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Attitude and Drug Acceptance*

By ARNOLD D. RICHARDS

Many of the changes which make up the revolution in the treatment of the mentally ill in large hospitals in recent years have been facilitated by the use of new drugs, the tranquillizers. A patient who takes his tranquillizer responds better to other treatment, the staff becomes more friendly and helpful: such an anti-vicious cycle hastens recovery. A patient who refuses to take his medication in tablets or capsules is given it in liquid form, the ingestion of which can be more easily checked.

There have been few attempts to find out why some patients refuse drugs, but the incidence of "checking" of drugs, as determined by negative or abnormally low metabolite levels in the patients' urine, has been studied. Neve, in a 1958 (6) survey of the urines of 56 patients supposed to be receiving chlorpormazine found that 10 per cent. had not taken their drug.

Forrest and Forrest (2), in their extensive published work on urinary tests for various phenothiazines, state that "spot checks as well as systematic testing of hospital populations show that at least 5 per cent. to 15 per cent. of patients in institutions successfully 'cheek' their drugs". They attribute this behaviour to the patients' "catatonic, paranoid, depressive or negativistic symptomatology".

Two attempts to delineate specific factors associated with refusal of tranquillizers have been reported in the literature. Raskin (8), found that patients in a VA mental hygiene clinic who refused to take their medicine were better educated, more hostile and aggressive, more negative toward their doctor, less well liked by their therapists and had more psychiatric knowledge than "drug accepters". Raskin concluded that drugs, "provide a focal point for hostile and aggressive impulses, as noted by therapists and admitted by patier themselves". Michaux (5), also studying V out-patients, found that side-effects, resistan and dosage deviation were unrelated to t type of medication and the patient's initi attitude towards drugs. He concluded th "immediate situational and defensive factc predominated in drug refusal".

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Theoretical Considerations

The patient who refuses his drugs may reacting to effects of the drug itself or the setti in which it is given or prescribed. Scott, in symposium on the dynamics of psychiati therapy (11), made the following remai about the meaning of the administration tranquillizers:

"Not only the oral or nasal opening is us for inserting medicines. Any opening may used and any opening may be felt by one patie to be the substitute for one or more of the oth openings. New openings may be made throu the skin with symbolic apparatus such poultices or needles which are frequent symb of the breast and the penis. At present t breast-like pill and the penis-like capsule a for many reasons very much to the fore. might have been stimulating to have specime of each medicine which will be talked about view somewhere enlarged a hundredfold. Th we could see more clearly at least one way which these medicines may loom large in t patients' imaginations".

The patient may object to the taste of t drug, its real or imagined side-effects, or physiological effect. Klerman (4), found th the psychomotor retardation and sedati produced by certain psychotropic drugs had special significance for certain subjects w reacted with feelings of hostility to th effects.

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It is possible that some patients refuse to take their tranquillizers because the drugs make them feel worse rather than better. Sarwer-Foner (9) and Schlesinger (10) have reported on "paradoxical" reactions to tranquillizers: patients who used physical activity as an outlet for the control of anxiety became more violent. Sarwer-Foner suggests that male patients who mask doubts about their masculinity behind social outgoingness may find the "chemical restraint" produced by tranquillizers particularly threatening.

Refusal of tranquillizers may be related to the doctor who prescribed the drug, the nurse who administers it, or the hospital in which it is given. Since in our setting, the patient must take his medicine, his refusal to do so may reflect a conflict with an authority which he must resist. The patient may regard taking his medicine as a submission, related to the hospital staff, parents or more remote authority figures. Where most patients receive tranquillizers, refusal to take drugs may show independence and individuality. A patient may feel that he does not need medicine because he does not believe that he is sick; or he may acknowledge that he is ill, but prefer to retain his symptoms for secondary gain.

There are, therefore, many possible reasons for refusing drugs. Although unconscious factors are probably important, it was decided to investigate differences in conscious attitudes between tranquillizer "refusers" and "accepters", toward the hospital, home, authority, themselves and their illnesses. This study attempts to answer the question, "Is there a particular constellation of attitudes which differentiates accepters from refusers and which might help us to understand the meaning and motivation behind this behaviour?"

