

DOCUMENT RESUME

ED 057 364

CG 006 668

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TITLE Behavioral Assessment of Therapeutic Personality
Attributes of Nonprofessionals and Their Relation to
Independent Measures of Patient Improvement.
Attitudes and Attitude Change Among College Students
Serving as Mental Health Workers in a State Hospital
Setting.

INSTITUTION Connecticut Univ., Storrs.; Illinois Univ.,
Urbana.

SPONS AGENCY Maurice Falk Medical Fund, Pittsburgh, Pa.; Rochester
Univ., N.Y.

PUB DATE Apr 70

NOTE 20p.; Papers presented at Annual Meetings of Eastern
Psychological Association, Philadelphia, Pa. and
Atlantic City, N. J., April 10-12, 1969 and April
2-4, 1970

EDRS PRICE MF-\$0.65 HC-\$3.29

DESCRIPTORS *College Students; Institutional Environment;
*Institutionalized (Persons); *Mental Health
Programs; Mental Illness; *Nonprofessional Personnel;
Patients (Persons); Social Attitudes; Student
Attitudes; *Volunteers

ABSTRACT

Each of the 2 studies included in this report concerns a different aspect of utilizing volunteers as mental health workers. The first used a behavioral assessment technique (the Group Assessment of Interpersonal Traits [GAIT]) to measure the qualities of understanding, openness and accepting-warmth in college students. Subsequently, these students served as group leaders with chronic patients in a state mental hospital. Results indicate: (1) that the behavioral assessment technique is reliable; and (2) that there are significant relationships between these therapeutic qualities as measured and independent measures of patient ward improvement. The 2nd study used a control group design to examine the impact, on student attitudes, of their participation as companions or group leaders in state mental hospitals. The results show that, while the groups were initially quite similar on the attitude measures, following participation only the experimental group significantly increased in favorable attitudes toward mental patients. It is suggested that such programs may serve to promote constructive social change to improve the state mental hospitals. (TL)

ED057364

BEHAVIORAL ASSESSMENT OF THERAPEUTIC PERSONALITY ATTRIBUTES
OF NONPROFESSIONALS AND THEIR RELATION TO INDEPENDENT
MEASURES OF PATIENT IMPROVEMENT

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Abstract

A behavioral assessment technique was used to measure the qualities of understanding, openness, and accepting-warmth in college students serving as group leaders with chronic mental patients in a state hospital. The reliability of the technique was demonstrated and significant relationships were found with independent measures of patient ward improvement.

Paper Presented at the Annual Meeting of the
Eastern Psychological Association, Atlantic City,

April 1970

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- (1) Title of Paper: Behavioral assessment of therapeutic personality attributes of nonprofessionals and their relation to independent measures of patient improvement.
- (2) Problem or Major Purpose: Notwithstanding the increase in the utilization of nonprofessionals in a variety of mental health relevant roles and settings (Cowen, Gardner, & Zak, 1967), several questions pertaining to their use remain unexplored. For example, there is the central question of the personality attributes of effective nonprofessionals.

The present research attempts to evaluate the relationship between theoretically relevant personality attributes of nonprofessionals and independent measures of patient change. The nonprofessionals in this study were college students serving as group leaders in a state hospital setting (Chinsky, 1968; Rappaport, 1968). Student personality attributes were measured using a structured behavioral technique. This procedure, known as the Group Assessment of Interpersonal Traits (GAIT) (Goodman, 1965), assessed: "understanding," "openness," and "accepting-warmth," each assumed to be related to therapeutic effectiveness (e.g., Rogers, 1957). The purpose of this study was to examine the reliability of the technique, and to test the prediction that GAIT qualities of understanding, openness, and accepting-warmth would be positively related to improvement in chronic, hospitalized mental patients who met regularly with college student mental health workers.

