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A Comparison of Quality of Life, Medication Side-Effect and Adherence among Schizophrenia Patients on Conventional versus Atypical Antipsychotics

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Abstract

Quality of life (QoL) is becoming a widely accepted schizophrenia management outcome. But it is still not very clear if there are any significant differences between the conventional and atypical antipsychotics in terms of QoL improvement among people with schizophrenia (PWS). It is also imperative that antipsychotic drug-related factors, such as medication adherence and side-effect, which could directly or indirectly affect the QoL of PWS, are determined and compared among PWS on different classes of the drugs. Data were collected on Socio-demographic Characteristics, Quality of Life and Medication adherence using Socio-demographic and Schizophrenia Clinical Characteristics questionnaire, World Health Organization Quality of Life (WHOQoL)-Brief, and Morisky Medication Adherence Scale (MMAS) respectively from 250 respondents attending a tertiary health center's Psychiatric clinic in Kano, Nigeria. Although PWS on the two classes of antipsychotic drugs showed inequalities in different aspects and domains of QoL, as well as in the levels of adherence and side-effects, the differences were all insignificant. However, presence of drug side effects was significantly associated with lower health-related QoL in the conventional antipsychotics group (p = 0.001), and lower score in the physical domain of QoL in the atypical antipsychotics group (p = 0.044). Medication adherence was found to be associated with better scores in different domains of QoL in both groups of PWS. There are no significant differences in terms of QoL, medication side-effect and adherence among PWS on the two classes of antipsychotics. However, drug side-effects and adherence were significantly and respectively associated

with lower and higher scores in different domains of QoL in both groups.

1. Introduction

For quite sometimes, the interest in quality of life (QoL) among people living with mental illnesses in general and schizophrenia in particular has been deservedly growing. [1] This is attributable to the fact that QoL is an important outcome measure in the management of people living with chronic conditions from all medical specialties. Adoption of such an approach could be a step towards fighting the long-term stigma facing the field of psychiatry and psychiatrically ill persons. The use of antipsychotic drugs to treat people living with psychotic disorders, especially schizophrenia, started in the 1960s, at a time when the mechanism of action of such drugs was largely unknown. Although the success recorded with the first generation or conventional antipsychotics was huge, such drugs had little or no effect on some symptoms of schizophrenia and were noted to be associated with some undesirable side effects, especially the so-called extrapyramidal effect. That paved the way for more researches in psychopharmacology which led to the discovery of second generation or atypical antipsychotic drugs. Because of their different receptor and other properties, it was prematurely assumed that such newer classes of drugs were better than the conventional ones in many respects. [2] But objective research findings on such claims have been controversial since then.

Over the last decades, several researches, of different designs, have been conducted to compare the two classes of antipsychotic drugs based on different parameters, ranging from efficacy, tolerability to side effects, among others. Although QoL improvement has also been considered, the attention it received has not been adequate and most of the studies had used clinician administered instruments to assess for the QoL. However, people living with schizophrenia, especially those in remission state, just like any human being are capable of expressing their subjective feelings and experiences. [3] The relationship between antipsychotic drug medication and QoL among people with schizophrenia might not be direct, as the role of some mediating factors, such as the extent of compliance to the drug treatment and drug-related side effects, cannot be ruled out. Therefore, it is very important to put into consideration the aforementioned factors when studying the role of drug use on QoL among people living with schizophrenia. So, in addition to the QoL, this study involves the assessment and comparison of treatment adherence and drug-related side-effects among the respondents on the older and those on the newer generations of antipsychotic drugs.

