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RESEARCH PAPER

Assessing the Quality of Life of Hepatitis-C Patients in Orientation of Their Families in Southern Punjab

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ABSTRACT

The situation of Hepatitis C remains a challenge for public health providers as well as for patients and families also. The situation in developing countries is getting worse. This study was designed to examine the effects of hepatitis C, especially on the patients and their families as well, the impact on both and barriers in treatment that they faced. Furthermore, depression is significantly and positively correlated with stigmatization, economic effect, impact on family and treatment barriers while significantly and negatively correlated with quality of life. Similarly, quality of life is significantly and negatively correlated with stigmatization, economic effect, impact on family, and treatment barriers. Economic effect significantly and positively correlated with impact on family and treatment barriers. The impact on family and treatment barriers is significantly and positively correlated with each other. It was also concluded that anxiety and stress, depression, stigmatization, economic effect, and impact on family significantly negatively predict the quality of life while treatment barriers don't significantly predict the quality of life. This study suggests that there is a need to launch a proper vaccination program to eradicate chronic disease.

Introduction

Hepatitis is a term gotten from Greek and afterward from Latin. The word Hepar implies the irritation of the liver. Firstly, the Hepatitis A virus was confined to the livers of patients giving intense symptoms of jaundice and liver irritation (Fokuo et al., 2020). Then, at that point, virus B was secluded which was creating a more persistent liver problem and resulted in entire harm to the liver. If a patient gave highlights of liver disturbance due to the virus yet was negative for Hepatitis A or B virus, he was essentially analyzed as Non-A and Non-B hepatitis (Petruzziello, 2016). Hepatitis C is a viral infection and blood-borne illness, that makes harms to the ordinary working of the liver, currently known as a significant medical problem around the world. It decreases the nature of sound well-being and altogether adds to mortality and bleakness. The virus is liable for bonding-related non-A non-B Hepatitis recognized and far ahead called Hepatitis C in 1989 (Fokuo et al., 2020).

There were 1.34 million mortalities in 2015 due to Hepatitis (WHO, 2017). This measurement plainly elucidates the seriousness of the issue. The World Health Assembly embraced the world healthiness strategy about viral hepatitis in 2016. It is estimated that 6% population of Pakistan is infected with HCV. In Punjab, genotype 3a (86.46%) is most prevalent, followed by untypable (7.17%) and genotype 1a (3.84%) and 3b (1.04%). Mixed genotype constitutes only 0.67% of total infections. Genotypes 2a, 2b, 3c, and 4 were found

to be rare. Data available from the literature review when compiled showed that HCV genotype 3a (58.16%) was predominant in Pakistan, followed by genotypes 3b (9.05%), 2a (6.70%), 1a (6.22%), and 1b (2.39%). The frequency of mixed genotypes was found to be 4% and 12% of untypable HCV variants (Haqqi et al., 2019).

Literature Review

There are many issues (physical, communal, and mental health-related difficulties, feeling the proximity of death, which causes dread and melancholy) confronted by the patients and families of hepatitis C. During this brutal mental health and emotional disturbance-related circumstances, the patients demand spirituality (Omer, Lovering & Al Shomrani, 2014) It was reported that the patients of hepatitis C not received appreciable able support from a primary group member that led towards tension (Evon et al., 2009).

The Patient of hepatitis C also became the victim of Social stigma that had an adverse impact on the patient's mental health. The patient exploited by social stigma begins faulting oneself for the reason for the illness as opposed to the truth (Madden et al. 2018). Depression is another problem faced by HCV. It was reported by a 2017 survey that around 33 percent of individuals with hepatitis C additionally have depression. The survey proposes that the connection between hepatitis C and depression might be because of decreased personal satisfaction and expanded healthcare costs (Beijer, Wolf & Fazel, 2012). Emotional distress is found in no less than 35% of patients infected with HCV with pinnacle 71% of patients found to have both mental health and medical health-related problems among HCV patients. At the point when comorbidities were not revealed, 20% of the impacted people had a level of stress which was twofold (Omland, et al., 2013).

Hepatitis strongly hit the economic conditions of the patients and their families as well. It was found in the different studies that the patients did not have the affordability to cure the disease due to the lack of financial resources (Bhatti et al., 2017; Tahir, Amin & Rafiq, 2020).