- (3) Subjects: Forty-eight college students (24 males, 24 females; ages 18-22) participating in a year-long, undergraduate seminar-practicum in community mental health (Cowen, Chinsky, & Rappaport, 1970) offered at the University of Rochester, served as GAIT Ss. Reliability figures, presented

below, are based on this N of 48. Thirty (15 males, 15 females) of the 48 students did practicum work with chronic hospitalized patients for whom pre-post evaluation data were available. Patient change data, reported below, are based on this N of 30.

- (4) Procedure: The GAIT. Eight students were evaluated in each of six separate GAIT sessions. Each session was for same sexed participants, hence there were three male and three female groups. Every student in the group was asked to disclose a personal problem. Another member of the group then engaged the student in a short conversation centered on expanding and understanding the disclosed problem. Using a "round-robin" sequence, each student revealed a problem and engaged a peer's problem during the session. Ratings of each participant on the qualities of understanding, openness, and accepting-warmth as well as several other personality dimensions were made by all of the students in the group as well as by three advanced clinical psychology graduate students who served as observers.

The hospital project. Each of the 30 Ss met individually with a group of eight chronic patients at Rochester State Hospital for approximately 30 hourly sessions over a 5½ month period. Seven male and seven female students met with male patient groups; eight students of each sex met with female patient groups. Patient groups were closely matched on several demographic variables.

Pre and post-test scores were individually obtained from each patient on a number of criterion measures of test performance (e.g., reaction time and perceptual-motor tasks) and actual behavior. Behavioral

ratings were made by hospital attendants using the Ellsworth MACC Behavioral Adjustment Scale, Form II (MACC) (Ellsworth, 1952). The MACC consists of four factorial scales measuring mood, cooperation, communication, social contact, and a total adjustment score based on the sum of the four scales.

- (5) Results: GAIT reliability. Split-half reliability coefficients (corrected by the Spearman-Brown formula) for the student ratings were .70 for understanding, .56 for openness, and .41 for accepting-warmth. The average r (McNemar, 1962) for the three observers for the understanding dimension was .49; it was .42 for openness, and .64 for accepting-warmth. Intercorrelations assessing agreement between students and observers were .32 for understanding, .49 for openness, and .53 for accepting-warmth.

GAIT relationship with outcome. Change from pre to post for each patient on each of the performance tests and MACC scales was tabulated. A group improvement score on each dimension was obtained by dividing the number of "improved" patients by the total number of patients in the group. Observer ratings of understanding correlated significantly with patient improvement in mood ($r = .48, p < .01$). Observer ratings of accepting-warmth related significantly to improvement in mood ($r = .39, p < .05$), cooperation ($r = .41, p < .05$), and overall ward adjustment ($r = .46, p < .01$).

- (6) Implications and Conclusions: The GAIT reliabilities obtained for student and observer ratings separately, as well as the relatively high intercorrelations of the two sets of scores, closely replicate Goodman's (1965) findings.

The student qualities of understanding and accepting-warmth, as

judged by experienced observers, were moderately related to some subsequent improvement indices in the patients, particularly mood and ward cooperation. That the understanding and accepting-warmth of group leaders predict to patient behavior changes rather than to change in test performance is, perhaps, not surprising. Although patients may have improved on performance tasks, the latter measures are logically less related to interpersonal experiences with college students than to actual group activities. Indeed, additional data (Chinsky, 1968) show that what the groups physically did, e.g., active versus passive group activities, was significantly related to change in test performance.

It is more difficult to explain the lack of relationship between peer ratings and ward improvement. Possibly the greater experience of the observers was important in interpretation of the items to be rated. For example, in post-GAIT interviews, many of the students indicated that they interpreted the dimension of "understanding" in the cognitive or intellectual sense rather than the empathic, emotional perspective used by the observers.

