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RISK OF VIOLENCE IN SEVERELY MENTALLY ILL AND THE PSYCHIATRIC MORBIDITY AMONG THEIR CAREGIVERS

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ABSTRACT

Background: Public health and mental health professionals are very anxious about violence among psychiatric patients. Risk of violence in patients can put caregivers under a lot of psychological stress, which could put them at risk for a variety of psychiatric issues.

Objective: The aim of this study was to explore the Risk of violence in severely mentally ill and the psychiatric morbidity among their caregivers.

Methodology: The current cross -sectional study was carried out in in Ashfaq Neuropsychiatric and General hospital Khwazakhela Swat from July 2022 to march 2023 after taking approval from the ethical committee of the institute. Individuals diagnosed as seriously mentally ill by the International Classification of Diseases (ICD)-10 as having either bipolar affective disorder or psychotic illness. Caregivers who had spent at least three months of the previous year with the participant and who were between the ages of 18 to 65 years were included. Mini International Neuropsychiatric Interview (MINI) - Plus was used to evaluate the psychiatric morbidity of caregivers, and ICD-10 diagnostic criteria were used to make the diagnosis. Adults with mental illnesses can use the structured professional judgment tool HCR-20 to determine their risk of violence. Data was analyzed through SPSS version 18. The relationship between the qualitative variables was examined using the chi-square test or Fisher's exact test, and the means of the two groups were compared using the t-test. The significance of comparing differences between two groups was determined using the Mann-Whitney U test. A P value of less than 0.05 was deemed significant. The odds ratio (OR) & corresponding 95% confidence interval (CI) were used to measure the strength of the association.

Results; 32.0% of the seriously mentally ill had high Risk of violence. A substantial percentage of psychiatric disorders (44.8%), of which mood disorders accounted for 71.4%, was reported by caregivers. A notable correlation was found between patients' Risk of violence and their caregivers' psychological disorders (p = 0.001).

Conclusion

The current study revealed that 32.0% of people who had serious mental illness had a high Risk of violence. Gender, comorbid substance abuse, drug compliance, legal involvement, & a diagnosis of schizophrenia are all significantly correlated with Risk of violence. The prevalence of psychiatric morbidity is significant among caregivers.

Key words: Risk; Violence; Severely mentally ill; Morbidity

Introduction

People having mental disorders are thought to be the major sources of violence. But not all mental health individuals are aggressive; rather, a small percentage are responsible for the majority of violent cases. Violence is considered as a subtype of aggression that involves non-accidental physical harm done by one person to another and is frequently or likely to result in physical injury, psychological harm, or even death. Aggression is defined as behaviors that cause non-accidental harm.[1] Violence and aggression are frequently used interchangeably.[2-3] Mentally ill people frequently use violence against their family members or careers, medical personnel, and infrequently the general population.[4] There have been reports of patients with mental disorders having a high risk of violence (ROV) when they are in mental health institutions.[5] An earlier study stated that 4.5% of patients who were released from the hospital had committed at least one violent act. In contrast to 31.1% of individuals with drug addiction and 43.0% of individuals with other mental disorders who also abuse substances, the same study found a ROV in 17.9% of severe mood disorder people without substance abuse.[4] When mentally ill people use violence, there may be little to no physical harm, but there are frequently serious emotional repercussions. It is challenging to measure the psychological effects of violence. It might lower career morale, lead to serious anxiety that manifests as a range of emotional issues, and add to the strain of caring for others. The aggressive or violent atmosphere creates stress, which has a detrimental impact on Caregivers quality of life (QOL). Among other psychiatric disorders, Caregivers of the mentally ill reported low quality of life, social isolation, and a negative effect on their relationship.[6-7-8] Therapists who were victims of their patients' violence reported mental health issues, including symptoms of posttraumatic stress disorder (PTSD).[2] Aggression brought on by a mental health disorder also adds to stigma and the burden on families.[7] High ROV was noted by in individuals exhibiting psychotic symptoms or illnesses. Individuals diagnosed with significant affective disorders, schizophrenia, and drug addiction had a greater relative risk of ROV than those with moderate affective disorders or anxiety disorders.[9] The best indicator of potential violence in the future is thought to be violent previous behavior.[3] Knowing the ROV can aid in the prevention or reduction of aggressive behavior and its aftereffects in therapy. Furthermore, recognizing and treating the different psychological issues that arise in the families of mentally ill people with high ROV can enhance the quality of life for both the families and the patients, as well as increase treatment compliance and prognosis. Therefore the current study was conducted to determine the risk of violence in severely mentally ill and the psychiatric morbidity among their caregivers.

