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Perceived Self-Stigma, Adherence to Treatment and Discontinuation of Medication among Schizophrenic Patients

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Abstract: Self-stigma plays a role in many areas of the patient's life. Furthermore, it also discourages therapy. This study aimed to examine the association between perceived self-stigma, drug adherence and discontinuation of medication among schizophrenic patients. A descriptive correlational design was utilized in this study. Three tools were utilized for data collection; socio-demographic and medical data sheet, Internalized Stigma of Mental Illness questionnaire and Drug Attitude Inventory Scale. A sample of convenience of 120 schizophrenic patients was recruited for the current study. The study was carried out at Psychiatric Medicine and Addiction Prevention Hospital – El Manial University Hospital. The results revealed that half of the studied sample was not adherent to medications, more than half of studied sample experienced self-stigma. There is a statically significant relation between stigma and number of admission. Moreover, the results revealed that there is a positive association between stigma and discontinuation of medications. To conclude the level of internalized stigma of patients with schizophrenia was determined to be high and the internalized stigma had a negative impact on the adherence and attitude toward the treatment. A supportive rehabilitation programs are recommended for both the discharged patients and their families to enhance the drug adherence attitude among those patients.

Key words: Self-stigma · Drug adherence · Schizophrenic patients

INTRODUCTION

Stigma refers to a social phenomenon whereby the public has a negative view of individuals with attributes perceived by the general population as inferior, threatening, or having other negative connotations. An integral part of the process is unequal treatment of such individuals. The most important correlates of stigma include mental diseases. Self-stigma, or internalized stigma, is a gradual process in which a person (e.g. a psychiatric patient) is uncritically adopting negative societal prejudices about attributes discredited by others [1].

Throughout history, mental illness has been interpreted in many different ways, depending on the beliefs of each culture. In social settings like eastern countries, mental illness always had negative connotations. The mentally ill have been discriminated against in several ways throughout the centuries. Expressions such as ''mentally ill'' or ''mental patients'' are still associated with violence, dangerousness, unpredictability and even moral depravity [2].

Compared to other mental illnesses, schizophrenia tends to be linked to negative media coverage and public imagery. Public fear and negative stereotypes remains an obstacle to the adequate use of effective treatment and social integration of the patient. Negative attributions can be detected in western and non-western societies [3]. Self-stigma plays a role in many areas of the patient's life. Furthermore, it also discourages therapy. Stigma associated with mental illness can have far reaching consequences for the lives of individuals who are labeled. Stigma occurs when such "elements of labeling, stereotyping, separation, status loss and discrimination co-occur in a power situation that allows the components of stigma to unfold" [4].

Stigma and discrimination related to mental illness may block certain life goals for individuals, such as living independently or obtaining stable and meaningful employment [5]. Further, public attitudes and stereotypes about mental illness may causepeople to avoid getting treatment that is needed because they do not want to be labeled or experience discrimination [6]. Moreover, adherence to treatment plan may be interrupted

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and discontinuation of medication may result from self-stigma leading to more deterioration in social, psychological, occupational and academic life as well for schizophrenic patients. Patients with poor treatment adherence are more likely to report a worsening of symptoms, which may lead to relapse [7]. Scott [7] found that recently discharged psychiatric patients who do not attend their initial appointment are at considerable risk for clinical deterioration and possible re-hospitalization.

Patients are usually well aware of stereotypes that society holds about people receiving psychiatric care and are concerned about them. Anxiety about potential stigma increases in those who have a greater tendency toward self-stigma. The consequences may be even more serious than in the case of stigmatization by others [8].

Significance of the Study: The effectiveness of the psychiatric nursing prevention starts from the nurse; who is caring most of the time of the psychiatric patient; and it is important to add to the nurses' knowledge the patient's perspective about the possible factors that may lead to discontinuation of medication. Stigma can devastate the patient's ability to work productively and or even, the patient's motivation to find work; subsequently that can increase the financial burdens encountered by the patients and their families.