In sum, it may be concluded that the GAIT is a reliable instrument for the assessment of personality characteristics of nonprofessional mental health workers in that both peers and observers agree in their ratings. In addition, observer ratings, but not peer ratings, are moderately successful in the prediction of improvement in interpersonal behavior of treated patients. The GAIT, thus, shows promise as a tool for the assessment of nonprofessional therapeutic talent. Possible modifications of the GAIT and its potential application in other assessment situations (e.g., evaluation of sensitivity groups) are also discussed.

Attitudes and Attitude Change Among College Students
Serving as Mental Health Workers in a State Hospital Setting¹

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University of Connecticut University of Illinois

Paper Presented at the Meeting of the
Eastern Psychological Association, Philadelphia,
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Attitudes and Attitude Change Among College Students
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A growing awareness of the shortage of professional mental health manpower (Albee, 1959) and of the ineffectiveness of traditional treatment approaches for large numbers of patients (e.g., chronic schizophrenics) has led to a search for new approaches to mental health problems. The use of non-professionals has been among the most promising of these new approaches. Housewives, hospital attendants, retired oldsters, and many other nonprofessional groups are being used in an ever-expanding number of settings and treatment situations (Gowen, Gardner, & Zax, 1967).

A frequent example of this type of programming, arising from the understaffed, overcrowded conditions of many state hospitals, has been the use of college students as companions or group leaders in such settings (Chinsky, 1968; Holzberg, Knapp, & Turner, 1967; Poser, 1966; Rappaport, 1968). One of the many by-products of such programs has been that students often report favorable changes in attitude toward both self and mental patients following participation (Holzberg, Gewirtz, & Ebner, 1964; Scheibe, 1965).

The purpose of this paper is to further explore the impact of program participation on student attitudes, as well as to compare initial volunteer attitudes with those of non-volunteers. An attempt was made to separate students' attitudes toward mental patients from their attitude toward the various components of the hospital including nurses, psychologists, and the institution per se. It was hypothesized that the experience of working as a volunteer

Paper presented at the meeting of the Eastern Psychological Association, Philadelphia, April 1969.

in a mental hospital would lead to more favorable attitudes toward self and mental patients, and to less favorable attitudes toward the institution. The latter prediction is based on the premise that volunteer programs of this nature acquaint the college student with some of the unfavorable conditions under which the chronic patient lives including overcrowded wards, poor physical facilities, lack of treatment, etc. In short, the conditions which have been described by other observers of large mental institutions (e.g. Goffman, 1961). Initial student volunteer attitudes were also compared to those of demographically, and motivationally comparable non-volunteers to determine if the former were more idealistic.

Subjects:

Thirty college students (15 males, 15 females) participating in an undergraduate seminar and practicum course in community mental health (Cowen, Chinsky, & Rappaport, 1970), offered at the University of Rochester, served as the experimental group (E). All but one of these students was a psychology major. Two control groups were used. The first (C I) included 30 students, demographically comparable to the E group, not enrolled in the course. The second (C II) consisted of 30 students, drawn from a large introductory psychology course, who were younger and more diverse in background than either E or C I.

Procedure:

Each member of the E group met individually with a group of eight chronic hospitalized mental patients at Rochester State Hospital for approximately 30 hourly sessions conducted over the course of 5½ months.

The Adjective Check List (ACL) (Gough & Heilbrun, 1965) and an adaptation of the semantic differential (SD) (Osgood, Suci, & Tannenbaum, 1957) were administered separately to E, C I, and C II on three separate occasions:

- 1) at the beginning of the program,
- 2) one month after the E group began working in the hospital, and
- 3) during the final week of the practicum.

Students were asked to check those adjectives on the ACL which best described the "typical mental hospital patient." Independent scores obtained from the "favorable" and "unfavorable" scales were used. The SD consisted of nine concepts each rated on 14 scales. The concepts used were: "myself," "mental patients," "mental hospital," "volunteer groups," "psychologists," "nurses," "average person," "mental illness," and "psychotherapy." The 14 scales* on the SD were:

effective	-	ineffective
good	-	bad
healthy	-	sick
relaxed	-	tense
friendly	-	unfriendly
interesting	-	boring
pleasant	-	unpleasant
understandable	-	mysterious
helpful	-	harmful
warm	-	cold
safe	-	dangerous
strong	-	weak
active	-	passive
predictable	-	unpredictable

The favorable adjective on each scale was determined by at least 80 per cent agreement of five independent raters. Concept scores on the SD were obtained by summing scale ratings in the favorable direction.