Methodology

The current cross sectional study was carried out in Ashfaq Neuropsychiatric and General Hospital Khwazakhela swat from July 2022 to march 2023 after taking approval from the ethical committee of the institute. Both inpatients and outpatients were enrolled. Individuals diagnosed as seriously mentally ill by the International Classification of Diseases (ICD)-10 as having either bipolar affective disorder or psychotic illness. All subsequent patients between the ages of 18 to 65 who had been ill for at least a year and who provided written, informed consent were included in the research study. Individuals with a mental retardation diagnosis were excluded while consenting caregivers who had spent at least three months of the previous year with the participant and who were between the ages of 18 to 65 years were included. Based on previous research conducted by Inogbo and colleagues (2017), which revealed a prevalence of mental illness of 24.3% in caregiver relatives, the sample size was determined.[10] A proforma created specifically for this purpose was used to record the patients' sociodemographic and clinical information after both the participants and the caregivers provided written, informed consent. Mini International Neuropsychiatric Interview (MINI) - Plus was used to evaluate the psychiatric morbidity of caregivers, and ICD-10 diagnostic criteria were used to make the diagnosis.[13] Adults with mental illnesses can use the structured professional judgment tool HCR-20 to determine their risk of violence. It comprises three domains: the five-item R (Risk item scale); the ten-item H (Historical scale); and the five-item C (Clinical scale). Every component is given a score between 0 & 2, with an overall score of twenty or higher indicating a high ROV. This instrument has outstanding inter-rater reliability, as do its subscales.[13]

Analysis of data

Data was analyzed through SPSS version 18. Quantitative variable were presented in the form of mean and standard deviation (STD) while qualitative variables were shown in percentages and frequencies. The relationship between the qualitative variables was examined using the chi-square test or Fisher's exact test, and the means of the two groups were compared using the t-test. The significance of comparing differences between two groups was determined using the Mann-Whitney U test in cases where the quantitative variable was not regularly distributed. A P value of less than 0.05 was deemed significant. The odds ratio (OR) & corresponding 95% confidence interval (CI) were used to measure the strength of the association.

Results

Data of the patients group

A total of 312 individuals and their caregivers participated in this research whose age ranged from 18 to 65 year with a mean of 39.9. The most prevalent age group of participants was 26 to 35 years 94(30.1%) 76.3 % of the population belonged to the low-income stratum, meaning their monthly income was less than Rs 5000, whereas 4.4% of the population earned more than Rs 10,000. The demographic features of the study population has given **in table 1**. Of these individuals, 114 (36.5%) had been diagnosed with schizophrenia, 146 (46.7%) with bipolar affective disorders, 39 (12.5%) with other psychotic illnesses, and 13 (4.1%) with delusional disorder (**table 3).** The illness mean duration was 13.3 years. The most common clinical features of the participants were Comorbid physical illness (38.1%), Drug compliance (37%), history of head injury or epilepsy (11.8%) and Inpatient treatment (7.83%) as described in **figure 1.** A ROV score of 20 or higher was seen in 100 individuals, or 32.5%. The mean ROV score on the HCR-20 was 16.88, and the scores for H, C, and R on the various HCR dimensions were 8.66 4.57, and 3.66, respectively. With the exception of gender, no correlation was found between any of the sociodemographic factors and patients' ROV as shown in **table 2.** It was shown that individuals with schizophrenia had greater ROVs than those with bipolar illness or mood disorders. A noteworthy correlation was seen between the patients' ROV and their different mental diagnoses as displayed in **table 3.** Substance abuse, drug compliance, & legal involvement were shown to be significantly correlated with the Risk of violence as depicted in **table 4.**