Background

Setting

This study was carried out in a large VA hospital with a very active milieu programme, a high staff-patient ratio and a training centre for a psychodynamically-orientated residency programme. The unit studied includes four open wards and four closed wards housing approximately 260 adult male patients, excluding patients admitted for less than one month and a small group of patients under special treatment for alcoholism. The 126 open-ward and 107 closed-ward patients in the study were on the average 38·8 years old and in the hospital 65·0 months. The closed-ward patients were younger than the open-ward patients, yet had been in the hospital longer. Some kind of psychotropic drug was given to 82 per cent. of all patients and 95 per cent. of closed-ward patients. Of these, 90 per cent. were on either chlorpromazine or trifluoperazine. Closed-ward patients received chlorpromazine more often and in larger doses than open-ward patients. Open-ward patients received trifluoperazine more often but in like doses. Except for rare intramuscular doses given to acutely agitated patients, psychotropic drugs were administered orally in tablet, spansule or concentrate form. The concentrate was given to 22 per cent. of patients on tranquillizers. More closed-ward than open-ward patients were on concentrate.

Medication Administration Procedures

While the nurse gave all medication directly to the patient to take immediately, supervision of actual ingestion was more strict on closed wards than on open wards. Nurses might insist on seeing some patients swallow medicine; others might be allowed to walk to the water fountain and take their pills unobserved. Occasionally, where "cheeking" of medicine was suspected, the nurse would inspect the patient's pharynx or have him sit at the nurse's station for fifteen minutes following ingestion. Some nurses, the nurse of the maximal security ward, for example, were particularly alert to techniques used to avoid ingesting medication. On her ward, most patients were on concentrate because of her concern about possible covert refusal of these drugs.

Method

Osgood's semantic differential rating scale was used to measure the patients' attitudes toward such concepts related to hypotheses about refusal of tranquillizer as "home", "father", and "nurse". Subjects rated each concept on each of these scales: Good—Bad, Pleasant—Unpleasant, Strong—Weak, Helpful—Harmful, Fair—Unfair, Healthy—Sick, Useful—Useless, Kind—Cruel. Since eight scales, each with seven intervals, were used, the most favourable score for a concept was fifty-six and the least favourable score was eight.

The specific hypotheses tested are given below with the relevant concepts:

Hypothesis 1: Refusers approve of medicine less than accepters.

Concept: "My Medicine."

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Hypothesis 2: Refusers approve of the hospital less than accepters.

Concepts: "Hospital", "Doctor". "Nurse", "Other Patients", "Hospital Activities".

Hypothesis 3: Refusers are less favourable to life outside the hospital.

Concepts: "Home", "Mother", "Father", "Wife", "Neighbours", "Job".

Hypothesis 4: Refusers are less favourable to authority and authority figures.

Concepts: "Rules and Regulations", "Freedom", "President", "Mayor".

Hypothesis 5: Refusers have a higher self-concept.

Concept: "Me".

Hypothesis 6: Refusers are more favourable toward their illness.

Concept: "My Illness".

Hypothesis 7: Refusers are more favourable toward athletic activities.

Concept: "Baseball".

Subjects

Judgments were obtained from each patient's nurse and doctor about his attitude toward medication through a questionnaire and individual interviews. Of the 191 patients on the unit rated, 133 were considered accepters and 58 were rated as refusers. Of the 58 refusers, 35 patients were rated as refusers by either the doctor or the nurses and 23 by both. There was no significant differences between these two groups in age (38 years), length of stay in hospital (6 years), kind of drug, form of drug (tablet or concentrate) and dose (23 mg.). Refusers were significantly more often on closed wards and were often on concentrate and on larger doses of chlorpromazine than accepters, but differences in the kind or dose of drug became insignificant when ward placement was taken into account.

There are obvious limitations in assessing refusal of tranquillizer through the personnel questionnaire. Refusers differ markedly in the degree of their resistance to medication. Some patients in the accepter group, while outwardly accepting medication, may be "cheeking" their drugs. Also patients who dislike drugs may be either too sick or too timid to indicate this to the nurse.