Material and Methods

The current study was conducted in Southern Punjab, Pakistan by randomly selecting the three districts of South Punjab (Multan, Muzaffargarh, and Bahawalpur). All the patients of hepatitis C from these three districts were targeted as the population of the study. The researcher selected 445 respondents for completing this study. The interview schedule was used for data collection. The main reason to use the interview schedule was that the majority of the population's education was below matriculation, and they were not fully able to fill the proper response. The researcher used SPSS for data analysis.

Results and Discussion

The results of the study are discussed in the following section which gives an overview of the descriptive and inferential statistics.

Table 1
Demographic Information of the Respondents

Category	F	%	Category	F	%	Category	F	%
Male	340	76.4	**Joint**	284	63.8	**Male**	349	78.4
Female	105	23.6	**Nuclear**	161	36.2	**Female**	96	21.6
Total	445	100.0	**Total**	445	100.0	**Total**	445	100.0
Category	**F**	**%**	**Category**	**F**	**%**	**Category**	**F**	**%**
Married	250	56.2	**1-3 persons**	33	7.4	**Own**	280	62.9
Single	195	43.8	**4-6 persons**	181	40.7	**Rented**	102	22.9
Total	445	100	**7-9 persons**	107	24	**Free space usage (hut)**	18	4
Category	**F**	**%**	**10 or above**	124	27.9	**Shared**	24	5.4
Below 10 years	36	8.1	**Total**	445	100	**Other**	21	4.7

11-15 years	21	4.7	**Category**	**F**	**%**	**Total**	445	100
16-20 years	49	11	**Uneducated**	123	27.6	**Category**	**F**	**%**
21-25 years	171	38.4	**Primary**	63	14.2	**5001-10000**	69	15.5
26-30 years	77	17.3	**Elementary**	50	11.2	**10001-15000**	256	57.5
Above 30 years	91	20.4	**Secondary**	30	6.7	**15001-20000**	39	8.8
Total	445	100	**Higher Secondary**	24	5.4	**20001-25000**	42	9.4
			Graduation	87	19.6	**More than 25000**	39	8.8
			Post-graduation	68	15.3	**Total**	445	100
			Total	445	100			

Table number 1 depicted that 340 (76.4%) respondents were males and 105 (23.6%) respondents were females among 445 respondents. 250 (56.2%) respondents were married and 195 (43.8%) respondents were unmarried from 445 respondents. 284 (63.8%) respondents belonged to the joint family system and 161 (36.2%) respondents belonged to the nuclear family system. 349 (78.4%) family heads of respondents were males and 96 (21.6%) family heads were females. 36 (8.1%) respondents belonged between age 10 years, 21 (4.7%) were between 11-15 years, 49(11.0%) were between 16-20 years, 171 (38.4%) were between 21-25 years, 77 (17.3%) were between 26-30 years, 91 (20.4%) respondents were above 30 years of age. 33 (7.4%) respondents have 1-3 persons, 181 (40.7%) respondents have 4-6 persons, 107 (24%) respondents have 7-9 persons and 124 (27.9%) respondents had 10 or above family members in their family. 92 (20.7%) respondents were landlord, 42 (9.4%) were did cultivation, 64 (14.4%) were had their own business, 60 (13.5%) respondents were government employees. 97 (21.8%) were doing a private job and 90 (20.2%) respondents were unemployed. 92 (20.7%) respondents were landlord, 42 (9.4%) were did cultivation, 64 (14.4%) were had their own business, 60 (13.5%) respondents were government employees. 97 (21.8%) were doing private jobs and 90 (20.2%) respondents were unemployed. 280 (62.9%) respondents lived in their own houses, 102 (22.9%) respondents lived in rented houses, 18 (4%) respondents lived in huts, 24 (5.4%) respondents lived in shared spaces, and 21 (4.7%) respondents lived in other places. There was no previous study about the type of residence and hepatitis C. 123 (27.6%) respondents were uneducated, 63 (14.2%) respondents had primary education, 50 (11.2%) respondents had elementary education, 30 (6.7%) respondents had secondary education, 24 (5.4%) respondents had higher secondary education, 87 (19.6%) respondents had graduation and 68 (15.3%) respondents had post-graduation education. 69 (15.5%) respondents had 5-10 thousand rupees monthly income, 256 (57.5%) respondents had 10-15 thousand rupees monthly income, 39 (8.8%) respondents had 15-20 thousand monthly income, 42 (9.4%) respondents had 20-25 thousand rupees monthly income and 39 (8.8%) respondents had more than 25 thousand rupees monthly income.

