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Impulsivity, Depression and Aggression among Psychiatric Patients

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Abstract
Aggression in inpatient facilities can generally be conceptualized as an interaction between an individual and the environment in which he or she finds themselves. The aim of this study was to assess impulsivity, depression and aggression among psychiatric patients. Descriptive correlational research design was used in this study. A convenient sample of 100 psychiatric patients from Beni-Ahmad psychiatric hospital in El-Minia, governorate, four tools were utilized to measure the study variables; Personal and clinical data Questionnaires, Barratt Impulsiveness Scale, Beck Depression Inventory and Aggression Questionnaire. Results of the study revealed that, 79% of the patients were in the age group from 20-35 years, 63% of the patients were males, and 52% of the patients were not working, 42% of the patients were schizophrenic, 56% of patients had moderate impulsivity, 58% of patients had extreme level of depression and 51% of the patients had severe level of aggression. In conclusion, more than half of psychiatric patients had moderate impulsivity level, extreme level of depression and severe level of aggression. There were positive correlations between impulsivity, depression and aggression. This study recommended developing and implementing psychosocial program to decrease impulsivity, depression and aggression among the psychiatric patients.
Keywords: Impulsivity/ Depression /Aggression / psychiatric patients.

1. Introduction

Aggression is a behavior performed by one person "the aggressor'' with the intent of harming another person "the victim'' who is believed by the aggressor to be motivated to avoid that harm. Harm may include direct physical harm e.g., a punch to the jaw, direct psychological harm e.g., verbal insults, and indirect harm e.g., destroying the victim's property (Dupre & Barling 2006).

There are many possible causes for aggressive behavior in patients with psychiatric disorders. Probably the most important causes are the presence of comorbid substance abuse, dependence, and intoxication. In addition, the disease process itself may produce hallucinations and delusions, which may provoke aggression. Often, poor impulse control related to neuropsychiatric deficits may also facilitate the discharge of aggressive tendencies. Finally, underlying personality characteristics, such as antisocial personality traits also may influence the use of violent acts as a means to achieve certain goals. Concerning environmental factors that are associated with aggressive behavior, such as chaotic or unstable home or hospital situation, which may encourage maladaptive aggressive behaviors (Volavka & Citrome 2008).

A positive relationship between impulsivity and aggression was found by Vitacco et.al., (2002) and suggested that, high levels of impulsivity lead to poor problem solving, which then leads to aggression, they also added that, long-standing psychological abnormality and environmental stresses or cues may be necessary for the development of violent impulses. When such impulses occur, their control may relate to trait impulsivity.

Depression refers to mental disorder characterized by low mood accompanied by low self-esteem, and loss of interest or pleasure in normally enjoyable activities. Depression and aggression are considered to belong to different classes of diagnoses according to psychiatric classification systems (DSM-IV) and to different factors in personality inventories. Yet, there is biochemical and clinical evidence for a relationship between the two constructs (Roberts etal., 2010). Indeed, both depression and aggression are characterized by low tolerance to frustration. The original frustration-aggression hypothesis claiming that frustration always leads to aggressive as well as depressive responses (Blair, 2010). Also, Fava (2002) found that, aggressive behavior was common among individuals experiencing depression.

Similarly, Berkowitz (2002) suggested that, depression may contribute to aggression by bringing on unpleasant emotions or stimuli within the individual. Although for many individuals the reaction to depression may be to withdraw, for some individuals depressed emotions may increase sensations of anger, particularly toward perceived sources of the unpleasant emotions. This transference of depression to anger may result in impulsive

aggressive behaviors unless these urges are brought under proper restraint.

Significance of the Study

To date, few studies have examined the potential relation between impulsivity and depression as potential risk factors for aggression in psychiatric patient populations. So it is helpful for nursing profession to explore several potential risk factors related to impulsivity and depression that may place certain psychiatric patients at higher risk for aggressive behavior to manage them properly.

Aim of the study

The study aimed to assess impulsivity; depression and aggression among psychiatric patients.

2- Subjects and Methods

Research design: Descriptive correlational research design was used in this study, such design fits the nature of the problem under investigation.

Setting of the study: This study was conducted in Beni-Ahmad psychiatric hospital at El-Minia governorate, this hospital is affiliated to ministry of health.

Subjects & sample: A convenient sample of 100 psychiatric patients was recruited in the study according to the inclusion criteria which include: recently admitted patients (duration of hospitalization not more than two weeks). Their age ranged from 20-45 years and duration of illness not less than one year. Data collection started from the first of May to the end of October 2011.

Tools of data collection:

1- Personal and clinical data questionnaires

An interview questionnaire sheet was developed by the researcher and covered the following items: Personal data, Duration of illness and diagnosis.