Literature searches have revealed the shortage of studies among people living with schizophrenia from Africa, especially from countries located to the South of the Sahara and north of Limpopo. [4] This could be attributable to the weaknesses of the state and public health and research institutions in most of the countries, as well as the burden of infectious diseases. Hence mental health receives the lowest priority even from international organizations and donor agencies. Theoretically speaking, the burden of mental illness is expected to be much in the developing world for obvious reasons, such as multiple lifetime adversities. But the outcome of mental problems might differ between the developing and the developed world. For instance, the well-known International Pilot Study on Schizophrenia (IPSS) found that schizophrenia has better outcome in the developing countries. [5] This calls for more studies on the role of drug treatment on the outcome of chronic mental illnesses, like schizophrenia, in developing countries.

The objectives of the study included;

1) To determine and compare different aspects and domains of QoL among PLWS on conventional and atypical antipsychotic drugs.

2) To determine and compare drug-related side-effects among PLWS on conventional and atypical antipsychotic drugs.

3) To determine and compare medication adherence among PLWS on conventional and atypical antipsychotic drugs.

2. Materials and Methods

The study was conducted among people living with schizophrenia who were attending the psychiatric out-patient clinics at Aminu Kano Teaching Hospital (AKTH). The hospital is a major tertiary health center in northwestern Nigeria. The study was conducted between February and August, 2019. Inclusion criteria for the respondents included; must met MINI-7 criteria for lifetime schizophrenia diagnosis, in remission and on antipsychotic drug for at least 6 months and aged 18 - 60 years, while patients with co morbidities such as substance use disorder, intellectual disability and chronic physical illnesses were excluded. Cluster random sampling technique was applied. Ethical clearance was obtained from the Ethical Committee of the hospital. The study population comprised of 250 people living with schizophrenia, out of which 158 and 92 were on atypical and conventional antipsychotic medications respectively. The data was obtained from a study on caregiver expressed emotion, QoL and medication adherence among people living with schizophrenia, published elsewhere. [6]

The following instruments were used:

1) Socio-demographic and Schizophrenia Clinical Variables Questionnaire

Apart from the socio-demographics of the patients, the clinical section of this instrument was used to subjectively and objectively assess for the presence or absence of antipsychotics related side-effects among the respondents.

2) MINI International Neuropsychiatric Interview (MINI)-7.0 Scale

MINI-7 corresponds to DSM-5 diagnosis and it has been used to confirm the lifetime diagnosis of schizophrenia among respondents. The instrument contains "yes" or "no" questions on different forms of delusions, hallucinations and formal thought disorders.

3) Positive and Negative Syndrome Scale of Schizophrenia (PANSS)

Each of the total 30 items on this scale is scored on a 7 point symptom severity proportional scale. This instrument has been used to establish the remission criteria among the PLWS. The Criteria was satisfied when a patient reported a score of 3 or less on these eight items of the PANSS. The 8 items were delusions, conceptual disorganization, hallucinatory behavior, blunted affect, social withdrawal, lack of flow or spontaneity of conversation, mannerism and posturing and unusual thought content.

4) World Health Organization Quality of Life (WHOQOL-BREF) Scale

This 26-item of the self-administered are grouped under the overall quality of life and general health category (2-items), and four domains, namely—physical health (7-items), psychological health (6-items), social relationships (3-item) and the environmental health (8-items) domain. Each item is scored on a scale of 1 to 5, with 1 being the lowest score and vice versa, exceptions are the items (facets) of "pain and discomfort", "negative feelings" and "medication dependence" in which the scoring is in reverse order.

The scoring of each domain was made by calculating the mean domain score, the mean score was then multiplied by 4, this conversion gives the corresponding **score** on WHOQOL-100. To calculate the percentage satisfaction with an item or domain of quality of life, this formula was used; **score** minus 4 multiplied by 100/16.

English and Hausa versions were used.

5) Morisky 4-Item Medication Adherence Scale

This scale was used to assess patients' level of medication adherence. The 4-items come in the form of "Yes" or "No" questions, a score of 0 denotes high adherence, while scores of 1 - 2 and 3 - 4 denote intermediate and low adherence respectively

3. Procedure

Interviews for the data collections were conducted, with ethical considerations in mind and in practice, during each of the 2 clinic days per week. Data was analyzed using Statistical Package Software for Social Sciences (SPSS) version 21. Analysis was done, in line with the study's objectives, at both univariate, bivariate levels. Chi-square test and independent samples t-test were used to compare proportions and means respectively.