Data of the Caregivers

The age range of the caregivers was 18–65 years old, with a mean age of 47.1 years. The most prevalent age group was 46 to 55 years old 99(31.7%).The common demographic features of the caregivers explained in table 1. 36(25.7%) of the 140(44.8%) caregivers with mental diagnoses reported delusions, mode disorder was reported in (71.4%), individuals and (0.71%) had other psychotic

Disorders **(table 5)** .The psychological morbidity of cargivers was significantly correlated with their age and gender. Association of socio-demographic characteristic and psychiatric diagnosis of caregivers has been explained in **table 6.**

Table 1.Social and demographic features of both patients and caregivers

Parameters		Participants N =312	Caregivers N =312
Age in years	18 to25	35(11.2%)	18(5.7%)
	26 to 35	94(30.1%)	39(12.5%)
	36 to 45	92(29.4%)	77(24.6%)
	46 to 55	50(16.0%)	99(31.7%)
	56 to 65	41(13.1%)	79(25.3%)
Sex	Male	165(52.8%)	110(35.2%)
	Female	147(47.1%)	202(64.7%)
Material status	Married	176(65.4%)	250(80.1%)
	Unmarried	104(33.3%)	(288.9%)
	Divorced/widow	32(10.2%)	34(10.8%)

Table 2. Sociodemographic features of the participants and violence risk						
Parameters		Risk of violence		Odds Ratio (95% CI)	χ2(degree of freedom)	Value of P
		Yes n=100	n2=212			
Age in years	45 or less	78(35.45%)	142(64.55%)	1.59 (0.91-2.75	2.77 (1)	0.10
	Greater than 45	24(26%)	68(74%)			
Sex	Male	62(37.5%)	103(62.5%)	1.63 (1.00-2.64)	3.88 (1)	0.049
	Female	40(27.2%)	107(72.8%)			
Education	Uneducated	2(50%)	2(50%)			0.62
	Primary	10(30%)	23(70%)			
	2ndry	79(32.2%)	166(67.8%)			
	Graduate / post	10(25.6%)	19(75.4%)			
	Professional	1(100	0(0)			
Income in RS	Greater than 5000	82(34.1%)	158(66.9%)			0.31
	5000 to 10000	18(47.3%)	40(53.7%)			
	Greater than 10000	2(14.2%	12(85.8%)			
Place	Rural	97(32.8%)	198(67.8%)	1.34 (0.41-4.31)		0.78
	Arban	5(29.4%)	12(88%)			
Occupation	Yes	33(34.73%)	62(38%)	1.13 (0.68-1.9)	0.23 (1)	0.63
	No	69(31.79%)	148(68.21%)		4.62 (2)	0.33
Material status	Married	55(31.0%)	122(69%)			
	Unmarried	40(38.0%)	65(62%)			
	Others	7(23.33%)	23(76.7%)			
95% CI – 95% Confidence interval , – P value < 0.05, †– Fisher's exact test;						