2- Barratt Impulsiveness Scale, (2000)

This scale was translated into Arabic by Abd El Megied et al., (2011). It consists of 30-item self-report questionnaire designed to assess general impulsiveness. Subjects were asked to answer on 4-point likert scale format ranging from 1(rarely/never), 2 (occasionally), 3 (often) to 4 (almost always/always). The degree of impulsivity was categorized according to the following scores: low impulsive from 30 to 59, moderate from 60 to 89, and severe impulsive from 90 to120. Reliability of this scale was done by the researcher is 0.88 (Alfa-coefficient).

3- The Beck Depression Inventory Second Edition (1996) (BDI-II)

This scale was translated into Arabic by Ibraheem (1996). It is a 21-item self-report instrument intended to assess the existence and severity of symptoms of depression. Total score of 0– 9 is considered normal, 10 – 15 is mild, 16- 23 is moderate, 24- 36 is severe depression and from 37 and more is considered extreme level of depression. Reliability of this scale was done by the researcher is 0.96 (Alfa- coefficient).

4- Aggression questionnaire Buss and Perry (1992)

This questionnaire was developed by Buss and Perry (1992). It is a self-reported measure that consisted of 29 items through four subscales; namely (9) items for "Physical aggression", (5) items for "verbal aggression", (7) items for "anger" and (8) items for "hostility". Subjects were asked to answer on a 3-point likert scale format which ranged from 1 (Extremely uncharacteristic of me), 2 (somewhat characteristic of me) to 3 (Extremely characteristic of me). Total score of 29-44 is considered mild aggression, 45-74 is moderate and 75-87 is considered severe level of aggression. Validity of this scale was estimated. The investigator used and followed the “Back translation procedure” for verifying the translation of aggression scale, which used in this study.

Ethical Consideration

The purpose of this study was explained for every interviewed psychiatric patient (males & females). The patient has the ethical right to agree or refuse participation in the study, informed consent to participate in the study was obtained from educated patients and verbal one obtained from uneducated psychiatric patients, they informed that, the information obtained will be confidential and used only for the purpose of the study and there was no any risk for their participation.

Procedure

A review of related literature covering various aspects of the problem was done using available journals and books to be acquainted with the research problem and to select the appropriate study tools. An official permission was granted from the director of Beni-Ahmad psychiatric hospital at El-Minia governorate to conduct the study. The aim of the study was explained by the researcher through direct personal communication with the patients for getting their approval prior starting their participation in the study to gain their cooperation, as well as voluntary participation and confidentiality were assured.

Statistical Analysis

Subjects’ responses to each category were analyzed, categorized and coded by investigator then tabulated separately by using the statistical package for social science (SPSS) version 12. Descriptive statistics were

calculated as frequency, percentage, mean, stander deviation. T-test and ANOVA test and Pearson correlation were also used among studied values. Probability (p-value) less than 0.05 is considered significant and less than 0.001 is considered highly significant.

Pilot Study

A pilot study was done to evaluate the questionnaires clarity and applicability as well as the time needed to fulfill each sheet. It was carried out on a sample of 15 patients and they were excluded from the actual study sample.

Limitations of the study

The hospital is far to reach and difficult in the transportation.

3- Results

Table (1) showed that, the age of the studied patients was ranged between 20- 45 years. 79% of them were in the age group between 20-35 years, 63% were males, 54% from rural areas, and 39% of were educated in secondary school. It was also observed that, the highest percentage of the patients (53%) were married, 52% did not work and 42% had schizophrenic disorders, 35% were depressed and 14% were manic.

Table (2) demonstrated that, 56% of patients had moderate impulsivity and 43% had severe level of impulsivity.

Table (3) illustrated 58% of patients had extreme level of depression while 26% of the sample had severe depression. Half of the patients (51%) had severe level of aggression and 49% of them had moderate aggression. Table (4).

As noted from table (5a) there were no significant differences between age groups and impulsivity, depression as well as aggression, but the total mean scores of depression was increased in age group (36 yrs-45yrs). Regarding gender, there was no significant difference between gender and impulsivity, but the total mean score of impulsivity was increased in males (2.49±0.51). While there were significant differences among gender, depression and aggression (P =0.00, 0.04) respectively. For gender differences, it was proved that, the total mean score of aggression was increased in males, while depression was increased among females.

Regarding marital status (5b), there was no significant difference between marital status and impulsivity, depression and aggression, but it was found that, widowed patients had highest level of depression and the total mean score of impulsivity was increased in married patients, then the total mean score of aggression was increased among divorced patients. In occupation, there was no significant difference between occupation and impulsivity, depression and aggression.

There were significant differences among diagnoses and (impulsivity, depression and aggression). The total mean score of impulsivity and aggression were increased in patients with personality disorders and with manic disorder respectively. Table (6).