Because it may be difficult to "know" whether or not a patient is taking his drug, semi-quantitative colour tests for phenothiazines in urine were introduced by Forrest and Forrest (2). Although this seems an ideal method for determining whether or not a patient is taking his drug, these tests were found to have serious limitations in our study as urine tests of our patients produced few negatives. The tests were found unreliable for doses of drugs less than 100 mg. because of a high incidence of false positives and difficulty in reading the faint and varied colours produced at the lower end of the dosage scale.* This limitation excluded all patients on trifluoperazine, almost half of the patients on drugs, since the average dose of this drug is 23 mg.

In six months, 19 patients of the group receiving more than 100 mg. of phenothiazine (almost always chlorpromazine) showed negative or markedly reduced urine levels. Four were consistently negative. The other 15 varied during the course of the study. Some became urine-positive on concentrate and in some cases the drug was changed or discontinued. Of these 19 patients, 11 were judged refusers by both the doctor and the nurse, 7 by either, and one was judged as an accepter by both.

Final Selection of Groups

Finally, 30 patients were selected for study by the semantic differential technique described above. They were judged as refusers by nurse and doctor or they showed negative or greatly reduced phenothiazine levels in their urine, or both. This extreme refuser group was compared with an equal number of controls matched for ward, drug, and approximate dosage level of drug but judged as accepters by both the doctor and the nurse.

The larger refuser group (all patients judged as such by nurse, doctor, having negative urine levels, or all three) was compared with patients judged as accepters by both doctor and nurse. At first there were relatively more closed-ward patients in the refuser group and relatively more open-ward patients in the accepter group. This

* Note: A report of these findings will be published separately by the author and Dr. Herman Mason. See also the recent study: Gold, S., Griffiths, P. D., and Huntsman, R. G. (1962). "Phenothiazines in urine", *J. Ment. Sci.*, **108**, 88–94.

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confounded the results of the semantic differential test comparisons because there were greater differences in attitude between open and closed ward patients than between accepters and refusers. Therefore, closed-ward refusers were compared with closed-ward accepters and open-ward refusers with open-ward accepters. Similarly all closed-ward patients were compared with all open-ward patients, closed-ward refusers with open-ward refusers and closed-ward accepters with open-ward accepters.

The groups of patients tested did not differ significantly in age, length of stay, race, marital status and education.*

Results

Semantic Differential Scores

The patients tended to make extreme positive judgments and used the negative half of the scale infrequently; the modal score was 56, with 90 per cent. of the scores above the midpoint of the scale. Similar score distributions have been found in two other studies. Bopp (1) found that psychotic patients tended to make extreme ratings on a semantic differential scale. Souelem (12), who rated patients' attitudes to the hospital on the basis of a questionnaire, found that 85 per cent. of the patients scored above the midpoint of his attitudinal scale. Possibly some patients scored all concepts very favourably to avoid indicating their true feelings; in that case a high score might indicate an unfavourable attitude. It is not possible to determine how much this affected the results here.

Analysis of Scores

The Mann-Whitney U Test was applied to the distribution of test scores for each concept to determine if there were significant differences between groups. Non-parametric tests of significance were used because of the skewed distribution of concept scores and because the points used on the semantic differential scale are probably not equally distant. One-tailed tests were made, except when the differences were in a direction opposite to that predicted. The differences tested were those between all refusers and accepters, and then subdivided into open and closed wards, and finally between extreme refusers and their control group. Comparisons were made also between closed and open wards, also subdivided into accepters and refusers.

There were, therefore, 7 series of comparisons each containing 19 variables. Of the total of 133, 22 differed significantly, three times the chance number (5 per cent. of total number or 7). Half of these were in the two major comparisons, extreme refusers versus controls and open versus closed ward, whereas only two would have arisen by chance.

Attitude Toward Medication

The hypothesis that refusers would rate Medicine less favourably than accepters was confirmed for the Extreme Refuser group but not for refusers as a whole.

