WHICH ANTIPSYCHOTICS WOULD MENTAL HEALTH PROFESSIONALS FROM A LOW INCOME COUNTRY CHOOSE FOR THEMSELVES?

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ABSTRACT

Objective: To determine which antipsychotics mental health professionals from a low income country would choose for themselves.

Design: Cross-sectional study

Place and duration of study: This study was conducted in 8 cities in Pakistan from February to August 2008.

Subjects and Methods: Responses from 268 mental health professionals, including psychiatrists and nurses were obtained using a semi-structured questionnaire.

Results: All together 80% of doctors chose an atypical antipsychotic; risperidone was the most popular choice. Half of nurses did not know which antipsychotic to choose and the remaining chose haloperidol (21%) and risperidone (19%). Efficacy and safety were the two most important factors influencing their decision.

Conclusion: Both doctors and nurses in Pakistan considered efficacy and safety/tolerability to be important factors for choosing an antipsychotic; this is in line with National Institute of Clinical Excellence (NICE) guidelines 2009. Mental health training for nurses was identified as a major service deficiency.

Key words: Antipsychotic, Mental health professionals, Low income country.

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INTRODUCTION

A number of studies have explored mental health professionals' choices when deciding on medications for themselves if they were to become unwell[1-3]. A large survey of 544 psychiatrists from all specialties in Scotland (59%) showed that almost a third (29%) preferred to receive risperidone should they develop psychosis[3]. Another study in south London reported antipsychotic preferences of 188 psychiatrists, pharmacist and nurses. This study showed that mental health professionals largely chose olanzapine, risperidone or aripiprazole as treatment option for themselves and the most important factors in making these choices were efficacy and tolerability[1]. It has been suggested that such collective expert opinion is a powerful form of evidence, complementing data obtained from clinical trials and meta-analyses, incorporating years of clinical experience[4]. Furthermore, these studies have provided results that coincide with current research on the drugs in question.

However, most of these studies are carried out in developed countries, whereas clinical experience in a developing country like Pakistan can be very different. Pakistan has a population of about 180 million, with 70% of the population living in rural areas. The traditional healers along with psychiatric services are the main mental health service providers. The number of trained mental

health professionals is small as compared to the population demands with an average of two psychiatrists to population of a million people[5]. For a doctor in clinical settings in Pakistan, pharmacological attributes of a drug may be of less importance and other factors like affordability and availability may play a greater role in drug-prescribing[6].

In addition, there are no formally trained mental health nurses in Pakistan. The majority of nursing staff on psychiatric inpatient units are trained in general nursing with little exposure to psychiatry. They gain experience while on the job particularly regarding psychotropic medications. Nurses however are responsible for dispensing psychotropic medications on these units and are the first line of contact for monitoring responses and side effects. There are no studies from the developing world that have investigated the experiences and attitudes of nurses with regards to antipsychotic medication. Although nurses are not involved in prescribing psychotropic medications in most settings, they do influence choices made by doctors and compliance by the patients.

The popularity of individual antipsychotics is often thought to be indicated by their rate of prescription. However, prescription rates indicate only prescribers' preference for antipsychotics to be taken by their patients. The impression given by these figures may well be at odds with prescribers' preferences when faced with a hypothetical situation in which they themselves would be required to take antipsychotic medication[1].

In this study we aimed to determine whether these very different set of conditions would influence the collective expert opinion of local doctors and nurses in a low resource country and produce a noticeable difference in results from the original studies.

SUBJECTS AND METHOD

The study was carried out in the psychiatric units in Karachi, Hyderabad, Sukkur, Dadu, Quetta, Lahore, Rawalpindi and Islamabad. Consultant psychiatrists, psychiatry trainees, middle grade psychiatrists and nurses working in psychiatry for more than two years were included in this study. Psychiatrists working in private sectors in different cities of Pakistan were also approached for inclusion in the study. Institutional Review Boards approval was obtained from concerned institutions.