Table 2
The Correlation Analysis

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**
AS	1						
Dep	.632**	1					
QL	-.624**	-.234**	1				
Stigma	.592**	.189**	-.252**	1			
EE	.832**	.450**	-.459**	.445**	1		
IoF	.780**	.452**	-.390**	.433**	.624**	1	
TB	.441**	.196**	-.313**	.193**	.371**	.289**	1

*** p <0 .01.*

Where: DV: Dependent Variable; IV: Independent Variable; Anx and Str: Anxietyand Stress; Dep: Depression; Stigma: Stigmatization; EE: Economic Effect; IoF:Impact on Family; TB: Treatment Barriers

Table number 2 depicted the results of correlation analysis between anxiety and stress, depression, stigmatization, economic effect, impact on family and treatment barriers. From the results we conclude that anxiety and depression significantly and positively correlated with depression, stigmatization, and economic effect, impact on family and treatment barriers while significantly and negatively correlated with quality of life. Furthermore, depression is significantly and positively correlated with stigmatization, economic effect, impact on family and treatment barriers while significantly and negatively correlated with quality of life. Similarly, quality of life is significantly and negatively correlated with stigmatization, economic effect, impact on family and treatment barriers. Stigmatization is significantly and positively correlated with economic effect, impact on family and treatment barriers (Peltzer & Ramlagan, 2011). Economic effect significantly and positively correlated with impact on family and treatment barriers. Impact on family and treatment barriers is significantly and positively correlated with each other.

Table 3
Multiple linear regression analysis

DV	IV	β	SE	t	p-value	F	R^2
QL	Constant	22.260	2.147	10.370	.000	93.493	.562
	AS	-2.105	.119	-17.670	.000		
	Dep	-.575	.056	-10.266	.000		
	Stigma	-.327	.038	-8.544	.000		
	EE	-.429	.064	-6.684	.000		
	IoF	-.343	.050	-6.895	.000		
	TB	-.069	.046	-1.502	.134		

Where: DV: Dependent Variable; IV: Independent Variable; Anx and Str: Anxiety And Stress; Dep: Depression; Stigma: Stigmatization;EE: Economic Effect; IoF: Impact on Family; TB: Treatment Barriers

Table number 3 depicted the results of multiple linear regression analysis, we take the quality of life as outcome variable while anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers as predictors. From the results, we conclude that anxiety and stress, depression, stigmatization, economic effect, and impact on family significantly negatively predict the quality of life while treatment barriers don't significantly predict the quality of life. Furthermore, we can conclude that one unit change in anxiety and stress, depression, stigmatization, economic effect, and impact on family will 2.105, .575, .327, .429, and .343 negatively changes in quality of life respectively.

Table 4
Comparisons of all Studied Variables

Variable	*M ± SD*		*t*	*p*
	Male (n=340)	Female (n=105)		
AS	21.24±3.88	21.19±3.61	.133	.895
Dep	21.09±3.65	20.67±3.65	1.041	.298
QL	29.66±4.70	29.73±4.09	-.146	.884
Stigma	41.87±5.12	42.04±4.88	-.301	.763
EE	27.17±4.29	27.27±3.97	-.198	.843
IoF	38.40±4.72	38.82±4.79	-.793	.428
TB	21.07±3.53	21.02±3.71	.129	.897

Where: Anx and Str: Anxiety and Stress; Dep: Depression;
QL: Quality of Life; Stigma: Stigmatization; EE: Economic Effect;
IoF: Impact on Family; TB: Treatment Barriers

Table 4 represented the results for comparison of anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers between male and

female patients. From the results, we conclude no significant differences were found in the levels of anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers between male and female patients.

The comparison of anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers between male and female patients (Kingori et al., 2013).

Table 5
The comparison of anxiety and stress, depression, stigmatization, economic effect, impact on family and treatment barriers between patients belongs to nuclear family system and joint family system

Variable	*M ± SD*		*t*	*p*
	JFS (n=284)	NFS(n=161)		
AS	21.28±3.97	21.16±3.53	.326	.744
Dep	21.03±3.79	20.92±3.40	.312	.755
QL	29.71±4.70	29.61±4.31	.236	.814
Stigma	42.05±5.20	41.65±4.82	.821	.412
EE	27.14±4.37	27.29±3.92	-.340	.734
IoF	38.61±4.89	38.31±4.45	.632	.528
TB	20.89±3.62	21.35±3.48	-1.289	.198

Where: JFS: Joint Family System; NFS: Nuclear Family Syatem;
Anx and Str: Anxiety and Stress; Dep: Depression; QL: Quality of Life;
Stigma:Stigmatization; EE: Economic Effect; IoF: Impact on Family;
TB: Treatment Barriers

Table 5 represents results for comparison of anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers between patients belonging to nuclear family system and joint family system. From the results we conclude no significant differences were found in the levels of anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers between patients belonging to nuclear family system and joint family system (Okoror et al., 2013; Kingori et al., 2013; Peltzer and Ramlagan, 2011).