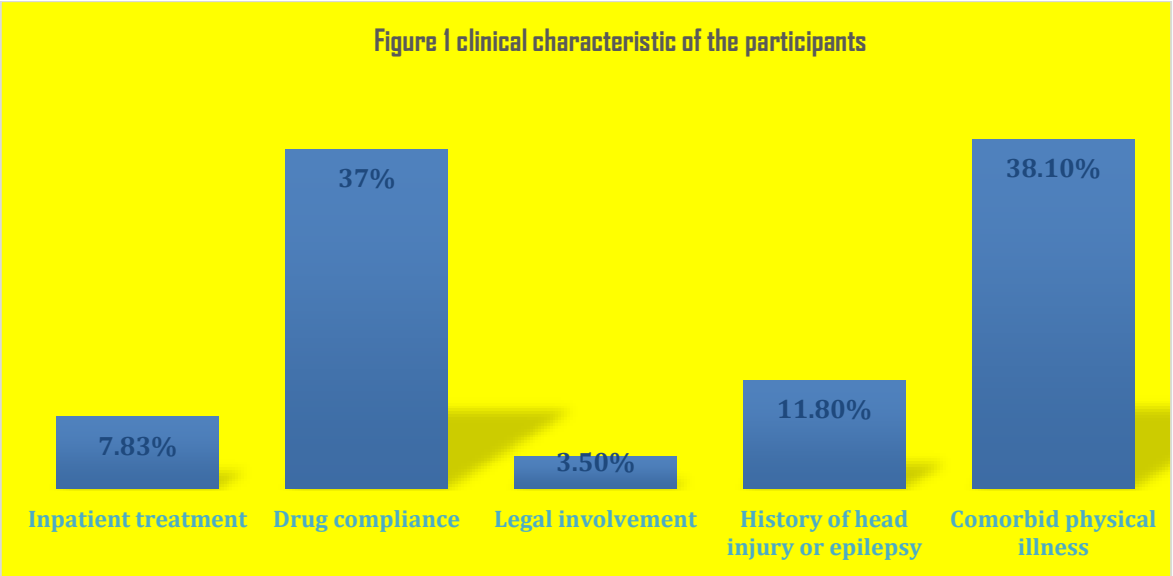

Table no 3. Relationship between individuals' mental diagnoses and their tendency for violence

Psychiatric evaluation	Risk of violence	
	Yes n=100	No n=212
Schizophrenia	45(39.4%)	69(60.6%)
bipolar affective disorder	34(23.2%)	112(76.8%)
Delusional disorder	6(46.1%)	7(53.9%)
Others	15(38.4%)	24(61.6%)
X2 = 10.70 (df = 3), P = 0.01;		

Table 4. Clinical features of patients and their risk of violence

Parameters		Risk of violence		Odds Ratio (95% CI)	χ2(degree of freedom)	Value of P
		Yes n=100	n2=212			
*Drug compliance	Yes	21(17.6%)	98(82.4%)	0.29 (0.16 - 0.50)	20.34 (1)	<0.001
	No	81(41.9%)	112(58.1%)			
Psychiatric hospitalization	Yes	79(30.6%)	158(%)	1.15 (0.65-2.03)	0.24 (1)	0.63
	No	23(30.6%)	52(69.4%)			
Substance abuse	Yes	46(52.2%)	42(47.8%)	3.33 (1.98- 5.61)	21.46 (1)	<0.001

Table 5. Clinical features of caregivers

Features		**N= 312**
History of substance abuse	**Yes**	**36(11.5%)**
	No	**276(88.4%)**
Physical illness history	**Yes**	**109(34.9%)**
	No	**203(65.0%**
Psychiatric diagnosis	**Yes**	**140(44.8%)**
	No	**172(55.1%)**
Psychiatric diagnosis	**Mode disorder**	**100(71.4%)**
	substance use disorder	**3(2.1%)**
	Other psychotic disorders	**1(0.71%**
	Delusion	**36(25.7%)**

Table 6. Association of socio-demographic features and psychiatric diagnosis of caregivers

Parameters		Psychiatric diagnosis		Odds Ratio (95% CI)	χ2(degree of freedom)	Value of P
		Yes n=140	n2=172			
Age in years	45 or less	50(37.59%)	83(62.1%)	1.59 (0.91-2.75	5.05 (1)	0.03
	Greater than 45	90(50.27%)	89(49.73)			
Sex	Male	30(27.27%)	80(73.72%)	0.31 (0.18 - 0.51)	21.68 (1)	<0.001
	Female	109(54.22%)	92(45.78%)			
Education	Uneducated	4(33.3%)	8(67.7%)			0.08
	Primary	31(57.40%)	23(42.6%)			
	2ndry	94(44.13%)	119(55.9%)			
	Graduate / post	7(26.9%)	19(73.1%)			