4. Results

The mean age of the all respondents was 34.6 (sd ± 10.8) years, while for those

on conventional and atypical antipsychotics the respective mean age values were 36.0 (sd ± 11.2) and 33.8 (sd ± 10.4) years respectively. However, the difference in the mean age between the 2 groups was not statistically significant (t = −1.55, p = 0.122). Apart from gender, where a significantly larger proportion of males were on atypical antipsychotics (x^2 = 6.488, df (1), p < 0.011), there was no other significant difference, in terms of socio-demographic characteristics, between the 2 groups. See Table 1.

Among the patients on conventional antipsychotics, the younger respondents had higher mean scores on the overall and health-related QoL, while the older respondents scored higher on the psychological and social domains of the QoL. However, the aforementioned differences were not statistically significant. Insignificant variations in QoL mean scores were also found across different measures of the QoL and other socio-demographic variables. See Table 2 for the detailed breakdown.

However, in the case of those on atypical antipsychotic drugs, female respondents had significantly higher mean score of the overall QoL (p = 0.01). While male were found to have a statistical significant higher scores in the physical and social domains of QoL (p = 0.012 and p = 0.017 respectively). No significant differences were noted with respects to the other variables. More on Table 3.

Table 1. A Comparison of Socio-demographic Variables among the 2 groups of Respondents.

Variable	CAG n (%)	AAG n (%)	x^2	df	p-value
	N = 92	N = 158			
Gender					
Male	40 (43.5)	95 (60.1)	6.488	1	**0.011***
Female	52 (56.5)	63 (39.9)			
Marital Status					
Married	39 (42.4)	60 (38.0)	0.474	1	0.491
Non-married$^\$$	53 (57.6)	98 (62.0)			
Educational Status					
Low	55 (59.8)	80 (50.6)	1.960	1	0.162
High	37 (40.2)	78 (49.4)			
Employment Status					
Employed	30 (32.6)	63 (39.9)	1.314	1	0.250
Unemployed	62 (67.4)	95 (60.1)			
Ethnicity					
Hausa	83 (90.2)	143 (90.5)	0.006	1	0.940
Others*	09 (09.8)	15 (09.5)			
Religion					
Christianity	4 (4.3)	5 (3.2)	Fisher's p-		0.790
Islam	88 (95.7)	153 (96.8)			

CAG = Conventional Antipsychotics Group, AAG = Atypical Antipsychotics Group. Non-married included singles, divorcees, and widows/widowers. Low education refers to those with formal education not beyond primary level. Others* included Fulani, Yoruba, Igbo etc.

Table 2. Comparison of Mean (sd) Scores on the 2 main items and 4 domains of Quality of Life across the Socio-demographic Variables in the Conventional Antipsychotics Group.