A recent critical review of the research literature shows there to be inconsistent and still unclear findings upon the nature, relationships and clinical significance of stigma difficulties and adherence to treatment outcomes among adults with schizophrenia.

The Egyptian literature has very few studies in respect to adherence to treatment and discontinuation of medication in relation to stigma among schizophrenic. The results of this study will help the psychiatric nurse to plan and implement an individualized nursing care when discharging the patient from the hospital while; incorporating the available community resources. Additionally, this study will add to the body of nursing knowledge about the Egyptian schizophrenic patients' perspective of the stigma related factors. The study will shade the light on a combination of various factors such as the patients' socio-demographic and medical data and how they are associated with the patient's treatment adherence.

Aim of the Study: This study aimed to examine the association between perceived self-stigma, drug adherence and discontinuation of medication among schizophrenic patients.

Research Questions:

Q1: what are the correlates to perceived self-stigma among schizophrenic patients?
Q2: What are the correlates to drug adherence and treatment discontinuation among schizophrenic patients?
Q3: What is the relation between self-stigma and treatment discontinuation among schizophrenic patients?

MATERIALS AND METHODS

Research Design: A descriptive correlational design was utilized in this study. This type of research design is appropriate to the current study as the researches collected the data from the subjects at one time meeting without changing any of the subjects' behaviors or perception [9].

Sample: A sample of convenience of 120 schizophrenic patients, who attended "Outpatient Clinics" of the "Mental Health and Addiction Prevention Hospital" in "El Manial University Hospital" were recruited for this study. Criteria for inclusion for this sample were both genders, aged 16-50 years diagnosed as schizophrenic patients with various psychiatric diagnoses, with duration of illness not less than 3 years. All patients with mental retardation; other psychiatric diagnoses; addiction; and neurological disorders were excluded from the sample.

Setting: The study was conducted at "Outpatient Clinics" of the "Mental Health and Addiction Prevention Hospital" in "El Manial University Hospital". The hospital presents inpatient and outpatient services.

Tools of Data Collection: Three tools were utilized in this study:

Socio-Demographic Data Sheet and Medical Data Questionnaire: This included age, gender, marital status, education, duration of illness, number of previous admission, type of medications, number of follow-up in the last month, date of last admission, date of last discharge.

Internalized Stigma of Mental Illness (ISMI) Inventory [10]: This scale measures the subjective experience of stigma of mental illness and is consisting of 29 items (e.g., "Having a mental illness has spoiled my life" and "I feel out of place in the world because I have a mental illness"). Each statement is rated on the following 4-point

Likert scale: 0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree. A total score is computed by adding the 29 items. A cut-off of 43 on the ISMI is a good predictor of experiencing stigma measured by Cronbach's alpha test = (.887) indicating a high degree of internal consistency.

Drug Attitude Inventory [11]: Drug Attitude Inventory is a questionnaire created to measure patients' attitudes toward medications. The patient decides whether statements about drugs are true or false. The statements are concerned with drug effectiveness, necessity and adherence. The instrument assesses the current attitudes toward medications, not whether the patients discontinued their medication in the past. A total score is computed by adding the 10 items. A cut-off of 6 on the drug attitude inventory is a good predictor of having discontinuation of medication, 6 score and more means adherent to drug.

Ethical Considerations: A written approval was obtained from the director of Mental Health and Addiction Prevention Hospital" in "El Manial University Hospital to conduct the current study. All subjects were informed that participation in the current study is voluntary and the data collected will be used only for research purpose and anonymity and confidentiality of each participant was protected by allocation of a code number for each response. The participants were informed that they can withdraw at any time during the study without giving reasons; confidentiality was assured and subjects were informed that the content of the tools will be used for the research purposes.

Pilot Study: A pilot study was conducted in order to test the reliability and validity of the questionnaire items and clarity of questions. A total of 10% of the sample were recruited for the pilot study. All subjects included in the pilot study met the criteria for inclusion. The pilot study revealed minimal modifications in the questionnaires. Subjects included in the pilot study were excluded from the main study sample.