A semi-structured self reporting questionnaire was designed to explore the factors influencing the decision-making process when choosing an antipsychotic medication. Prior to the study fifteen mental health professional contributed to piloting the questionnaire and amendments were made for clarity. Research assistants approached all psychiatrists and nurses present in the selected hospitals on the day of their visit. They waited while the questionnaires were completed by the participants. Details regarding the grade of the professionals, age, gender and years since qualification were collected. Participants were asked which antipsychotic they prescribed most frequently to treat patients suffering from psychosis and the reasons for the same. They were then asked which antipsychotic they would prescribe for themselves if, hypothetically, they were to suffer a psychotic illness. Finally they were asked to give a reason for their choice from six available options: dosing schedule, efficacy, safety, tolerability, pharmacokinetic profile and cost. Alternatively they had the option to report any other reason for their choice.

RESULTS

A total of 268 responses from 35 hospitals in the eight cities in Pakistan were obtained. All doctors and nurses present on the day the research team visited their hospital were approached and none refused. A total of 192 psychiatrists; including 70 junior trainees with up to 2 years experience, 52 middle grade psychiatrists with more than 2 years experience, 70 consultant psychiatrists (including professors) and 76 nurses participated in the study.

Of the 192 doctors, 100 (52.7%) prescribed a first generation antipsychotic (FGA) most often, with the remaining prescribing second generation antipsychotics (SGA). Only 50% of nurses had some knowledge of antipsychotics, with haloperidol and olanzapine being the most commonly used antipsychotic. However, a larger number (30%) of nurses gave no response or said they did not know which antipsychotic they dispensed most frequently. Some (18%) of nurses named other psychotropic medications like anticholinergics, anxiolytics and antidepressants (Table 1).

In response to the question on preference of an antipsychotic for themselves, 80% of doctors opted for an SGA, 55.2% choosing risperidone. Amongst the nurses, 35 (46%) did not know which antipsychotic to choose or gave no response, while 10% named other psychotropic medications. The remaining nurses chose haloperidol (21.1%) and risperidone (19.1%) as their preferred antipsychotic. Overall risperidone (n=121, 45.1%) was the antipsychotic most likely to be chosen followed by haloperidol (n=52, 19.4%).

The main factors that the participants considered important in choosing an antipsychotic for themselves were efficacy (doctors 56.3%, nurses 28.9%) and safety (doctors 22.6%, nurses 18.4%). Table 2 shows the main reasons for deciding on the drug of choice when prescribing for oneself.

DISCUSSION

This study shows that amongst the FGA, haloperidol was reported by the psychiatrists to be the most commonly prescribed antipsychotic in the sample studied in Pakistan. In our sample, it was equally prescribed by mental health professionals regardless of years of experience in practice. Amongst the SGA, risperidone was

Table 1: Antipsychotic use and preference by mental health professionals

	Antipsychotics that psychiatrists have reported to most frequently prescribe in clinical practice		Antipsychotics that health professionals would prescribe for themselves					
	Psychiatrists (n=192)		Psychiatrists (n=192)		Nurses (n=76)		Psychiatrists + nurses (n=268)	
Drug	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**
First Generation Antipsychotics								
Haloperidol	86	(44.8)	36	(18.6)	16	(21.1)	52	(19.4)
Trifluperazine	11	(5.7)	1	(0.5)	–	–	1	(0.37)
Fluphenazine	3	(1.6)	1	(0.5)	–	–	1	(0.37)
Chlorpromazine	–	–	1	(0.5)	2	(2.6)	2	(0.74)
Second Generation Antipsychotics								
Risperidone	83	(43.2)	106	(55.2)	15	(19.7)	121	(45.1)
Olanzapine	4	(2.1)	11	(5.7)	–	–	11	(4.1)
Quetiapine	3	(1.5)	15	(7.8)	–	–	15	(5.6)
Aripiprazole	–	–	2	(1.0)	–	–	2	(0.74)
Zaprisidone	–	–	5	(2.6)	–	–	5	(1.8)
Clozapine	–	–	11	(5.7)	–	–	11	(4.1)
Other psychotropics*	–	–	–	–	8	(10.4)	8	(3.0)
No response	2	(1.0)	3	(1.5)	7	(9.2)	10	(3.7)
Don't know	–	–	–	–	28	(36.8)	28	(10.4)
Total	192	(100)	192	(100)	76	(100)	268	(100)