Results:

Table 1 presents pre-program means and sigmas for E, C I, and C II on the 11 attitude measures. A 1x3 analysis of variance computed on each of the measures revealed group differences in initial attitude toward three of the SD concepts; "average person" ($F = 5.10$; $df = 2/87$; $p = .05$), "mental patient" ($F = 10.40$; $df = 2/87$; $p = .01$), and "mental illness" ($F = 3.91$; $df = 2/87$, $p = .05$).

Examining these differences more closely, it was found that C I had more favorable initial attitudes toward the concept "average person" than did

*Favorable adjectives are listed here first. A random ordering of adjectives was used on the SD.

both E ($\underline{t} = 3.28$, $\underline{p} = .01$) and C II ($\underline{t} = 2.27$, $\underline{p} = .05$). C I also had more favorable attitudes toward the concept "mental patient" than did E ($\underline{t} = 3.24$, $\underline{p} = .01$) or C II ($\underline{t} = 4.67$, $\underline{p} = .01$). E did not differ from C II on either of these two concepts. C II had a less favorable attitude toward the concept "mental illness" than E ($\underline{t} = 2.16$, $\underline{p} = .05$) or C I ($\underline{t} = 2.81$, $\underline{p} = .01$). E and C I did not differ significantly in attitudes toward this concept. Thus the three significant \underline{F} s found between E, C I, and C II were due to C-group differences. The E-group was not systematically different in initial attitude from both C I and C II on any of the measures.

A 3x3, two way factorial analysis of variance with repeated measures was used to assess differential attitude change among E, C I, and C II. Table 2 presents the analysis of variance for attitude change toward the "typical mental hospital patient" on the favorability scale of the ACL. Although the three groups were identical on the pre-measure, the analysis indicated a significant increase in the favorability of the volunteers' attitudes toward the concept ($\underline{F} = 5.56$; $\underline{df} = 4/174$; $\underline{p} = .01$).

Table 3 presents a structurally comparable analysis using the ACL unfavorability index as criterion. Once again the three groups were initially similar but diverged with a drop in unfavorability scores for E, over time. This was reflected in the significant Groups x Time interaction ($\underline{F} = 7.67$; $\underline{df} = 4/174$; $\underline{p} = .01$). Thus, participation in the program resulted in a significant increase in ACL favorability and decrease in ACL unfavorability of attitudes toward patients.

Table 4 presents a similar analysis of variance, this time based on the SD concept "mental patient." A significant Groups x Time interaction ($\underline{F} = 5.06$; $\underline{df} = 4/174$; $\underline{p} = .01$) demonstrated, once again, differential improvement in attitudes across time favoring the E group. This datum parallels the preceding ones for the two ACL scales.

Another analysis of this same type, with the SD concept "mental hospital," as criterion is summarized in Table 5. E group attitudes toward the mental hospital, as reflected in the $G \times T$ interaction became significantly less favorable with time ($F = 9.02$; $df = 4/174$; $p = .01$).

An analysis by scales on the SD concepts "mental patients" and "mental hospital" allows for a more specific examination of attitude change toward these two concepts. Using the same factorial design on each of the scales, it was found that the E group saw the mental patient as more pleasant, less harmful, more predictable, more friendly and more passive. The latter change was opposite in direction to the overall favorable change in attitude toward the mental patient. The mental hospital was seen as more passive, more cold, less helpful, less good, less pleasant, less interesting, less friendly, and less effective.

