A STUDY ON THE STAFF-PATIENT INTERACTION IN THE PSYCHIATRIC HOSPITAL (1)

— ANALYSIS OF THE ATTENDANTS' RATINGS OF THE MACC BEHAVIORAL ADJUSTMENT SCALE WITH PSYCHIATRIC PATIENTS —

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As a study of the staff-patient interaction in the psychiatric hospital, variability in the attendants' perception of the patients was investigated. 7 attendants were asked to fill the MACC Behavioral Adjustment Scale with 3 schizophrenic patients. The results indicated that the variability in the attendants' ratings of the MACC Scale was greater with the severely disturbed patients who tended to act out the anxiety in the interpersonal area and in the behavioral area where the attendants and patients were interrelated.

INTRODUCTORY REMARK

In the fall of 1969 the author was engaged in the psychotherapy of a schizophrenic patient, single white female at a State Hospital in the U.S.A. The patient was 24 years old. She comes of a family of middle class. According to the social history, she had a psychotic breakdown just after her 17th birthday, when she was in the Europe with her family. They came back to the States soon, but since then she had been hospitalized in several psychiatric institutions with the diagnosis of schizophrenia. She was admitted to the State Hospital in March, 1966. It was reported that previously she had been very self-destructive and attempted suicide on several occasions. But by the time of admission to the State Hospital, she appeared to have improved considerably. However she was very much delusional, believing that people watched her and ridiculed her and still at times she swallowed a safety pin or pills. Because of these self-destructive behaviors she had been confined in the closed ward.

She was seen by the author one hour every morning except weekends. In the beginning of the therapy we met on the ward. She was very demanding. She constantly asked to have whatever the therapist had with her, for example, a watch, a ring, etc. and she demanded to have a cup of coffee. Also she was threatening suicide, while she was giggling. It was clear that she was testing the therapist. However, in a few days she stopped demanding indiscriminately. After about 10 days the therapist took her out of the ward for therapy. When she was with the therapist, she appeard shy and gentle, and she was rather quiet. However, outside the sessions, she behaved quite differentialy. She called loudly

whomever she saw in the hallway and talked nonsense and let them be frowned at her. Although she showed considerable improvement during therapy sessions, she took pills and swallowed safety pins on several occasions even after the therapy started. On such occasions she was transferred to the Medical & Surgery Unit and the thrapy was prevented to carry on. Most of the attendants seemed to think her behavior of this kind as unpredictable, attention-seeking behavior of the disorganized schizophrenic patient. However, as the author got acquainted with her through therapy, such behavior of her became predictable for the author, and it was found that these behaviors were her reactions in the interpersonal relation with her family (she went home almost every weekend) and staff personnel in the hospital. Then the author became interested in observing the interaction between the patient and the staff on the ward.

She was very labile. Her mood vacillated moment to moment. However, it was felt that her mood vacillation was closely related to her interpersonal reaction. She had very strong likes and dislikes for people and responded quite differently to different persons. And among attendants also, the strong likes and dislikes for her were clearly seen. Some liked her and some hated her. Then there were vicious circles between them. When she was with the persons she liked, she was a quiet, shy but gentle and even sweet girl, and she carried on relatively sensible conversation. On the other hand when she was with the persons she disliked, she was demanding, gave dirty words to them, and did attention-seeking behaviors. Thus she presented herself as a crazy and hateful person and was responded as such a person by them. And then she became hurt and got angry with them. Furtheremore, to some persons she strongly disliked she could not even approach. She just cursed them and call them names in the distance. Just seeing them seemed to provoked anxiety, fear, or anger in her. It is hard to know how this circle of the interaction between them was formed, however, once it was formed,it seemed quite difficult for attendants to realize their feeling towards the patient moment to moment, to understand and empathize the patient at the given moment. They appeared to respond to the patient based on the fixed, stereotypic perception of the patient. And it was impressed that there were individual difference in the attendants' perception of the patient. It appeared to be reflected in that some attendants' observation notes were relatively positive most of the time, for example, "The patient is in good mood", etc. and others' were relatively negative; "The patient is hateful." "She uses dirty language." etc.