Procedure:

- The investigators used and followed the back translation procedure for verifying the translation of the tool.
- An official permission was obtained from director of Mental Health and Addiction Prevention Hospital" in "El Manial University Hospital to conduct the study.
- The investigators met with the subjects in the outpatients clinics in the selected hospital, explained the purpose of the study, assured them about confidentiality and anonymity and finally invited them for participation. They were also informed about their rights to withdrawn from the study at any time without giving any reason.
- Each participant was interviewed individually, in semi-structured interview, for about 30 to 45 minutes, the questionnaires were read and explained and the choices were recorded by the investigators.

Data Management and Analysis: Statistical analysis was done with the help of software 'SPSS 22' Statistical Package for the Social Sciences (Windows version 22.0). Descriptive statistics including number and percentages were used for qualitative variables and mean and standard deviations were used for quantitative data. Correlation coefficient and multiple regressions were used to answer the current research questions. Relationship between different measures was computed via Pearson's correlation coefficient. The level of significance in this study was (<0.05) and (<0.01) considered highly significant.

RESULTS

As observed in Fig. 1 that studied male participants were the majority of the entire studied participants (87%).

This figure shows that nearly half of the studied participants (43.3%) were aged from 26 – 35 years old, with mean age and standered deviation (32.02 ± 9.399)

Regarding marital status, figure (3) illustrates that, less than two thirds (65%) of the studied sample were single while more than one third (34.1%) was married.

As observed in Figure (4) that four fifth (80%) of the studied sample were educated and one fifth of them (20%) were illiterates.

As regards working condition in Figure (5), more than half (53%) the studied participantswere working while the rest of them had no work.

Fig. (6) shows that, 88% of the studied participants were admitted 5 times to psychiatric hospitals.

As regards to duration of disease, majority of the studied participants (82.5%) were stayed for 5 years in psychiatric hospitals.

Data in Figure (8) revealed that, more than half of the studied participants (53%) were discontinuing their medication and 46.5% were adherent to medication.

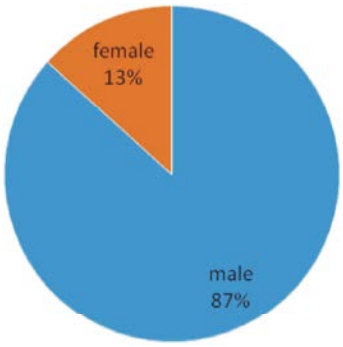

Fig. 1: Gender distribution among the studied participants (n=120)

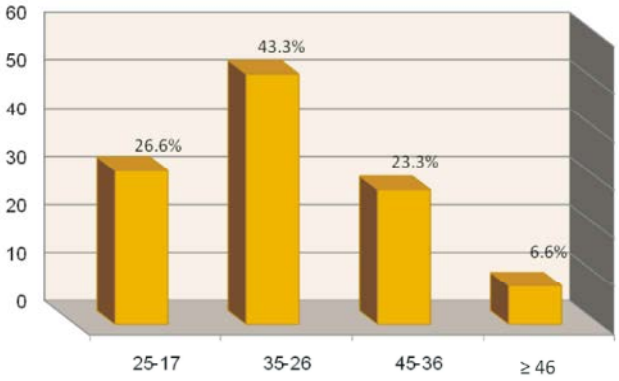

Fig. 2: Age groups of the studied participants (n=120)

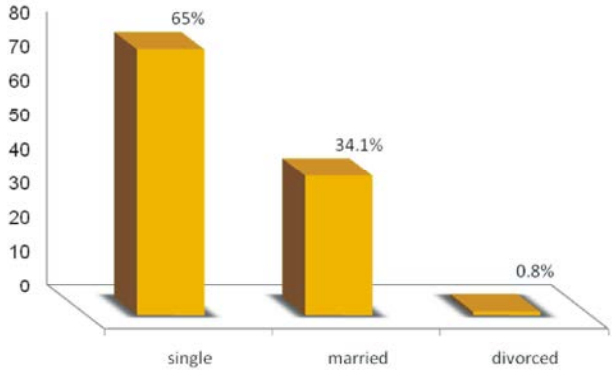

Fig. 3: Marital status distribution of the studied participants (n=120)