* Anticholinergics, anxiolytics and antidepressants

Table 2: Factors considered most important when choosing antipsychotic for self

	Group-1 Trainees (n=70)		Group-2 Experienced Medical Officer (n=52)		Group-3 Qualified Consultants (n=70)		Total number of psychiatrists Group 1 + Group 2 + Group 3 (n=192)		Group-4 Nurses (n=76)		Total number of psychiatrists and nurses (n=268)	
Factors	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**	**n**	**(%)**
Dosing Schedule	1	(1.4)	1	(1.9)	1	(1.4)	3	(1.6)			3	(1.1)
Efficacy	29	(41.4)	35	(67.3)	44	(62.9)	108	(56.3)	22	(28.9)	130	(48.5)
Safety	22	(31.4)	8	(15.4)	13	(18.6)	43	(22.4)	14	(18.4)	57	(21.2)
Tolerability	12	(17.1)	2	(3.8)	5	(7.1)	19	(9.9)	3	(3.9)	22	(8.2)
Pharmacokinetic Profile	–	–	2	(3.8)	2	(2.9)	4	(2.1)	3	(3.9)	7	(2.6)
Cost	5	(7.1)	2	(3.8)	5	(7.1)	12	(6.3)	12	(15.8)	24	(8.9)
Not answered	1	(1.4)	2	(3.9)	–	–	3	(1.7)	22	(28.9)	25	(9.3)
Total	70	(100)	52	(100)	70	(100)	192	(100)	76	(100)	268	(100)

**Junior trainees were psychiatrists preparing for their part 1 exam of Fellow of College of Physician & Surgeons (FCPS) Pakistan. Middle grade psychiatrists are those preparing for part II of FCPS and consultants are psychiatrists with postgraduate qualifications in private practice.

by far the most frequently prescribed antipsychotic. Similar studies from the UK[3] reported risperidone to be the most commonly prescribed antipsychotic by psychiatrists. The predominance of SGA prescribing might reflects the influence of evidence based medicine as highlighted by reports as the National Institute of Clinical Excellence (NICE) guidelines[7] and The Maudsley Prescribing Guidelines[3] in clinical decision making. Most psychiatrists in Pakistan tend to follow NICE guidelines. However it is surprising to note that there is less experience with olanzapine and quetiapine even with experienced doctors seeing larger number of patients. The main reason reported for these choices is greater efficacy, followed by safety and tolerability. This is a very important finding considering that the study was undertaken in a developing country. Due to financial constraints one would have expected cost of medication to be a considerable influence on choice of medication, but this is not evidenced from our data.

It is interesting to note that our study was conducted prior to the publication of the new NICE guidelines for Schizophrenia in 2009[8]. In this study approximately 42% of mental health professionals were still using a first generation antipsychotic (haloperidol) and 20% would prefer to use this for themselves. In the 2009 NICE guidelines, clinicians are encouraged to consider both FGA and SGA in first episode (drug naive) patients, involving them in making the decision. This also reflects the findings of two recent studies; Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) and the Cost Utility of the Latest Antipsychotic Drugs in Schizophrenia Study (CUTLASS 1)[9, 10]. Both studies included patients on first generation antipsychotics (perphenazine and amisulpride respectively) as well as second generation antipsychotics. In CATIE patients on olanzapine had the lowest rate of discontinuation and the discontinuation of the conventional antipsychotic perphenazine appeared similar to that of quetiapine, risperidone, and ziprasidone. While in CUTLASS1 there was no advantage of using SGA over FGA, except clozapine, when comparing symptoms and quality of life.

An important finding from our study is the treatment preferences of mental health professionals when prescribing an antipsychotic for themselves. It is shown that the majority of participants opted for atypical antipsychotics. Our sample expressed far greater preference for risperidone, followed by haloperidol, quetiapine and olanzapine. This collective clinical experience and opinion is a powerful form of evidence and should add to the results of randomized controlled trials and meta-analysis in shaping the development of clinical guidelines. Further work needs to be done to explore why risperidone was prescribed more by psychiatrists in Pakistan and less experience with olanzapine and quetiapine.