Problem

The staff-patient interaction in the psychiatric hospital effects greatly the patient's progression. Careful study should be done on the staff-patient interaction, especially the interaction between the patient and attendants or aides in order to

provide a good treatment program and therapeutic environment for the patient. It will also help to make an attendant training program.

In the introductory remarks some observation of the attendants-patient interaction were presented and difference in the attendants' perception of the patient was suggested. It might be based on the attendants' factors, their implicit personality theory, personal construct and so forth, the patient's different attitude and behavior toward different attendants and interaction of both. This paper, as a first step of the studies on the staff-patients interaction, is aimed to examine in which area of the patint's behavioral adjustments the variability of the attendants' perception of the patient is great and with what kind of the patient the valiability of the attendants perception is great.

The hypotheses of the study are; hypothesis 1: There will be variability in attendants' perception of the patient. The variability will be greater with a severely distureed patient. Hypothesis 2: The variability of attendants' perception of the patient will be greater in the area of the patient's behavioral adjustments where the attendants and the patient are interrelated each other.

The MACC Behavioral Adjustment Scale was used in this study. This Scale was developed by Ellosworth, R.B. as a method of evaluating how the chronically hospitalized psychiatric patients adapted themselves to various ward and off-ward situation found in the hospital community, regardless of extend of psychopathology. He tried to use it as a method of evaluating the patient's adjustment level and the change in it, and much studies have not be done from the view point of the staff-patient interaction. Then some problems in using the MACC Scale for the study of the staff-patient interaction will be discussed.

Method

Subjects: The subjects were 3 schizophrenic patients, white, single females, in the closed ward and 7 attendants, all females, who were working in the ward where three patients were.

Patient A is the patient whose behavioral observation was presented in the introductory remark.

Patient B was 17 years old. She was admitted to the State Hospital at age 9. She had measeles and chickin pox at age 2, and since then she had not been too well. She had been in the various hospitals a number of times with physical complaints and behavioral problems, and the onset of the psychotic disorder was not clear. There was a suspicion of minimal brain damage. Mother reported that she always wanted her way, got angry easily, wanted other children to like her and be accepted. She ran off if not watched closely. By social history mother had habied her a lot, while father did not have patience with her and often there was disagreement between them concerning discipline of her. She was supposed to have been in the Youth Center, however with unknown reason she stayed in the

ward for grown-up females.

Patient C was 17 years old. This was the third admittion to the State Hopital. This time she was brought to the hospital involuntarily by order of Juvenile Court. She had been unable to establish satisfactory relationship with her family, especially with father who was elderly and was considered a hostile and aggresive individual. She felt isolated, confined and depressed. She ran away from home on several occasions. Previously she was diagnosed as adjustment reaction of adolescent, however this time psychiatric and psychological evaluation diagnosed her as schizophrenic. She was waiting to be transferred to the Yough Center. She did not have many behavioral problems on the ward, except that she was easily mixed up with young people of the opposet sex and this was the main reason she was put in the closed ward.

Thus the onset, hospital course, psycho-dynamics and family background of these patients were quite different. However there was commonness in their behavioral manifestation and it formed a striking contrast on the ward. In this ward there were many hebephrenic typed schizophrenic patients who were recently transferred from the Infarmary. These patients were mute and inactive, sitting on the chairs all day long without moving nor talking, and they were sleeping most of the time. They could not take care of themselves and attendants took care of them. On the other hand, these three patients were young and active. They could take care of themselves. However they felt strongly insecure in the interpersonal situation and tended to act out their anxiety in this area. They wanted others' attention, wanted them to like them, and be accepted. They always did attention-seeking behavior and had trouble with attendants.

By psychiatric and psychological evaluation and behavioral observation on the ward A was considered most severely disturbed, B was less disturbed and C was least disturbed. They will be referred as A, B, and C hereafter.

All attendants, except one had been working as psychiatric attendants more than 10 years and they had some attendant training inside or outside the hospital.

Procedures: The attendants were asked to fill the MACC Behavioral Adjustment Sale (Form II) with three patients the MACC Scale is consisted of 16 items which are grouped into four behavioral areas, Mood, Cooperation, Communication and Social Contact. Each scale was made into a 5 point-scale.

