt
[3]Associate Professor ,Department of Psychiatry & Behavioral Sciences, Gujju khan Medical College, Swabi KPK
[5] Associate Professor, Psychiatry, Islam Medical & Dental College, Sialkot
[6]Associate Professor, Orthopaedics,ShahidaIslam Medical & Dental College, Lodhran
Correspondence to Dr Naveed Gani. Email: Naveedgani@gmail.com   Mobile:0331-5417807

ABSTRACT

Aim: To examine the effect of elements of emotional distress like diminished quality of life, loss of enjoyment, cognitive changes, embarrassment, psychological trauma and loss of sleep on person's perception towards illness and how these elements influence self-care management of patients and their adherence to treatment.
Methodology: Four number of questionnaires were used to collect data having high reliability and validity from 1000 patients in different areas of Pakistan.
Results: The results revealed a significant relationship of psychological distress, illness perception, self care management and adherence to medication.
Conclusion: Based on these findings, the greater the psychological distress, the more would be the negative effects on illness perception, self-care management and adherence to medication.
Keywords: Psychological distress, illness perception, self-care management and adherence to medication.

INTRODUCTION

Psychological distress may be defined as "the personal emotional instability by which individual experiences low mood and poor self-care that may negatively impact patient's health"[1]. Regarding mental health, the psychological distress has an important bearing on treatment adherence[2].

Illness perception is the way of perceiving the illness and disability of patient, in that, how the patient views his health problem and whether he has insight regarding it. It can be defined as "the way patient perceives health and consequences of illness and the experiences of patients"[3]. A study identified psychological distress and illness perception as major determinants of healthier lifestyles. Improvement in illness perception among clinicians and patients caused low psychological distress[4].

Self-care management refers to the attitude of patients towards the signs and symptoms of the illness. It is the way by which patients can manage their self-care in relation to their physical and mental health. It involves the illness, treatment plan, and the environment-in which the patients have to manage self-care[3].

Furthermore, illness perception has strong association with self-care management. It was measured in the hemodialysis patients with uncontrolled phosphorus levels that pose cardiovascular risks. Here the illness perception played an important role in improving the self-care management for these patients[5]. On the other hand, number of respondents had negative thoughts related to illness due to poor adherence to medication[6]. "Medication adherence' has been defined as "the attitude of the patient towards their medication." It involves the prescriptions of doctors, proper medication timing, and remembering to take the medication[7,8].

This study defined the ways of understanding the increased level of non-adherence to medications, as the medication adherence is the basic factor for severe patients. This study also presented the positive relationship between psychological distress and medication adherence in the way that 182 severe patients were tested for these concepts and the results showed that the higher the psychological distress, the lesser the adherence with medicines[9].

METHODOLOGY

The study was comparative cross-sectional study in nature. After Ethical Committee permission, this study was conducted on the

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sample of 1000 individuals recruited through consecutive non-probability technique from the different areas of Wah Cantt, Rawalpindi and Islamabad. The age range was from 15 to above 50 years. The sample comprised 500 males and 500 females. The boys and girls were randomly selected. Inclusion criteria included individuals who were consenting and competent, with no cognitive deficits, who could easily respond to questions. Exclusion criteria was patients have severe cognitive deficits as in dementia/delirium, having language and communication issues, Intellectually impaired and aged less than 15 years. The number of demographic variables were used in this research such as age, Gender, Education, Socioeconomic Status, Religion, Number of siblings, Household Income, Parental status Residence were added. Self-management assessment scale (Oberg.U., et al, 2020)[10], the brief illness perception questionnaire[11],(Medication adherencerating scale(MARS) (Owie. G. O., et al, in 2018)[12]. Kessler psychological distress scale (K10)[13]. The Proposed analysis was consisted on Correlation, Independent sample t-test, ANOVA and Reliability analysis.

RESULTS

The salient findings of the study have been depicted in the tables as shown below:

Table 1: Reliability of Self-management assessment scale, the brief illness perception questionnaire, Medication adherence rating scale (MARS) and Kessler Psychological distress scale (K10).

Scales	No. of items	Cronbach's reliability coefficient
BIPQ	8	.80
SMAS	10	.92
MARS	10	.80
K10	10	.76

The brief illness perception questionnaire (BIPQ), Self-management assessment scale (SMAS), Medication adherence rating scale (MARS) and General Self-efficacy scale (GSE).The results in table 1 indicates that these four measures have significant Cronbach's reliability coefficient. The reliability for BIPQ is .80, SMAS is .92, MARS is .80 and GSE is .76.

The brief illness perception questionnaire (BIPQ), Self-management assessment scale (SMAS), Medication adherence rating scale (MARS) and General Self-efficacy scale (GSE). Table 2 shows alpha coefficient of BIPQ is .80, SMAS is .92, MARS is .80 and GSE is .76 respectively.

Table 2: Mean, Standard Deviation, Reliability Coefficient of Self-management assessment scale, the brief illness perception questionnaire, Medication adherence rating scale (MARS) and Kessler Psychological distress scale (K10).

Scales	N	M	SD	No.of items	Alphacoefficient
BIPQ	1000	33.7 3	6.36	8	.80
SMAS	1000	56.4 3	10.0 2	10	.92
MARS	1000	11.8 9	4.02	10	.80
K10	1000	37.9 9	5.58	10	.76

Table 3: Frequency table of demographic variables.