Variable	Overall QoL	Health-related QoL	Physical domain	Psychological domain	Social domain	Environmental domain
Total	**3.83 (0.82)**	**3.73 (0.93)**	**3.77 (0.57)**	**3.74 (0.63)**	**3.40 (0.74)**	**3.69 (0.50)**
Age group						
Group A[#]	3.95 (0.94)	3.81 (0.84)	3.73 (0.57)	3.63 (0.62)	3.27 (0.68)	3.59 (0.50)
Group B	3.75 (0.73)	3.67 (0.98)	3.80 (0.58)	3.81 (0.63)	3.49 (0.77)	3.75 (0.48)
t/p-value	1.152/0.252	0.699/0.487	−0.532/0.596	−1.403/0.164	−1.396/0.166	−1.578/0.118
Gender						
Male	3.87 (0.82)	3.75 (1.10)	3.70 (0.56)	3.71 (0.71)	3.43 (0.88)	3.67 (0.50)
Female	3.79 (0.82)	3.71 (0.82)	3.83 (0.57)	3.76 (0.56)	3.37 (0.62)	3.70 (0.49)
t/p value	0.500/0.619	0.196/0.845	−1.099/0.275	−0.415/0.679	0.382/0.704	−0.243/0.809
Marital status						
Married	3.79 (0.61)	3.71 (0.89)	3.77 (0.59)	3.73 (0.53)	3.47 (0.68)	3.69 (0.46)
Non-married	3.85 (0.95)	3.74 (0.96)	3.77 (0.55)	3.75 (0.69)	3.34 (0.79)	3.69 (0.53)
t/p value	−0.312/0.741	−0.910/0.928	0.260/0.979	−0.169/0.86	0.854/0.395	0.023/0.981
Level of Education						
Low	3.81 (0.59)	3.81 (0.59)	3.90 (0.42)	3.85 (0.46)	3.35 (0.53)	3.73 (0.38)
High	3.83 (0.93)	3.68 (1.01)	3.70 (0.63)	3.68 (0.69)	3.42 (0.84)	3.67 (0.55)
t/p value	−0.115/0.908	0.634/0.527	1.622/0.108	1.239/0.218	−0.449/0.655	0.637/0.526
Employed						
Yes	3.900 (0.84)	3.73 (1.00)	3.82 (0.64)	3.78 (0.75)	3.57 (0.86)	3.65 (0.50)
No	3.790 (0.81)	3.72 (0.89)	3.75 (0.54)	3.72 (0.56)	3.31 (0.67)	3.70 (0.50)
t/p value	0.599/0.551	0.036/0.971	0.544/0.588	0.418/0.677	1.586/0.116	0.471/0.639

Group A[#] comprised of 18 - 34 years old and Group B = 35 - 60 years old. Non-married included singles, divorcees and widows/widowers. Degrees of freedom for the t-test = 90.

Head-to-head comparison of the mean QoL scores among the 2 groups of respondents showed that patients on conventional antipsychotics have higher scores in the overall QoL, as well as the in the domains of psychological well-being and environmental conditions. While the respondents on the atypical drugs had higher scores of health related QoL, and also the domains of physical well-being and social aspects of life. However, all the differences were insignificant. See Table 4.

The level of medication adherence and side-effects between the respondents on 2 classes of drugs did not differ significantly, this was revealed by comparison of proportions (p = 0.603 and p = 0.094 respectively). See Table 5.

Lack of drug-related side effects is associated with significantly higher health-related QoL scores among the respondents on conventional antipsychotics (p = 0.001). But in the atypical antipsychotics group, lack of side effects is associated with better scores in the physical domain of QoL (p = 0.044). See Table 6.

Among patients on atypical antipsychotics, adherence to the drug treatment was found to be associated with significantly higher mean score in the health-related

QoL, and also in the domains of physical and psychological well-being (p = 0.017, p = 0.004 and p = 0.034 respectively). But among the respondents on conventional antipsychotics, no significant differences were found among the treatment adherent and non-adherent respondents, in all the aspects and domains of QoL. These are shown on Table 7.

Table 3. Comparison of Mean (sd) Scores on the 2 main items and 4 domains of Quality of Life across the Socio-demographic Variables in the Atypical Antipsychotics Group.