Results

The average total scores on the MACC Behavioral Adjustment Scale of 3 patients by 7 attendants are: A, 45.3, B, 55.4, and C, 71.8.

To examine the hypotheses, first, the scores were rearranged so that the item scores in the same area were got together, and Two Way Analysis of Variance was used to examine the main effects of raters (variable I) on the scores, the main effects of behavioral areas (variable II), and joint effects, interaction of two

variables (I×II)

Table 1 shows the results. As seen in the table, there is significant difference in behavioral areas (II) but not in raters (I) and interaction (I×II) when dealt as a whole of 3 patients. Then Two Way Analysis of Variance was made on attendants' ratings of each patient separately. As seen in Table 1, with A there are significant differences in raters and behaviaral areas but not in the interaction. With B, there are significant differences in all 3. With C, significant difference is seen in behavioral areas but not in raters and interaction.

Table 1. Two way analysis of the MACC Behavioral Adjustment Scales. (7 attendants and 3 paietns)

Pts.	Source of variance	SS.	df.	MS.	F
Three pts. as a whole	Raters (I)	8.42	6	1.40	1.25
	Areas of behavioral adjustments (II)	36.41	3	12.14	10.84**
	Interaction (I×II)	14.51	18	0.81	0.72
	Within group	346.33	308	1.12	
	Total	405.67	335		
A	Raters (I)	10.43	6	1.74	2.26*
	Areas of behavioral adjustments (II)	33.32	3	11.11	14.43**
	Interaction (I×II)	9.43	18	0.52	0.67
	Within group	64.5	84	0.77	
	Total	117.68	111		
B	Raters (I)	10.86	6	1.81	3.55**
	Areas of behavioral adjustments (II)	24.07	3	8.02	15.72**
	Interaction (I×II)	15.93	18	0.88	1.72*
	Within group	43.00	84	0.51	
	Total	93.86	111		
C	Raters (I)	2.21	6	0.37	1.42
	Areas of behavioral adjustment (II)	3.74	3	13.34	4.76**
	Interaction (I×II)	6.01	18	0.33	1.27
	Within group	22.00	84	0.26	
	Total	33.96	111		

** 1% level of significance * 5% level of significance

As significant differences were seen in behavioral areas by Two Way Analysis of Variance of attendant's ratings as a whole and with each patient, *t*-test was done to see among which areas the difference is significant with each patient's scores. Attendants' ratings of A and B are lowest in Cooperation and the scores get higher in order of Mood, Communication, and Social Contact. By *t*-test, with A significant differences of 1% level are seen among all areas except between Mood and

Communication. With B the same tendency is seen, but the significant differences are seen between Mood and Social Contact ($p<0.01$) and between Cooperation and Social Contact ($p<0.02$). With C the tendency described with A and B is not seen.

Next, as there was significant difference in raters (variable I) in the ratings of A and B, One Way Analysis of Varince was made on the ratings of A and B separately, in order to find in which area the difference of raters is great. There are no significant difference except in Cooperation of B, but the tendency that the difference among raters gets greater in order of Cooperation, Mood, and Social Contact is seen in the ratings of both A and B.

Then we will see the frequency distribution of ratings. With C Point 5 and 4 are dominantly used by all raters, while with A and B the frequency distribution tends to be expanded. F-test of frequency distribution of the attendants' ratings of 3 patints resulted in that there are significant differences between A and C ($p<0.01$) and, B and C ($p<0.01$) but no significant difference between A and B.

In summary, as regards to the hypothesis 1, the variability of the attendants' ratings of severely disturbed patients (A and B) is greater than that of the less disturbed patient (C). (The variability is greatest with B.) As regards to the hypothesis 2, the attendants' ratings of the severely disturbed patients (A and B) tend to be lower in the area of Cooperation, where the raters and the patients are thought to be interrelated each other, and the variability of raters tends to be greater in this area.

Discussion

In this section 1) comparison of the findings in this study with Ellsworth's will be made briefly and 2) some methodological problems in using the MACC Behavioral Adjustment Scale for the study of the staff-patient interaction will be discussed.