	Professional	2(66.66%)	1(33.45%)			
Income in RS	Greater than 5000	102(43.2%)	134(56.8%)		1.38 (2)	0.5
	5000 to 10000	28(48.2%)	30(51.8%)			
	Greater than 10000	8(57.14%	6(42.86%)			
Occupation	Yes	58(37.41%)	97(62.6%)	0.55 (0.35 - 0.86)	6.88 (1)	0.01
	No	80(46.24%)	73(53.6%)		1.73 (2)	0.42
Material status	Married	110(44.17%)	139(55.83%)			
	Unmarried	10(38.46%)	16(61.5%)			
	Others	18(54.5%)	15(45.5%)			
95% CI – 95% Confidence interval , – P value < 0.05, †– Fisher's exact test;						

Discussion

There were 312 patients and 312 caretakers in this research. The average age of the patient group was in line with Fazel et al. & Witt et al. [14-15] Consistent with the findings of Jakhar et al.[16], the majority of our patient participants were male 165(52.8%) and unmarried 104(33.3%).Despite the fact that individuals under 45 had a high ROV, there was no statistically significant correlation found between ROV & age group. This contradicts the findings reported by Amore et al .they revealed that there was a substantial link between age and ROV.[17] In comparison with Jakhar et al study, the present study found that both men and females had low ROV.[16] But a noteworthy correlation was identified between gender and ROV in our study (p = 0.049). As in previous research, higher ROV was seen among those with concomitant substance abuse and poorer income.[3-15] Unlike a research by Dean et al., this investigation found no evidence of a meaningful correlation between ROV & income.[18]

This study found that people with schizophrenia had a higher ROV (39.4%) than bipolar (23.2%), in contradiction to a prior study that found significant ROV in bipolar participants. This may be related to people with schizophrenia experiencing greater periods of symptoms and not taking their medicine as prescribed. As in other earlier research, there was a notable correlation seen between ROV and inadequate medication compliance. (p <0.001). [15-16-19] Individuals with drug substance abuse and legal concerns had a high (ROV), in line with previous studies .[20-21-22] This study did not find a significant correlation between ROV and a head injury history as well as epilepsy, in contrary to earlier research.[17] This may be because there were fewer participants in this research who had a history of epilepsy or head injuries. During the course of their disease, more than 74% of our patients needed inpatient care at least once. Our individuals' ROV scores are similar to those of a prior research.[23] Despite the fact that many patients reported having physical comorbidities, no meaningful correlation could be found. It was discovered that nearly half of the caretakers were diagnosed with a mental illness. The findings of another study have indicated a substantial correlation between the age, gender, and work position of caregivers and their psychological illness.[30]

Despite the fact that most caretakers were from low-income households, those who make more than $10,000 per month were shown to have a greater prevalence of mental illness. This is not the case with a prior research.[24] This might be explained by a number of factors, including the middle-class population's tendency to take on several duties at once and the strong stigma associated with mental illness in our culture. As opposed to a research published Alzarani et al., which indicated a greater degree of education among caretakers with mental illness.[25] A history of substance did not appear to be related to caregivers psychological morbidity, however co-occurring physical illnesses were found to be positively correlated. Similar to findings from a different study on main caregivers of people with schizophrenia, almost 46% of caregivers in our study had a psychiatric disorder, with depression accounting for 70.4% of these cases.[26] Still another study found that caretakers of patients at high risk for violence had a reduced proportion of mental problems (19.4%).This may be explained by variations in research methodology or sociocultural disparities.[27] There was a substantial correlation between mental morbidity and ROV, and this association held true for ROV and the present

psychiatric diagnosis. According to a 2015 research, ROV just increases the likelihood of emotional strain on the family even in the absence of actual violence.[28] On the other hand, Kjellin et al.[29] discovered no connection between caregiver burden and patient violence. But in these studies, caregivers' psychological illness was not compared to ROV. Therefore, this requires more research.

Conclusion

The current study revealed that 32.0% of people who had serious mental illness had a high Risk of violence. Gender, comorbid substance abuse, drug compliance, legal involvement, & a diagnosis of schizophrenia are all significantly correlated with Risk of violence. The prevalence of psychiatric morbidity is significant among those who provide care for individuals who are more likely to commit violent crimes. The need of providing care and support to those who look after the seriously mentally ill is highlighted by this study.

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