Impulsivity was positively correlated with depression and aggression, as well as depression was correlated with aggression. Table (7).

Table (1): Distribution of demographic and clinical characteristics of the studied patients (n=100).

Demographic /clinical characteristics	No	Frequency
The age groups		
20-35 yrs	79	79%
36-45yrs	21	21%
Gender Males	63	63%
Females	37	37%
Residence Rural areas	54	54%
Urban areas	46	46%
level of education		
▪ Illiterate	16	16%
▪ Read & write	36	36%
▪ Secondary	39	39%
▪ University	9	9%
Marital status		
▪ Single	39	39%
▪ Married	53	53%
▪ Divorced	4	4%
▪ Widow	4	4%
Occupation		
▪ Working	48	48%
▪ Not working	52	52%
Diagnoses		
▪ Schizophrenia	42	42%
▪ Depression	35	35%
▪ Mania	14	14%
▪ Delusional disorders	7	7%
▪ Personality disorders	2	2%

Table (2): Total score of impulsivity among the studied patients (N=100)

Impulsivity levels	N	%
Mild impulsivity 30 to 59	1	1%
Moderate impulsivity 60 to 89	56	56%
Severe impulsivity 90 to120	43	43%

Table (3): Total score of depression among the studied patients (N=100)

Depression levels	N	%
Not depressed 0– 9	2	2%
Mild depression 10 – 15	7	7%
Moderate depression 16- 23	7	7%
Severe depression 24- 36	26	26%
Extreme depression from 37 and more	58	58%

Table (4): Total score of aggression among the studied patients (N=100)

Aggression	N	%
Mild aggression 29-44	0	0 %
Moderate aggression 45-74	49	49%
Severe aggression 75-87	51	51%

Table (5a): Differences Between Demographic Characteristics and Impulsivity, Depression and Aggression.

Items	Impulsivity Mean±SD	Depression Mean±SD	Aggression Mean±SD
Age group:			
20 yrs-35yrs: N=79	2.42±0.52	4.29±1.06	2.51±0.51
36yrs-45yrs: N=21	2.43±0.51	4.38±0.81	2.52±0.51
T-test	0.002	0.033	0.020
P value	0.965	0.856	0.887
Gender:			
Male: N=63	2.49±0.51	4.08±1.15	2.59±0.51
Female: N=37	2.31±0.52	4.71±0.52	2.38±0.49
T-test	3.061	7.512	4.031
P value	0.080	0.006*	0.045*
Residence:			
Urban: N=46	2.37±0.53	4.22±1.09	2.54±0.51
Rural: N=54	2.46±0.51	4.39±0.94	2.48±0.51
T-test	0.688	0.375	0.378
P value	0.407	0.540	0.539

Table (5b): Differences Between Demographic Characteristics and Impulsivity, Depression and Aggression (continued).

Items	Impulsivity Mean±SD	Depression Mean±SD	Aggression Mean±SD
Level of education:			
Illiterate: N=16	2.38±0.51	4.44±1.03	2.38±0.51
Read & write: N=36	2.53±0.51	4.42±0.84	2.61±0.49
Secondary: N=39	2.38±0.54	4.33±1.03	2.46±0.51
University: N=9	2.22±0.44	3.56±1.33	2.56±0.53
F-test	1.068	1.946	1.017
P value	0.36	0.12	0.38
Marital status:			
Single: N=39	2.38±0.54	4.18±1.19	2.44±0.51
Married: N=53	2.51±0.51	4.38±0.86	2.58±0.51
Divorced: N=4	2.01±0.01	4.01±1.41	2.75±0.51
Widow: N=4	2.01±0.01	5.01±0.01	2.01±0.01
F-test	2.463	1.041	2.458
P value	0.06	0.37	0.06
Occupation:			
Work: N=48	2.51±0.51	4.19±1.11	2.58±0.51
Not work: N=52	2.35±0.52	4.42±0.91	2.44±0.51
T-test	2.07	1.371	1.967
P value	0.15	0.24	0.16

Table (6): Difference between Diagnoses and Impulsivity, Depression and Aggression

Diagnoses	Impulsivity Mean±SD	Depression Mean±SD	Aggression Mean±SD
Schizophrenia: N=42	2.52±0.51	4.12±1.09	2.71±0.46
Depression: N=35	2.11±0.32	4.97±0.17	2.09±0.28
Mania: N=14	2.71±0.61	3.57±1.09	2.86±0.36
Delusional: N=7	2.57±0.53	3.86±0.91	2.71±0.49
Personality disorders: N=2	3.01±0.01	3.51±2.12	2.51±0.71
F-test	6.655	8.72	15.931
P value	0.005*	0.006*	0.010*

Table (7): Correlation between Impulsivity, Depression and Aggression.