Another important finding from this study is the limited knowledge of nurses working in psychiatric units about antipsychotic medications. In responses to both experience and choice of antipsychotic medications, almost 50% did not feel comfortable in answering and did not respond. It is important to point out that to our knowledge and until the time of completing this study, there are no programs for training mental health nurses in Pakistan. Psychiatric units are covered by general nurses, who only learn about psychiatric disorders mental illness and treatments while working at the psychiatric units. This is now being recognized as a service deficiency. To improve the quality of psychiatric services and patient outcomes we think it is very important that formal mental health nursing training programmes are introduced. We are aware that some nursing schools are making efforts to introduce such training. Two of the authors (IBC, NH) of this paper are working with one such institute in Karachi to develop a mental health module to be introduced as part of the general nursing training curriculum. However, it should be noted that despite limited training 51.2% nurses considered efficacy, safety and tolerability to be the most important factors in choosing antipsychotic medication for themselves.

It is important to consider our findings in the light of certain limitations. Though we were able to gather the opinion of mental health professionals working across the country, across a range of ages and with a balance of gender and experience, it is possible that our results may not be representative of the whole country. In Pakistan currently there are around 400 practicing psychiatrists and we were able to get a response from a total of 192 psychiatrists. We were able to recruit only 76 nurses to participate in the survey and as mentioned, these nurses did not have any formal training in psychiatry and therefore had very limited knowledge of psychopharmacology. This limited knowledge is likely to have an effect on their responses.

To our knowledge this is one of the first studies carried out in a low income country that has investigated mental health professionals' (doctors and nurses) preferred choices of antipsychotic medication for treatment of both their patients and themselves. Now with the focus on evidence based medicine, the choices for treatment are based not only on the scientific evidence and different guidelines, but also on clinical experience, peer opinion and the pharmaceutical industry marketing influence. We believe that this study sheds some light on the prescribing practice of antipsychotic medication in the developing world.

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REFERENCES

1. Bleakley S, Olofinjana O, Taylor D. Which antipsychotics would mental health professionals take themselves? Psychiatr Bull R Coll Psychiatr 2007;31:94-6.
2. Steinert T. Which neuroleptic would psychiatrists take for themselves or their relatives? Eur Psychiatry 2003;18:40-1.
3. Taylor M, Brown T. "Do unto others as…" — which treatments do psychiatrists prefer? Scott Med J 2007;52:17-9.
4. Taylor M. Antipsychotics preferred by mental health professionals. The columns correspondence. Psychiatr Bull 2007;31:272.
5. Karim S, Saeed K, Rana MH, Mubbashar MH, Jenkins R. Pakistan mental health country profile. Int Rev Psychiatry 2004;16:83-92.
6. Mendis S, Fukino K, Cameron A, Laing R, Filipe A Jr, Khatib O, et al. The availability and affordability of selected essential medicines for chronic diseases in six low- and middle-income countries. Bull World Health Organ 2007;85:279-88.
7. National Institute of Health and Clinical Excellence. Guidance on the use of newer atypical antipsychotic drugs for the treatment of schizophrenia [Online]. 2002 [cited on September 10, 2011]. Available from URL:http//www.nice.org.uk//page.aspx?o=TA043 guidance.
8. National Institute of Health and Clinical Excellence. Core interventions in the treatment and management of schizophrenia in primary and secondary care [Online]. 2009 [cited on September 10, 2011]. Available from URL: http://www.nice.org.uk/nicemedia/pdf/CG82FullGuideline.pdf.
9. Lieberman JA, Stroup TS, McEvoy J, Swartz MS, Rosenheck RA, Perkins DO, et al. Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. N Engl J Med 2005;353:1209-23.
10. Jones PB, Barnes TR, Davies L, Dunn G, Lloyd H, Hayhurst KP, et al. Randomized controlled trial of the effect on quality of life of second- vs. first-generation antipsychotic drugs in schizophrenia: cost utility of the latest antipsychotic drugs in schizophrenia study (CUTLASS 1). Arch Gen Psychiatry 2006;63:1079-87.