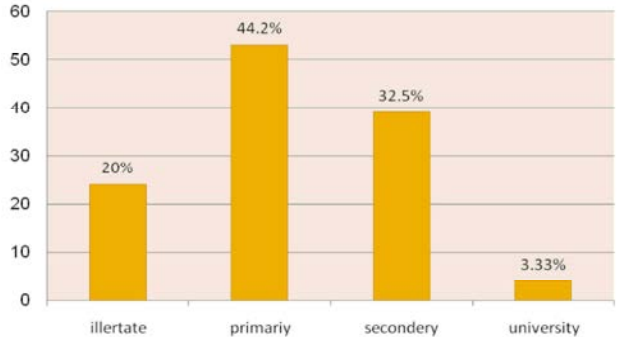

Fig. 4: Educational levels distribution among the studied participants (n=120)

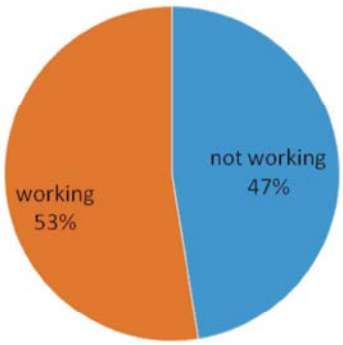

Fig. 5: Working condition distribution of the studied participants (n=120)

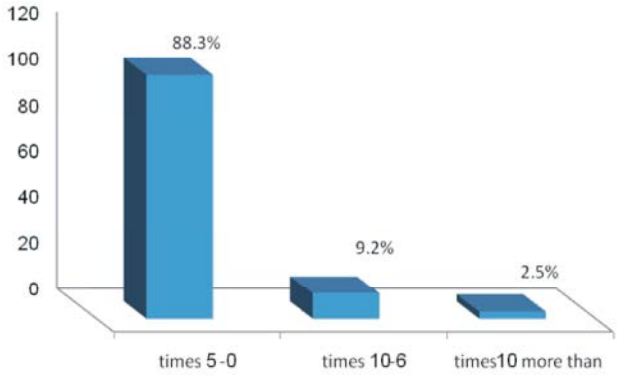

Fig. 6: Number of admissions distribution of the studied participants (n=120)

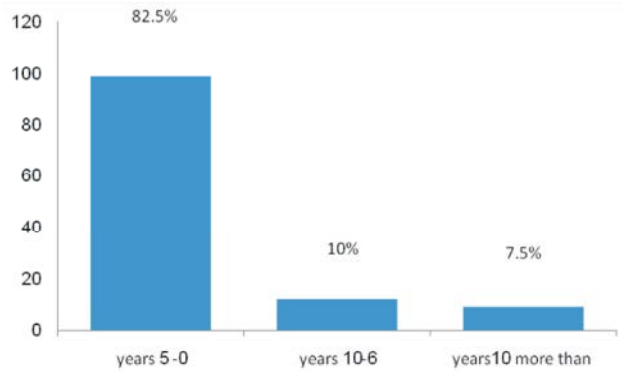

Fig. 7: Duration of disease among the studied participants (n=120)

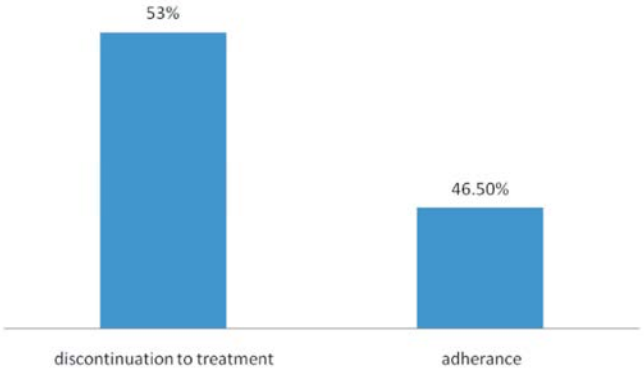

Fig. 8: Adherence and discontinuations of medications distribution of the studied participants (n=120)