		Impulsivity	Depression	Aggression
Depression	R	0.09	1	---
	P value	0.34	---	---
Aggression	R	0.49	0.19	1
	P value	0.00**	0.05*	---

4- Discussion

The present study revealed a presence of moderate impulsivity level among more than half of patients (56%) especially among male patients, this impulsivity may be related to the fact that more than half of the samples were males and schizophrenic. These findings are consistent with the results of Abed El Megied et.al.,(2011) who found that, moderate impulsivity level was recorded in 88.33% in a study of impulsivity among psychiatric patients especially among male patients. Neuro-cognitive studies suggest an array of impairments, particularly concerning frontal/executive abilities. Response inhibition plays a crucial role in executive functioning and is linked to impulsivity; it may therefore be particularly relevant to schizophrenia. As reported by Twamley et.al., (2006) impulsivity can be particularly problematic in patients with schizophrenia, who already have the burdens of psychiatric symptomatology and cognitive dysfunction.

Also Hoptman et.al., (2002) reported that, impulsivity may be a main symptom or manifestation of various psychiatric disorders among psychiatric patients. Concerning the relationship between marital status and impulsivity, there was a significant difference between marital status and impulsivity. It was found that, the total mean score of impulsivity was increased in married patients, because those patients had many responsibilities such as children and income to meet family needs, also their psychiatric illness affect on their marital status and causing marital problems.

The current study revealed that, more than half of patients 58% had extreme level of depression. Meanwhile, the total mean score of depression was increased among age group (36 - 45 yrs.).This could be explained by that patients see themselves as burden on their families, unable to work while they are in productive age. This finding was consistent with the findings of Haukka et.al., (2008) who found that depression is most prevalent in the 25-45 age groups. This could be explained by that majority of this patients had feeling of social and family rejection which is considered as a predisposing factor of depression. Also hospitalization considered as a main cause of depression.

It was also found a significant difference between gender and depression. Depression was increased among females, it could be due to certain factors, being hospitalized away their families and children. Indeed women tend to be more sensitive, weak and intolerable to life stressors. In this respect, Crabb &Hunsley (2006) reporting that, depression among Arabs have identified specific risk groups (women, middle-age) in a primary health care sample in the United Arab Emirates.

Regarding marital status and depression, it was found that, widowed patients had highest level of depression, which may explained by that loss of spouse and lack of social support are main causes of depression, people who living alone have higher rates of depression and loneliness than those living with others. This finding was consistent with Haukka et.al., (2008) who stated that, widowhood is a risk factor for depression. About 800,000 men and women were widowed each year, most of them are females and experience different degrees of depressive symptoms. A third of widows/widowers in the first month after the spouse's death met the criteria for major depression, and half of them continued to be depressed one year later.

Concerning patient's aggression, the results of the present study revealed that slightly more than half of patients had severe level of aggression, this could be explained by that, majority of the patients were schizophrenic. There is much evidence that schizophrenic patients have an increased risk for aggression and violent behavior, including homicide Milton et.al., (2008).

Regarding gender and aggression, it was found that, the high mean score of aggression was increased among

males. This could be due to the nature of their illness, the majority of them diagnosed as schizophrenic patients. Males with schizophrenia commit severe acts of aggression more frequently than females as stated by Lincoln et.al., (2007). Other causes of aggression may be due to hormonal secretions which create a propensity for certain behaviors such as "testosterone seems most strongly linked to competitiveness and aggression among males. These findings were consistent with the results of Monahan et.al., (2001) who stated that, high testosterone levels have been found in men like prisoners and hospitalized psychiatric patients.

Concerning other psychiatric diagnoses and aggression, a significant difference was found between diagnoses and aggression. The highest mean score of aggression was increased among manic patients. Similarly, Junginger & McGuire (2004) found that, patient who is in a manic phase of their illness present an increased risk of aggression.

The study findings revealed that impulsivity was positively correlated with both depression and aggression, the combination of depression and impulsivity is important in suicidal behavior. Interestingly, an epidemiological study found impulsive suicide attempts to be associated with high depression levels. This aspect of impulsivity may be related to hopelessness and depression (Swann et.al., 2007).

Finally, depression was correlated with aggression. Both depression and aggression are characterized by low tolerance to frustration. The original frustration-aggression hypothesis claiming that frustration always leads to aggression. Aggression is only one of the possible responses to frustration which would permit aggressive as well as depressive responses; they are positively correlated (Rose and Fioravanti, 2010).

5-Conclusion

More than half of psychiatric patients had moderate impulsivity level, extreme level of depression and severe level of aggression. There were positive correlations between impulsivity, depression and aggression.

6- Recommendation

This study recommended developing and implementing psychosocial program to decrease impulsivity, depression and aggression among the psychiatric patients.

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