No differences in attitude change among the three groups were found on the remaining seven concepts. An analysis by scales for each of these concepts, likewise, revealed no systematic difference in attitude change for the three groups.

Discussion:

Pre-program data indicate that E and C groups did not differ in idealism and were, indeed, roughly comparable in initial attitudes to mental health concepts. Significantly more favorable attitudes toward "mental patients" and less favorable attitudes toward the "mental hospital" followed participation in the volunteer program. Volunteer changes in self-concept, measured by the SD, did not occur, perhaps because such perceptions were initially quite favorable. Absence of change on this and other SD concepts contraindicates the possibility that a generalized favorability response style was the source of the observed attitude changes.

An increase in favorable attitudes toward mental patients replicates the findings of Scheibe (1965) and Turner, Holzberg, and Knapp (1967) working in

previous state hospital projects. The findings also complement those of Rappaport and Chinsky (1969) who reported that patient attitudes towards the students in this study grew more favorable as a result of the program.

These objective attitude changes were quite consistent with personal observations of, and comments by, volunteers who came to perceive patients more favorably as they got to know them better, while more and more seeing the limitations of the hospital and attributing the patient's condition to such shortcomings. Over time, many volunteers, more and more viewed patients as real, sometimes warm, and even likeable people—much differently than the stigmatized view of mental patients associated with the stereotype of mental illness (a view to which many volunteers, themselves, may have ascribed before patient contact began). They came to see these people as within the confines of an inefficient treatment hospital—an old, crowded and depressing custodial institution.

The physical surroundings were a major and chronic source of concern to volunteers. Volunteer meetings, for example, had to be held in the basement because there were no other places available for such contacts. The question, "How could a person be well in such a place?" was frequently asked by volunteers. Similar concerns have been verbalized by considerably more experienced students of the large mental institution (e.g., Goffman, 1961). Perhaps such concerns, generated by nonprofessional programs such as this one, can contribute to constructive social change to improve the conditions of the large state mental hospital.

References

- Albee, G. W. Mental health manpower trends. New York: Basic Books, 1959.
- Chinsky, J. M. Nonprofessionals in a mental hospital: A study of the college student volunteer. Unpublished doctoral dissertation, University of Rochester, 1968.
- Cowen, E. L., Chinsky, J. M., & Rappaport, J. An undergraduate practicum in community mental health. Community Mental Health Journal, 1970, 6, in press.
- Cowen, E. L., Gardner, E. A., & Zax, M. Emergent approaches to mental health problems. New York: Appleton-Century-Crofts, 1967.
- Goffman, E. Asylums. Garden City, N. Y.: Doubleday, 1961.
- Gough, H. C., & Heilbrun, A. B., Jr. The adjective check list manual. Palo Alto, Cal.: Consulting Psychologists Press, 1965.
- Holzberg, J. D., Gewirtz, H., & Ebner, E. Changes in moral judgment and self-acceptance as a function of companionship with hospitalized mental patients. Journal of Consulting Psychology, 1964, 28, 299-303.
- Holzberg, J. D., Knapp, R. H., & Turner, J. R. College students as companions to the mentally ill. In E. L. Cowen, E. A. Gardner, & M. Zax (Eds.), Emergent approaches to mental health problems. New York: Appleton-Century-Crofts, 1967. Pp. 91-109.
- Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. The measurement of meaning. Urbana, Ill.: University of Illinois Press, 1957.
- Poser, E. G. The effect of therapists' training on group therapeutic outcome. Journal of Consulting Psychology, 1966, 30, 283-289.
- Rappaport, J. Nonprofessionals in a mental hospital: College students as group leaders with chronic patients. Unpublished doctoral dissertation. University of Rochester, 1968.
- Rappaport, J., & Chinsky, J. M. Patient expectations and perceptions of college students in a mental hospital. Paper presented at the meeting of the Midwestern Psychological Association, Chicago, May 1969.