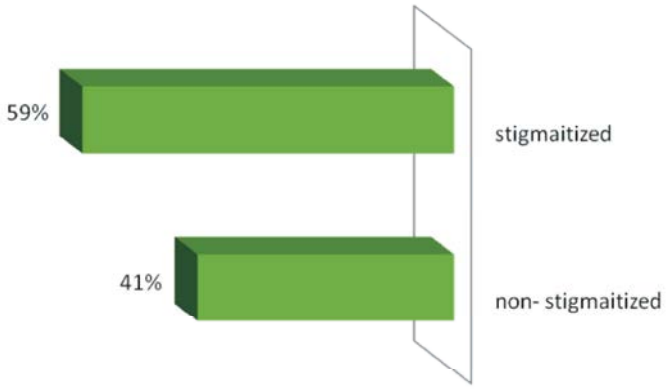

Fig. 9: Stigma distribution among the studied sample (n=120)

Table 1: Difference between self -stigma, adherence to treatment and discontinuation of medications in relation to gender (n=120):

		Self-stigma					
Gender	Items	Non stigmatized		Stigmatized		X^2	P- value
Male	Adherence	19	18.3%	29	27.9%	0.483	0.487
	Discontinuation to medication	26	25%	30	28.8%		
Female	Adherence	2	12.5%	6	37.5%		
	Discontinuation to medication	2	12.5%	6	37.5%		

Table 2: Difference between self-stigma, adherence to treatment and discontinuation of medications in relation to marital status (n=120):

		Self -stigma					
Marital status	Items	Non stigmatized		Stigmatized		X^2	P- value
Single	Adherence	15	19.2%	20	25.6%	0.467	0.470
	Discontinuation to medication	21	26.9%	22	28.2%		
Married	Adherence	4	25%	12	75%		
	Discontinuation to medication	7	17.1%	13	27.1%		

Table 3: Difference between self -stigma, adherence to treatment and discontinuation of medications in relation to educational status (n=120)

		Self -stigma					
Educational status	Items	Non stigmatized		Stigmatized		X^2	P- value
Illiterate	Adherence	4	3.3%	10	8.3%	0.479	0.489
	Discontinuation to medication	2	1.6%	8	6.6%		
educated	Adherence	18	15%	25	20.8%		
	Discontinuation to medication	29	24.2%	28	23.3%		

Fig. (9) illustrated that more than half of the studied participants (59%) were stigmatized meanwhile 41% of the studied participants were non- stigmatized.

Table (1) shows that 28.8% of the studied participants were stigmatized male and discontinued taking their medication, while more than one third 37.5% were stigmatizedfemale and discontinuedtaking their medication. Moreover, the table added that no statistically significant difference was found between self-stigma, adherence to treatment and discontinuation of medication in relation to gender (when X^2= 0.483 at p=0.487).

Table (2) revealed that 28.2% of the studied participants were stigmatized single patients with medication discontinuation, while 27.1% were stigmatized married patients with medication discontinuation. Moreover, the table added that no statistically significant difference was found between self-stigma, adherence to treatment and discontinuation of medication in relation to marital status (when X^2= 0.467 at p=0.470).

Table (3) shows that, 6.6% of the studied participants were stigmatized non educated patients with medication discontinuation, while 23.3% were stigmatized educated patients with medication discontinuation.