Table 6
Average value of anxiety and stress, depression, stigmatization, economic effect, impact on family and treatment barriers burnout among different monthly income levels

Variables	Up to 10000	10001-15000	15001-20000	20001-25000	Above 25000
AS	21.10	21.55	19.00	22.74	20.96
Dep	20.31	21.02	21.68	21.79	20.40
QL	30.51	29.08	31.64	28.47	30.47
Stigma	42.15	41.84	38.52	43.89	43.98
EE	27.09	27.52	24.80	28.74	26.96
IoF	39.26	38.87	35.68	39.34	37.73
TB	20.25	21.50	19.68	22.42	20.24

Where: Anx and Str: Anxiety and Stress; Dep: Depression; QL: Quality of Life;Stigma: Stigmatization;EE:Economic Effect; IoF: Impact on Family;TB: Treatment Barriers

Tables 5 and 6 represent results for comparison of anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers among different monthly income levels. From the results, we conclude that the levels of anxiety and stress, stigmatization, economic effect, impact on family, and treatment barriers among different

monthly income levels while no significant differences were found in the level of depression among different monthly income levels.

Table 7
The comparison of anxiety and stress, depression, stigmatization, economic effect, impact on family and treatment barriers burnout among different monthly income levels

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
AS	Between Groups	363.631	4	90.908	6.557	.000
	Within Groups	6100.063	440	13.864		
	Total	6463.694	444			
Dep	Between Groups	95.601	4	23.900	1.804	.127
	Within Groups	5828.363	440	13.246		
	Total	5923.964	444			
QL	Between Groups	409.863	4	102.466	5.113	.000
	Within Groups	8817.540	440	20.040		
	Total	9227.402	444			
Stigma	Between Groups	921.574	4	230.394	9.690	.000
	Within Groups	10461.648	440	23.776		
	Total	11383.222	444			
EE	Between Groups	406.343	4	101.586	5.986	.000
	Within Groups	7467.648	440	16.972		
	Total	7873.991	444			
IoF	Between Groups	524.720	4	131.180	6.128	.000
	Within Groups	9418.529	440	21.406		
	Total	9943.249	444			
TB	Between Groups	288.281	4	72.070	5.905	.000
	Within Groups	5370.200	440	12.205		
	Total	5658.481	444			

Where: Anx and Str: Anxiety and Stress; Dep: Depression; QL: Quality of Life; Stigma: Stigmatization; EE: Economic Effect; IoF: Impact on Family; TB: Treatment Barriers

Conclusion

It could be concluded that there was a strong association between economic status, stigmatization, depression, anxiety, stress, and patient quality of life, medicines, doctors' fees, lack of fulfillment of household needs, unemployment due to patient care, and short time for economic activities. Furthermore, depression is significantly and positively correlated with stigmatization, economic effect, and impact on family and treatment barriers while significantly and negatively correlated with quality of life. Similarly, quality of life is significantly and negatively correlated with stigmatization, economic effect, impact on family, and treatment barriers. Stigmatization is significantly and positively correlated with economic effects, impact on family, and treatment barriers. Economic effect significantly and positively correlated with impact on family and treatment barriers. Impact on family and treatment barriers is significantly and positively correlated with each other. It was also concluded that anxiety and stress, depression, stigmatization, economic effect, and impact on family significantly negatively predict the quality of life while treatment barriers don't significantly predict the quality of life. From the results, we conclude no significant differences were found in the levels of anxiety and stress, depression, stigmatization, economic effect, impact on family, and treatment barriers between male and female patients.

Recommendations

Public controlled mindfulness should be made in everyone alongside the law requirement by the Government to regularize the non-formal and private well-being area. There should be to establish regional level testing and treatment centers in each province to know the exact burden of hepatitis patients. This study suggests that there is a need to launch a proper vaccination program to eradicate the chronic disease.

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