Before proceeding to the discussion, however, some other problems concerning the method in this study will be examined. a) The number of the patients used in this study was small. As mentioned in the section of method they tended to act out their anxiety in the interpersonal area. In general, schizophrenic patients are insecure in the interpersonal situation. However some are withdrawn because of being insecure, while others act out their insecurity, and these three patients manifested characteristic behavior of the schizophrenic patients of the latter type. 2) In this study comparison with mute and inactive patients was not made. However the scores of these mute and inactive patients are predicted to be less variable among the raters and more stable in the time process although their scores would be low. And the staff-patient interaction will be a big problem with such patients as used in this study.

1) Comparison of the present findings with Ellsworth's study

A's average total scores, 45.3, approximates to the average scores (44.68) of

the patients on the closed ward in Ellsworth's study, B's, 55.4, approximates to that (58.00) of the patients without full time work assignment on the open ward and C's, 71.8, approximates to that (75.34) of the patients with full time work assignment on the open ward. However, the patient groups of Ellsworth's study showed the lowest acores on Social Contact, and the scores are getting higher in order of Cooperation, Mood and Communication. In the present study C showed the same tendency, while, as already mentioned, A and B obtained the lowest scores on Cooperation and highest on Social Contact.

This tendency seen in A and B might be related with the ward situation. As mentioned in the section of method, most of the patients in this ward were mute and inactive. They could not take care of themselves, and attendants were busy in taking care of them. Few therapeutic activities except giving medication were carried on in this ward. A and B were attending adult school at the Vocational Rehabilitation Unit two hours three times a week, but rest of the day they were coming around to the nurses' station on the ward asking and demanding, and did attension-seeking behavior. Their behaviors formed striking contrast with other patients, and they always had trouble with the attendants.

2) Some methodological problems in using the MACC Behavioral Adjustment Scale for the study of the staff-patient Interaction

We will begin with examination of the hypotheses. The hypothesis 1 was that there would be variability in attendants' perception of the patient and that the variability would be greater with a severely disturbed patient. There were significant differences in the attendants' ratings of A and B on the MACC Scale. Then can we say that there are significant differences in the attendants' perception of A and B ? Ellsworth discussed about the variability of raters' ratings of the MACC Scale in several places of the manual. Where he discussed the correlations of the behavioral clusters of the Scale, he stated that the variability in the range of correlations seemed to reveal differences in raters rather than instability of relationship. He continued saying, "Some raters gave global ratings based on overall impression of the patient. The intercorrelations between cluster scores for these rater then, are high because of this "halo" effect. Other raters apparently consider each item by itself, resulting in relatively independent cluster scores. Whether or not an item cluster is relatively independent in practice seems to be a function of both the instrument and the rater,.... In summary, the interrelationship between cluster scores varied from rater to rater, the degree of interrelationship depended largely on the manner the observer made his ratings." He also stated that reliability of the Scale is a function of both test items and rater characteristics. And he stressed that an appropriate period of rater training and reliability evaluation should be conducted if scores of a rater are used for clinical or research purposes.

Of course the "halo effect" due to global rating based on overall impression of the patient should be avoided and it will be able to be avoided to some extent by rater training. However, most of the items of the MACC Scale are, as Ellsworth mentioned, judgemental in nature and do not lend themselves easily to objective observation. Therefore, besides the halo effect, other factors, for example, contrasting effect, logical error, which tend to be involved in judgement of others and person perception, should be considered.