In contrast, both Raskin and Michaux did not find any relationship between their patients' attitude toward medication and refusal to take drugs. This contradiction may relate to the fact that they studied out-patients, who may not have been receiving medication at the start of their study, whereas the majority of our patients had been receiving tranquillizers for several years.

Attitude Toward the Hospital

The second hypothesis that refusers would rate concepts relating to the hospital less favourably than accepters, was not confirmed.

Attitude Toward Home

The third hypothesis was that refusers would rate concepts relating to life outside the hospial lower than accepters. The findings in the case of the Extreme Refuser groups suggested that this group was less favourable to their immediate home environment than comparable accepters. Significant difference ($P = \cdot 05$) was found for the concepts, Mother and Father, and a

* Note: Of the 104 patients selected for the study, 5 were out of the hospital, 8 were untestable and 11 refused to take the test. Five of the 11 patients who refused to take the test were in the negative urine group, significantly more (2 per cent. level) than all other subjects. Although more medication refusers than accepters refused to take the test, this difference was not significant.

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difference which approached significance in the direction (P=·07) was found for the concept, Home.

The foregoing is of interest in regard to the question, "Do tranquillizer refusers refuse to take their medicine because they do not want to leave the hospital?". Gordon and Groth (3) used a semantic differential technique to study differences in attitude between chronic schizophrenic patients wishing to leave the hospital and similar patients who resist attempts to plan for their discharge. They found that "Stayers" took a less favourable view of concepts concerned with life outside the hospital. A comparison of our findings with those of Gordon and Groth showed that Medication Refusers were similar to Stayers in their less favourable view of home concepts and that both groups differed from Closed-Ward patients who were markedly less favourable than Open-Ward patients to the hospital but not to their homes.

Gordon and Groth conclude from their data that Stayers remained in the hospital because of their unfavourable view of life outside the hospital. Similarly, Medication Refusers may prefer to remain in the hospital because of their unfavourable view of life at home. It is of interest, however, that in the Stayers-Goers study the greatest difference in any concept was that found for Father. The unfavourable view of parents found for both Stayers and Refusers may explain the conflict with authority found in both these groups (see next section) which in turn may have been a factor in our patients' refusal to take their tranquillizers and in Gordon and Groth's patients' refusal to leave the hospital.

To explore further the finding that extreme refusers have a less favourable view of their parents, the clinical records of all the subjects selected to receive the semantic differential test were reviewed by the author and the descriptions of the patients' fathers given to the admitting physician by the patients or the social workers were recorded. The descriptions of the fathers were then classified by the author as either positive, negative or indeterminate. In the latter group were included those instances in which sufficient information was not available about the father or where the statements were equivocal. This data is given in Table I. Extreme Refusers and Closed-Ward Refusers were found to have described their fathers negatively significantly more often than was the case for their controls. No differences were found when closed-ward patients were com-

TABLE I

Patients' Relationship to Male Parent Compared According to Ward Placement and Medication Acceptance

Categories of Patients	Description of Father on Clinical Record			Test of Significance	
	Positive	Negative	Indeterminate*	χ^2	P
Extreme refusers	5	11	14		
Controls (accepter) ..	16	5	8	7·3	< ·01
Closed ward refusers ..	7	14	21		
Closed ward accepters ..	12	4	16	6·3	< ·02
Open ward refusers	3	5	8		
Open ward accepters ..	7	5	12	0·83	< ·50
All refusers	10	19	29		
All accepters	19	9	28	6·3	< ·02
Closed ward refusers ..	7	14	21		
Open ward refusers	3	5	8	0·46	< ·50
Closed ward accepters ..	12	4	16		
Open ward accepters ..	7	5	12	0·87	< ·50
All closed ward patients ..	19	18	37		
All open ward patients ..	10	10	20	0·01	< ·99

* Omitted from χ^2 test.

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pared with open-ward patients or when Open-Ward Refusers were compared with Open-Ward Accepters. Descriptions of the mothers were not classified because it was difficult to make clear-cut judgments about the mothers from the material in the clinical record.