Table 4: Difference between self -stigma, adherence to treatment and discontinuation of medications in relation to working conditions (n=120)

		Self -stigma					
Working condition	Items	Non stigmatized		Stigmatized		X^2	P- value
Not working	Adherence	10	17.5%	19	33.3%	0.467	0.477
	Discontinuation to medication	10	17.5%	18	31.6%		
Working	Adherence	11	17.5%	16	25.4%		
	Discontinuation to medication	18	28.6%	18	28.6%		

Table 5: Difference between self- stigma, adherence to treatment and discontinuation of medications in relation to place of residence (n=120)

		Self -stigma					
Residence	Items	Non stigmatized		Stigmatized		X^2	P- value
Urban	Adherence	15	16.1%	32	34.4%	0.481	0.478
	Discontinuation to medication	15	16.1%	31	33.3%		
Rural	Adherence	6	22.2%	3	11.1%		
	Discontinuation to medication	48	28.6%	5	18.5%		

Table 6: Correlation between self -stigma, adherence to treatment and discontinuation of medications in relation to socio-demographic and medical data of studied participants (n=120)

	Perceived stigma		Discontinuation of medication	
Socio-demographic /medical data	r	p	r	p
Age	0.199	0.067	0.076	0.551
Gender	0.154	0.198	0.074	0.563
Marital status	0.236*	0.048	0.132	0.297
Educational level	0.173	0.148	0.035	0.781
Occupation	0.028	0.820	0.156	0.220
Residence	0.026	0.831	0.059	0.645
Duration of disease	0.200*	0.044	0.102	0.423
Number of admission	0.136	0.257	0.071	0.578

Table 7: Correlation between self -stigma, adherence to treatment and discontinuation of medications among studied participants (n=120)

	Discontinuation of medication		Adherence to treatment	
Study variables	r	p	r	p
Perceived self -stigma	.791*	0.000	.157	0.087

Moreover, the table showed that no statistically significant difference was found was found between selfstigma, adherence to treatment and discontinuation of medication in relation to level of education (when X^2= 0.479 at p=0.489).

Table (4) stated that around one third of the studied participants (31.6%) were stigmatized not working patients with medication discontinuation, while more than one quarter of studied participants (28.6%) were stigmatized working patients with medication discontinuation. Moreover, the table added that no statistically significant difference was found between self -stigma, adherence to treatment and discontinuation of medication in relation to working conditions (when X^2= 0.467 at p=0.477).

As observed in Table (5) 33.3% of the studied participants were stigmatized patients from urban areas with medication discontinuation, while 18.5% were stigmatized patients from rural areas with medication discontinuation. Moreover, the table added that no statistically significant difference was found self -stigma, adherence to treatment and discontinuation of medication in relation to place of residence (when X^2= 0.481 at p=0.478).

As observed intable (6) statistical significant correlation between marital statusof studied participants, duration of disease and perceived stigma (where r= 0.236, 0.200 at p= 0.48, 0.044, respectively). While in the other hand; there are no statistically significant relation was found between all socio-demographic and medical and discontinuation of medications.

Table (7) revealed that statistical significant correlation was found between perceived self -stigma and discontinuation of medication where r= 0.791 at p= 0.000, meanwhile there was no statistical significant correlation between perceived self -stigma and adherence to treatment where r=0.157 at p=0.087.

DISCUSSION

As regards socio-demographic and medical data among the studied participants the current study results revealed that more than half of the studied participants aged between 26 to 35 years old with no significant association to perceived self-stigma, discontinuation of medication and adherence to medication. These results could be due to the predetermined inclusion criteria of the studied sample or it might be due this middle age of the studied participants who have a deeper and focused vision to different issues, they also are generally more positive, accepting understanding and experienced.

These results are supported by Abd-El Monem[12]who revealed that age of mentally ill patients is not associated by experiencing stigma. Moreover, Yen *et al.* [13] studied "Self-Stigma and Its Correlates Among Outpatients With Depressive Disorders" and theydidn't find any statistical significant relation between both variables.

The current study results revealed that in spite of majority of male patients among the studied participants the female schizophrenic patients were more stigmatized with medication discontinuation and less drug adherence attitude. The results added that there are no associations between male and female in relation to perceived self - stigma, discontinuation of medication and adherence to treatment. These results could be interpreted by high flow of men checkups to the mental health and psychiatric clinics to prevent and protect themselves from deterioration by illness and fired from their jobs.These study results are contradicted by Abd-El Monem [12] who reported that there was no statistical significant relation found between stigma and gender. The current study result is matched with Lotfy [14] who revealed that, male gender represented 61% versus 39% for female.