Variable	Overall QoL	Health-related QoL	Physical domain	Psychological domain	Social domain	Environmental domain
Total	3.70 (0.95)	3.80 (1.04)	3.79 (0.62)	3.67 (0.66)	3.49 (0.62)	3.68 (0.53)
Age group						
Group A#	3.71 (0.92)	3.83 (1.10)	3.78 (0.62)	3.68 (0.65)	3.45 (0.66)	3.59 (0.50)
Group B	3.68 (0.98)	3.76 (0.98)	3.81 (0.61)	3.65 (0.66)	3.55 (0.58)	3.75 (0.48)
t/p-value	0.166/0.869	0.461/0.645	−0.316/0.752	0.223/0.824	−0.863/0.389	0.083/0.933
Gender						
Male	3.54 (0.95)	3.84 (1.00)	3.90 (0.51)	3.73 (0.65)	3.59 (0.58)	3.70 (0.52)
Female	3.94 (0.90)	3.73 (1.10)	3.63 (0.72)	3.58 (0.67)	3.35 (0.66)	3.65 (0.53)
t/p value	**−2.605/0.01**	0.662/0.509	**2.551/0.012**	1.432/0.154	**2.417/0.017**	0.568/0.571
Marital status						
Married	3.87 (0.87)	3.78 (1.00)	3.73 (0.68)	3.70 (0.63)	3.49 (0.62)	3.69 (0.69)
Non-married	3.60 (0.98)	3.80 (1.10)	3.83 (0.57)	3.65 (0.67)	3.50 (0.62)	3.67 (0.55)
t/p value	1.714/0.089	−0.133/0.894	−1.011/0.313	0.551/0.582	0.072/0.943	0.329/0.742
Level of Education						
Low	3.67 (1.00)	3.53 (1.00)	3.66 (0.63)	3.59 (0.54)	3.50 (0.54)	3.59 (0.57)
High	3.53 (1.00)	3.88 (1.00)	3.83 (0.61)	3.69 (0.69)	3.49 (0.67)	3.70 (0.51)
t/p value	−0.258/0.797	−1.784/0.076	−1.498/0.136	0.783/0.435	0.079/0.937	−1.159/0.248
Employed						
Yes	3.59 (1.10)	3.92 (0.96)	3.76 (0.58)	3.74 (0.58)	3.53 (0.52)	3.67 (0.53)
No	3.78 (0.84)	3.72 (1.10)	3.81 (0.64)	3.81 (0.64)	3.47 (0.68)	3.68 (0.53)
t/p value	−1.184/0.239	1.215/0.226	−0.517/0.606	1.219/0.225	0.635/0.526	−0.061/0.952

Group A# comprised of 18 - 34 years old and Group B = 35 - 60 years old. Non-married included singles, divorcees and widows/widowers. Degrees of freedom for the t-test = 156.

Table 4. Comparison of mean quality of life scores and the classes of antipsychotic drugs among the respondents.

QoL Domain	AAG	CAG	t-value (df = 248)	p-value
	Mean(±SD)	Mean (±SD)		
Overall QoL	3.70 (0.95)	3.83 (0.82)	−1.043	0.298
Health-related QoL	3.80 (1.04)	3.73 (0.93)	0.528	0.598
Physical Domain	3.79 (0.62)	3.77 (0.57)	0.296	0.768
Psychological Domain	3.67 (0.66)	3.74 (0.63)	−0.829	0.408
Social Domain	3.49 (0.62)	3.40 (0.74)	1.093	0.275
Environmental Domain	3.68 (0.53)	3.69 (0.5)	−0.139	0.889

QoL = Quality of Life.

Table 5. Levels of Medication Adherence and Drug-related Side-effects among the Respondents on the Conventional and Atypical Antipsychotics.

Variable	CAG n (%)	AAG n (%)	χ^2	df	p-value
	N = 92	N = 158			
Medication Adherent					
Yes	38 (41.3)	98 (62.0)	0.270	1	0.603
No	54 (58.7)	60 (38.0)			
Drug Side-effect					
Present	11 (12.0)	32 (20.3)	2.810	1	0.094
Absent	81 (88.0)	126 (79.7)			

Table 6. Side effects and Mean (±SD) quality of life among the respondents on the conventional and atypical antipsychotics.