Attitude Toward Authority

The fourth hypothesis, that refusers would rate concepts relating to authority figures lower than accepters, was largely confirmed. The differences in the concept "Rules and Regulations" were significant or very close to significant for 3 of the 4 refuser groups. Both the Extreme Refuser and total refuser groups rated "The President" less favourably and the extreme refuser group also took a less favourable view of the "Mayor". Hypothesis 4 was not confirmed for Closed-Ward patients.

These findings suggest that tranquillizer refusers as a group refuse to take their drug because they object to being told what to do. This attitude is exemplified by the comments of one drug refuser in describing himself. He said, "I guess I am very hard to regimentate. Even though I may want to do some of the things they want me to do, I look for excuses or refuse. I just figure it is better for me not to go anywhere or do anything because once I go along with something I may not be able to back track."

While medication refusers rated medicine and Rules and Regulations lowest, they rated hospital activities higher than did drug accepters. Why does medicine seem to be a focus for refusers' unfavourable view of authority? One possibility is that this relates to the authoritarian setting in which medicine is given. Any patient who refuses to take his medicine has the liquid tranquillizer almost literally poured down his throat. Medication refusers may be relatively more favourable to hospital assignments than they are to medicine because despite the regimentation involved in many hospital activities, patients do choose some of their own assignments and go to some activities alone or in small groups.

Although medication refusers are less favourable to authority (Rules and Regulations) they are not more favourable to freedom. This parallels the findings of Gordon and Groth that hospital stayers were less favourable to "control' but not more favourable to freedom. Gordon and Groth indicate that patients stay in the hospital because they are "rather rigid opponents of controls and believe they can find more real freedom in the hospital". This description of an ambivalent attitude to control, neither wanting it nor being able to do without it, coincided with our experience with some Medication Refusers. Although they resented being told what to do they remained on Closed-Ward. They may prefer the closed ward, where they can more readily externalize their conflict with authority, to the less authoritative setting of the open ward, where controls have to be maintained from within.

Other Hypotheses

The hypotheses relating to self-concept, attitude toward illness and attitude toward athletic activities were rejected for all the tranquillizer refuser groups.

Closed ward accepters scored lower on the concept, Me ($P = \cdot 015$) than did open-ward accepters. This finding of a lower self-concept for these closed-ward patients warrants further investigation.

Comment

The typical refuser of medication emerges from this study as a Closed-Ward patient who resents coercion, yet doesn't value freedom highly and doesn't dislike the hospital but dislikes his parents. He has been in the hospital for five or six years, yet hasn't been convinced that taking his medicine will make him better. Forcing this patient to swallow medicine is very different from insisting that an acutely ill, agitated, recently admitted patient accept medication. Although the agitated patient may simply be unaware of the benefits to be derived from the medicine, it may be that the chronic patient is influenced by his negative attitudes toward a coercive father image. Thus, it may be more profitable to consider a patient's refusal of medicine as a communication of intrapsychic conflict than to treat it as a mere

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resistance to getting well. Once the doctor and his patient understand why the patient doesn't want to take his drug, the patient may no longer need his medicine.

Summary

A semantic differential rating scale technique was used to study differences in attitudes between tranquillizer refusers and tranquillizer accepters differentiated on the basis of personnel (nurse and doctor) judgments and urine tests for phenothiazines.

Tranquillizer refusers were most often on closed wards and received their medicine in the form of concentrate significantly more often than tranquillizer accepters. Refusers did not differ significantly from accepters in age, length of stay in hospital, kind of drug or dose of drug.

Urine tests for phenothiazines were found to have serious limitations in determining non-ingestion of medication in patients receiving trifluoperazine.

The results of the semantic differential tests suggest that tranquillizer refusers may have less favourable attitudes toward their parents and toward authority than those who accept tranquillizers. Tranquillizer refusers rated the concept "Medicine" less favourably than tranquillizer accepters but did not differ significantly in their ratings of other concepts relating to the hospital.

The significance of these findings as they relate to possible motives for refusing to take tranquillizers and to the setting in which this behaviour occurs is discussed.

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