Variables	Categories	F	%
Age	15-20	34	3.4
	21-25	8	12.0
	26-30	167	28.7
	31-35	227	51.4
	36-40	319	83.3
	41-45	100	93.3
	46-50	67	6.7
Gender	Male	500	50
	Female	500	50
Education	Nil	43	4.3
	Primary	47	9.0
	Middle	138	22.8
	Matric	226	45.4
	Inter	126	54.0
	Bachelors	247	82.7
	Masters	139	96.6
	MS	27	99.3
	Ph.D.	7	7
Socio economic status	Lower	45	4.5
	Middle	673	67.2
	Upper	282	28.2
Occupation	Nil	228	22.8
	Student	38	26.6
	Employee	666	93.2
	Both	68	100
Religion	Muslim Non-Muslim	950 50	95 5
Residence	Wah Cantt	241	24.1
	Islamabad	521	52.1
	Rawalpindi	238	23.8
Parental status	single	191	19.1
	parent	663	66.3
	Both are alive Both dead	146	14.6
Mood most of the time	Normal	863	86.3
	Sad	55	5.5
	Aggressive Excited	739	7.39
Illness	Nil	42	4.2
	Mental	69	11.1
	Physical	88.9	88.9
Duration of illness	Nil	41	4.1
	Since birth	2	4.3
	Under 2 yrs	848	84.8

	Under 5 yrs	79	7.9
	10 yrs	11	1.1
	20 years/ more	19	1.9
Insight of illness	Yes	826	82.6
	No	42	4.2
	Partial	132	13.2
Status of medical checkup	Nil	34	3.4
	1-2 in week	39	3.9
	1-2 in month	445	44.5
	1-2 in year	482	48.2
Income	Nil	255	25.5
	10-20k	18	1.8
	30k-40k	521	52.1
	40-50k	185	18.5
	More than 50k	21	2.1
Marital status	Married	829	82.9
	Unmarried	135	13.5
	Widow	15	1.5
	Divorced	21	2.1
No. of children	Nil	140	14.0
	Only 1	115	11.5
	2	419	41.9
	>2	231	23.1
	>5	71	7.1
	>10	24	2.4
No. of siblings	Nil	0	0
	Only 1	17	1.7
	2	445	44.5
	>2	237	23.7
	>5	210	21.0
	>10	91	9.1

The brief illness perception questionnaire (BIPQ)

Table 3 shows the frequency of each demographic variable with each category patients selected. This table is representing frequencies and percentages of all the responses of patients according to their personal information.

Table 4: Pearson product moment correlation between Psychological distress on illness perception, selfcare management and adherence to medication.

	BIPQ		MARS		SMAS	
	r	sig	r	sig	r	sig
K10	.450**	.00 0	-.599**	.00 0	-.972**	.00 0

Note= p<0.01**

Table 4 shows the significant correlation between psychological distress on illness perception, self-care management and adherence to medication is (**p<0.01). K10 is positively correlated with these three variables. As psychological distress increase the BIPQ, MARS, SMAS will increase.

Table 5: Psychometric properties of Self-management assessment scale, the brief illness perception questionnaire, Medication adherence rating scale (MARS) and Kessler Psychological distress scale (K10).

Variable s	N	M	SD	α	Potential Range	Actual Range	S kewness	Kurtosis
BIP Q	10 00	33.37	6.36	.80	14-74	60	1.7	2.9
	10 00	11.8	2.42	.92	10-26	16	2.4	8. 9
	10 00	56.4	10.02	.08	10.5	12-60	48	3. 4
	10 00	37.9	5.58	.76	12.4 0	28	.3 4	10.0

Table 6: One way analysis of Variance (ANOVA) for Self management assessment scale, the brief illness perception questionnaire, Medication adherence rating scale (MARS) and Kessler Psychological distress scale (K10).

	Source of variation	SS	df	MS	F	P
BIPQ	Between groups Within groups	750.41 39702.22	28 972	28.79	.680	.890
	Total	40452.63	1000	40.84		
SMAS	Between groups Within groups	1700.91 98606.99	28 972	62.99	621	935
	Total	100307.90	1000	101.44		
MARS	Between groups Within groups	152.86 5743.93	28 5.66	5.66	.958	.527
	Total	5896.79	1000	5.90		
K10	Between groups Within groups	578.36 30573.63	27 28	21.42	21.42	.681
	Total	31151.99	1000	31.45		

Note: df=degree of freedom, SS=Sum of squares, MS=mean square, P=Level of significance.

DISCUSSION

The purpose of the study was to explore the influence of the psychological distress with self-care management, adherence to medication and illness perception. Every individual has different level of stress. Some individuals cope with the situations rather than to indulge in extreme level. But some people experience stress at different levels upon diminishing their daily life activities, alongside mood swings. The current study revealed that the psychological distress had positive correlation with self-care management, illness perception and adherence to medication. With increasing psychological distress, the overall health of the individuals concerned was being more adversely affected Psychological distress caused lack of interest towards particularly maintaining physical and emotional health leading to poor treatment adherence. Studies have revealed a combined effect of emotional distress and self care management for the better quality of life.

Our study also focused on identifying the gender differences in terms of the degree of psychological distress encountered. It was found that females experienced relatively more distress compared to males, and this is in line with another study that showed that the ratio of distress was 11% (for females) vs 8.8% (for males)[15]. The patients with less psychological distress have better self-care management as already emphasized, thus leading to better health related quality of life for the individuals concerned. This may help prevent the patient from counteracting serious physical diseases[16,17,18]. The conclusions of another past study represents that illness perception is very important to control the self-care for the patient of diabetes according to their diet. This study identifies the lower level of good metabolic control in individuals who have lower belief medication adherence[19,20].

CONCLUSION

This study revealed that the psychological distress had significant relationship with self care management, illness perception and adherence medication. Moreover, the females experienced more psychological distress than males.

Limitations and suggestions: No old-age individual were included in sample that may limit the generalizability of the results. A comparative sample of rural boys and girls should also have been considered- to observe the difference in trend

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