Ellsworth developed this Scale as an objective approach to the evaluation of behavioral adjustments of chronically hospitalized psychotic patients, and the change in their adjustment level, and he did not seem to pay much attention on these factors. Answering the question how much of a score change is needed to reflect an observable clinical change in adjustment of the patient, he stated that it is appropriate to consider a Total Adjustment score of 8 raw score points or more as large enough to reflect readily observable improvement or regression in the patient's adjustment on the MACC Form II. In the present study, A has 15, B, 16 and C, 4 raw score points of differences in the Total MACC scores between the highest and the lowest raters. Ellsworth admitted the variability of the raters here, too, stating, "Experience shows that a difference of 15 or more raw score points can occur when a patient is rated on two different occasions by two different raters when the patient has shown no observable change. Usually, it has been found that a patient may relate well to one aide, and poorly with a second one. The first rater rates him high, the second rates him a good deal lower." However, he pointed out that carelessness, inexperience, chronic pessimism, or patient unfamiliarity by the rater are sourses of misleading Total Adjustment scores, and here he again stressed that the use of the same well-trained raters for periodic ratings enchances the stability of scores and increases the probability that scores represent real clinical change in patient's adjustment.

Thus Ellsworth seems to ascribe the variability in the raters to their rating manner. In this study no reliability evaluation was made. However there were no significant differences in raters by Two Way Analysis of Variance of the attendants' ratings as a whole of three patients. Then we can say that there are no significant differences in raters' rating manner, and that the variability in raters depends on the patients. Then the variability in the attendants' rating on the MACC Scale can be considered as the difference in attendants perception of the patients, whatever factors are involved there, but not merely as reflection of attendant's rating manner which would be reduced by rater training. Here the author distinguishes the manner of the perception and the rating manner, although in the person perception both tend to be overlapped each other.

The finding that the variability in the attendants' ratings of A and B was significant supports the latter part of the hypothesis 1, that is, the variability in the attendants' perception of the patient would be greater with a severely disturbed

patient. However, as it was already suggested, it seems more appropriate to add some words and say that the attendants perception of the patients is greater with severely disturbed patients who tend to act out their anxiety in the interpersonal area.

Now we will examine the hypothesis 2. Hypothesis 2 was that the variability in the attendants' perception of the patient would be greater in the area of the patients adjustment behavior where the attendants and the patient were interrelated each other. The result showed that with A and B scores on Cooperation were lowest and the variability in the raters' ratings was greatest there. Here the structure of the MACC Scale must be considered. The MACC Scale, a measure of the patient's behavioral adjustment, evaluates the patient's interpersonal relation in a broad sense. Items of Social Contact, which evaluate mainly how the patient relates to other patients on the ward, lend themselves relatively easily to objective observation, while the scores on the items of Cooperation seem to be effected by the attendant-patient interaction. For instance, if the patient relates well and is cooperative to an attendant, the patient is rated high on Cooperation items by this attendant, while if the patient relates poorly and uncooperative to another attendant, the patient is rated low on the Cooperation items by this second attendant. Therefore, the above mentioned rasult support the hypothesis. However if we consider the items a little further it is found that two items of Cooperation evaluate uncooperativeness due to lack of interest and initiative, and two of them evaluate uncooperativeness due to resistiveness, and in this latter area the attendant-patient interaction would be revealed greatly. In this study, because of the small number of the patients, the statistic analysis was not made in such a detail.

Further it is well known that the shizophrenic patient's mood and communication depend largely on the interpersonal situation. Ellsworth stated, "A high score on communication is characteristic of patient who talk realistically as sensible, easy to "get through to" and grasps what is told to him. A low score describes a person who is mute or talks nonsense and who does not really understand or respond to what is said to him." However, A's behavioral observation showed that A talked realistically to some and talked nonsense to others, that her mood vacillated depending on the interpersonal situation. Thus not only the scores on Cooperation but also on Mood and Communication reflect interrelation between attendants and patients.

In A and B there were no significant differences between attendants' ratings of Mood and Cooperation and Mood and Communication. This might be related with the intercorrelations of the behavioral clusters of the Scale. Table 2 shows the intercorrelations among the clusters. As seen in the table the correlations among the clusters are relatively high except between Social Content and other clusters. Ellsworth stated that Form II behavioral clusters are neither entirely

independent nor extremely highely related, that scale items are part of the estimation of "behavioral adjustments" and interrelated to some extent and that average amount of relationship between clusters of Form II, however, is low enough so patients can score relatively high on one cluster and low on another. Relatively high correlations among Mood, Cooperation and Communication might be related item characteristics mentioned in the preceding paragraphs, although Ellsworth did not mention about it.