Quality of Life Division/Domain	Conventional Antipsychotics Group				Atypical Antipsychotics Group			
	No Side effect	Side effect present	t-value	p-value	No side-effect	Side effect present	t-value	p-value
Overall QoL	3.81 (0.85)	3.91 (0.54)	−0.356	0.723	3.67 (0.95)	3.84 (0.95)	−0.944	0.347
Health-related QoL	3.84 (0.86)	2.90 (1.04)	3.287	**0.001***	3.84 (0.93)	3.63 (1.39)	0.836	0.408
Physical QoL	3.79 (0.53)	3.65 (0.81)	0.765	0.446	3.86 (0.54)	3.54 (0.81)	2.087	**0.044***
Psychological QoL	3.75 (0.62)	3.66 (0.73)	0.437	0.663	3.64 (0.62)	3.76 (0.79)	0.904	0.367
Social QoL	3.42 (0.71)	3.24 (0.98)	0.734	0.465	3.53 (0.54)	3.33 (0.86)	1.256	0.217
Environmental QoL	3.71 (0.49)	3.54 (0.53)	1.045	0.299	3.65 (0.62)	3.78 (0.56)	1.277	0.204

Table 7. Medication Adherence and Mean (±SD) Quality of Life Scores among the Respondents on the Conventional and Atypical Antipsychotics.

Quality of Life Division/Domain	Conventional Antipsychotics Group				Atypical Antipsychotics Group			
	Adherent	Non-adherent	t-value	p-value	Adherent	Non-adherent	t-value	p-value
Overall QoL	3.97 (0.75)	3.72 (0.86)	1.490	0.140	4.08 (0.89)	3.47 (0.91)	4.151	**<0.001***
Health-related QoL	4.00 (0.90)	3.54 (0.91)	2.421	**0.017***	3.93 (0.90)	3.71 (1.11)	1.356	0.177
Physical QoL	3.96 (0.44)	3.63 (0.61)	2.988	**0.004***	3.84 (0.60)	3.77 (0.63)	0.698	0.486
Psychological QoL	3.90 (0.54)	3.62 (0.66)	2.148	**0.034***	3.69 (0.72)	3.65 (0.62)	0.348	0.728
Social QoL	3.42 (0.81)	3.38 (0.70)	0.210	0.834	3.48 (0.62)	3.50 (0.62)	0.249	0.804
Environmental QoL	3.76 (0.46)	3.63 (0.52)	0.210	0.834	3.75 (0.58)	3.64 (0.49)	1.284	0.201

5. Discussions

The proportion of male respondents in the atypical antipsychotics group was significantly larger than the females. This could be due to many patient's and physician-related factors such as females are mostly dependents and hence are more likely to have more affordable medications prescribed by their physicians and purchased by their husbands/parents, on the other hand, it could due to differences in severity of illness which often is the reason for chosen conventional antipsychotic or otherwise. Schizophrenia usually has an earlier age of onset and

relatively severer course among males, this could make the prescription of the newer agents, as first or second line drugs, to the male patients more likely. Another possible explanation is the possibility of higher risk of metabolic side-effects, associated with some of the atypical drugs, among the females. [7] The average age of the respondents, as a whole, was in the region of 35 years, which indicates a young and potentially productive age group. Lack of significant differences in terms of most of the socio-demographic variables between the 2 groups of patients would minimize the risk of bias. But female on atypical antipsychotics had higher overall QoL than males, this could be due to better subjective sense of overall well-being among the former. However, males had reported better enjoyment of physical and social aspects of life, this is attributable to the fact that the study was conducted in a male dominant society.