The current study results reported that more than three quarters of the studied participants were single less adherent with medication and less stigmatized, moreover, the married participants were more stigmatized with medication discontinuation. Also, the results added that a significant association between marital status and perceived self-stigma. These study results could be due to the risk factors of mental illness that included marital status (widowed, divorced) and could be due to the effect of internalized stigma, having low self -esteem and predicting failure later on in their marital life. These study results are congruent with Abd-El Monem [12] and Gaber [15] who reported that being single and poor social life is risk factors for being mentally ill which is positively correlated with experiencing stigma and poor insight.

Concerning level of education and work status of the studied participants the current study results revealed that more than three quarters were educated more stigmatized and less adherent with medication with no statistical significant association between education and the study variables. The current study also added that, more than half of the study participants were working patients moreover, the not working study participants were more stigmatized with discontinuation of medication attitude. These results could be due to dealing with others in outside community and at work place enable the mentally ill patients to cope with stressors and decrease the perceived self-stigma and be more adherentwith medications.

These study results are contradicted by Kamaradova *et al*. [16] who revealed that, self-stigma is negatively correlated with education and work status. Meanwhile, the study results are supported by Kim *et al*. [17] who reported that there are no associations between occupational status and self-stigma among mentally ill patients.

As regards medical data of the studied participants the current study results revealed that, duration of the disease is positively associated with perceived self-stigma meanwhile, there is no statistical correlation was found between number of admission and the study variables. These study results could be explained as schizophrenic patients reported more troubles at home and work that caused discrimination and marginalization. The results of the current study are contradicted by Abd-El Monem [12] who reported that, mentally ill patients with short duration of illness are more stigmatized. Meanwhile, the current results are in disagreement with Kamaradova *et al.* [16] who revealed that number of hospitalization is negatively associated with drug adherence attitude, meanwhile Kamaradova *et al*. [16] supported the current study results as revealed that there's a positive association between duration and onset of the disease and experiencing self-stigma.

In relation to perceived self-stigma, adherence and discontinuation of medication among the study participants the current study results revealed that, more than half of the studied participants have discontinuation of medication attitude and less than half of the studied participants have medication adherence attitude, with no statistical significance associations between adherence to medication and discontinuation of treatment attitude. Moreover, the study results added that, around two thirds of the studied sample were stigmatized with statistical significant correlation was found between perceived self-stigma and discontinuation of medication this might be

due to cultural and social view of mentally ill patients as strangers and all the time being observed by others in their all behaviors and acts with affect their medication adherence attitude and increasing the discontinuation attitude to medication. These study results are supported by Kamaradova *et al.* [16] who stated that, level of self-stigma as expressed by the total ISMI score was statistically significantly positively correlated with discontinuation of medication scores and significantly negatively correlated with the current level of adherence. The findings of the current studyare consistent with the results of a study showing that depressive patients perceiving more stigma tended to discontinue or interrupt their treatment [18, 19].

CONCLUSIONS

The current study concluded that maritalstatus, gender, working condition, level of education, duration of disease and number of admission were correlatedtoperceived self -stigma, adherence to treatment and discontinuation of medication. The studyalso revealed that, schizophrenic patients expressed higher perceived self-stigma, lower adherence to treatment and higher discontinuation of medication attitude. In other words, the more self-stigmatized the patients were, the lower their current adherence to treatment and the more severe level of medication discontinuation.

Recommendations:

- Drug adherence strategies should be included in the psycho-educational programs for schizophrenic patients.
- Family should be involved in classes for care of schizophrenic patients to increase adherence to medication.
- Social skill training program should be introduced as a useful way to help patients to develop and promote their coping skills.
- Planning and implementation of public health awareness programs to raise the orientation toward the nature of psychiatric disorders will minimize the experience of stigma.

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