Table 2. Average intercorrelations of 4 behavioral clusters, (Form II) (by Ellsworth 5 raters, 261 patients)

		Cooperation	Communication	Social contact
Mood	Average r	.66	.51	.38
Cooperation	Average r		.61	.41
Communication	Average r			.61

Furtheremore the scores on this Scale seem to be related to how the patient perceives the interpersonal situation. In the situation where the patient feels secure, he tends to be rated high, while in the situation where the patient feels insecure he tends to be rated low. This is shown in the following observation: When A was in the Medical & Surgery Unit, where she stayed for a while after she swallowed a safty pin, she looked very secure there. She was put on a white hospital shirt without even underwears and tied down to the bed. She was confined in the bend and had little freedom. Although she was ashamed of it, she could call the staff any time she wanted and the staff paid more attention to her. She appeared to be satisfied and feel secure about it. For comparison, two attendants in the Medical & Surgery Unit were asked to fill the MACC Scale while she was there. Their ratings were not included in the above report, because in the Medical & Surgery Unit A was not allowed to associate with other patients and therefore the items of Sodial Contact were not applied The average scores of the other behavioral areas by the attendants of the both units are shown in under:

Table 3. Comparison of A's average scores by attendants in psychiatric ward (7) and in the M & S unit (2).

	Mood	Cooperation	Communication	Social Contact
Psychiatric ward	10.4	8.2	11.8	14.2
Medical & Surgery	14.5	13.5	15.5	—

Certainly that a person shows stable and predictable behavior in various situations is an index of the good adjustment. However, in general, psychiatric patients, especially schizophrenic patients, are insecure in the interpersonal

situation. And as already suggested, the community of the psychiatric hospital itself is dynamic and complexed interpersonal situation. And the MACC Scale is weak to distinguish in which area of the patient's behavioral adjustment the variability of the attendants' prception of the patient is great.

Conclusion

In order to provide the patients with an appropriate treatment program and therapeutic environment, the knowledge of the psychopathology of the patient is not enough, and the patient's behavioral adjstments should be carefully observed. In this paper a study on variability in attendants' perception of the patients was reported. 7 attendants were asked to fill the MACC Behavioral Adjustment Scale with 3 schizophrenic patients. The result showed that the variability in the attendants' ratings of the MACC Scale was greater with the severely disturbed patients who tended to act out the anxiety in the interpersonal area, and in the behavioral area where the attendants and patients were interrrelated each other.

Ellsworth deviced this Scale as an objective approach to the evaluation of behabioral adjustments of hospitalized psychiatric patients. He admitted the variability in raters, however, he ascribed it to the raters' rating manner and he stressed rater training to get the stable scores. In this kind of rating, however, the factors which tend to be involved in judgement of other and person perception, for example, the rater's implicit personality theory, personal constructs and so forth, are not avoided. Furtheremore the community of the psychiatric hospital itself is dynamic and complexed interpersonal stuation. Therefore the author considers the variability in the attendants' ratings of the MACC Scale as the variability in the attendants' perception of the patient, in which the attendant-patient interaction is reflected. Although the result supports the hypotheses, the MACC Scale seems to be weak to distinguish the variability due to the rater's rating manner and that due to the rater's manner of person perception and interaction between rater and patients. For the futher study of the staff-patient interaction items of the MACC Scale are needed to be reconsidered.

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Zusammenfassung

Als ein Studium über die Pflegepersonal-Kranke Wechselwirkung in der Irrenanstalt wurde die Variabilität in der Wahrnehmung der diensttuenden Pflegerinnen der Kranken versucht. 7 diensttuenden Pflegerinnen füllten die MACC Verhalten Anpassung Skala mit den 3 schizophren Kranken aus. Die Resultate zeigen, daß die Variabilität in dem Schätzen der MACC Verhalten Anpassung der diensttuenden Pflegerinnen mit den schwer unruhigen Kranken grösser war, die in dem unterpersönlichen Raum die Tendenz zeigten, Angst zu verraten und such in dem Verhaltensraum, wo die diensttuenden Pflegerinnen und Kranke aufeinander einwirken.

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