In this study, the people living with schizophrenia who were on conventional antipsychotic drugs were found to insignificantly have higher mean scores of overall QoL than those on atypical agents. This finding is in keeping with what was reported by different studies. For instance, in the landmark clinical utility trial of antipsychotics in schizophrenia study (CUtlASS) it was found that there was no significant difference in terms of QoL and symptoms severity between patients on conventional and atypical antipsychotics, after a follow up for one year. [8] This further suggests that antipsychotic drug class on its own does not have effect on the QoL of individuals living with schizophrenia. As such other contributory factors need to be considered. Contrary to our finding, Golubovic and colleagues have reported that people with schizophrenia and schizo-affective disorder were significantly more likely to benefit from improved QoL when placed on an atypical antipsychotic, as opposed to a conventional agent. [9]

In addition, this study found that schizophrenia patients on conventional antipsychotics have higher levels of psychological well-being and better satisfactions with their environment. But in both cases the differences were not significant. This further demonstrates that there is no superiority, in terms of improvement in other domains of QoL, between the two classes of antipsychotic drugs. Meanwhile respondents on atypical antipsychotics had insignificantly better mean scores in terms of health-related QoL, as well as in the physical and social domains of the QoL. The aforementioned finding further complicates the comparison of QoL among patients on both classes of drugs. Therefore, this calls for more studies with larger sample sizes in order to simplify the dilemma. A meta-analysis on QoL improvement comparison had reported that about 50% of the included studies found clear superiority of the atypical antipsychotics. [1] But there are still persistent controversies surrounding the topic, as the more literature is searched, the more differing findings are encountered. [10] [11] As a number of high-quality studies did not find any significant difference in QoL between patients on the two generations of antipsychotics. Some went further to compare drugs from the same class, for example the Schizophrenia Outpatient Health Outcome (SOHO) study, conducted in Europe, found a significant superiority of Olanzapine, in QoL improvement, over other atypical agents such as

Risperidone, Quetiapine, as well as some typical drugs. [12]

An insignificantly larger proportion of the schizophrenia patients on the atypical antipsychotics were adherent to the drug treatment. This was in line with what was reported in some previous studies. [13] [14] For instance, Olfson and colleagues found, via electronic monitoring, that schizophrenia and schizo-affective disorder patients on atypical antipsychotic drugs had insignificantly higher levels of treatment compliance. [15] Therefore, the issue of comparison of medication adherence between patients on the two classes of drugs is said to be inconclusive. [16] In the landmark Clinical Antipsychotic Trial of Intervention Effectiveness (CATIE) study, no significant differences were found between the conventional and atypical antipsychotics in terms of time it takes to discontinue a given drug. [17] The time it takes to discontinue an antipsychotic could be a marker of both medication compliance and tolerability.

In this study, there were also no significant differences, in terms of antipsychotic drug-related side-effects, between the patients on the two classes of antipsychotic drugs. This could be due to the fact that there is still no "ideal antipsychotic", as each drug often comes with its associated side-effect, and this study involved the assessment of all forms of antipsychotic side-effects. Other studies have made similar findings. [16]

Presence of side-effect has been found to be associated with significantly low scores in the health-related QoL among respondents on conventional antipsychotics, and low scores in the physical domain of QoL among those on the atypical drugs. This underlies the need to consider the negative consequence of side-effects on the QoL of people living with schizophrenia, regardless of the class of their prescribed antipsychotic drugs. Ristner and colleagues have equally reported that presence of antipsychotic drug-related side effects was associated with less satisfaction with subjective feelings and general activities among people with schizophrenia. [18] As in this study, they also did not find any significant differences in quality of life between patients on conventional and atypical antipsychotic drugs.

We also found that medication adherence was associated with significant improvement in the health-related QoL, as well as in the physical and psychological domains of QoL among those on the conventional drugs. Medication adherent respondents had significantly higher overall QoL among the patients on atypical antipsychotics. The bottom line is that medication adherence, in both groups, is an important factor in the QoL improvement.

6. Conclusion

Although there are some insignificant differences, in terms of QoL, drug related side effects and adherence between the schizophrenia patients on the conventional and atypical antipsychotics, none of the head-to-head differences was statistically significant. Hence, other factors, rather than the class of antipsychotic drug alone, should be considered in the pharmacotherapy of schizophrenia.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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