Scheibe, K. E. College students spend eight weeks in mental hospital: A case report. Psychotherapy: Theory, Research, and Practice, 1965, 2, 117-120.

Turner, J. R., Holzberg, J. D., & Knapp, R. H. Effects of companionship with mental patients on students' stereotype of the typical mental patient. Paper presented at the meeting of the Eastern Psychological Association, Boston, April 1967.

Footnotes

1. This paper is partially based on the authors' Ph.D. dissertations.
2. This paper was sponsored at E.P.A. by Dr. Emory L. Cowen to whom we acknowledge our grateful appreciation.
3. Special thanks are expressed to Miss Carolyn Norris, Miss Judy Park, and Mr. Michele Francis, all of whom aided in the collection, scoring, and analysis of the data.
4. This study was supported in part by the Maurice Falk Medical Fund, Pittsburgh, Pennsylvania; the Department of Psychology of the University of Rochester; and the University of Connecticut Research Foundation.

Table 1

Mean Values and Standard Deviations of Initial Attitudes for
Volunteer Group, Control I, and Control II^a

Attitude Concept	Volunteer Group		Control I		Control II	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
ACL - Patient- Favorable	16.4	9.0	16.1	9.4	16.5	8.4
ACL - Patient- Unfavorable	82.2	14.7	80.4	14.5	81.1	18.2
SD - Nurses	75.7	9.7	80.0	10.0	78.2	8.4
SD - Volunteer Groups	77.0	7.4	74.5	8.8	75.8	10.6
SD - Mental Illness	44.4	8.1	45.0	6.6	40.2	6.2
SD - Average Person	64.2	10.2	71.4	5.7	66.8	9.3
SD - Psychotherapy	70.8	7.3	67.8	8.2	66.7	9.3
SD - Psychologists	75.5	8.2	75.5	7.2	71.5	8.6
SD - Myself	73.8	7.0	76.4	8.0	74.9	10.9
SD - Mental Patients	46.7	7.8	52.3	5.1	43.7	8.4
SD - Mental Hospital	60.8	10.5	64.6	10.2	59.8	8.5

^aN = 90, 30 Volunteer, 30 Control I, 30 Control II

Table 2

Analysis of Variance for E vs C Groups on
ACL Patient-Favorability Scale

Source	SS	df	MS	F
Between Subjects				
Groups	1822.69	2	911.34	5.82**
Subjects within groups	13606.84	87	156.40	
Within Subjects				
Time	644.45	2	322.22	8.04**
Groups X Time	919.59	4	229.89	5.56**
Time X Subjects within groups	7183.28	174	41.28	

**p = .01

Mean Scores

Groups X Time Periods

	Time 1	Time 2	Time 3
Vol Group (N = 30)	16.4	25.7	24.6
Control I (N = 30)	16.1	16.4	17.5
Control II (N = 30)	16.5	16.5	17.2

Table 3

Analysis of Variance for E vs C Groups on
ACL Patient-Unfavorability Scale

Source	SS	df	MS	F
Between Subjects				
Groups	3151.31	2	1575.65	2.58
Subjects within groups	53126.88	87	610.65	
Within Subjects				
Time	2194.49	2	1097.24	11.70**
Groups X Time	2878.85	4	719.71	7.67**
Time X Subjects within groups	16307.30	174	93.72	

**p = .01

Mean Scores

Groups X Time Periods

	Time 1	Time 2	Time 3
Vol Group (N = 30)	82.2	65.8	69.3
Control I (N = 30)	80.4	82.7	77.5
Control II (N = 30)	81.1	78.8	77.2

Table 4

Analysis of Variance for E vs C Groups on
SD Mental Patient Concept

Source	SS	df	MS	F
Between Subjects				
Groups	2446.58	2	1223.29	11.26**
Subjects within groups	9452.41	87	108.64	
Within Subjects				
Time	218.69	2	109.34	3.45**
Groups X Time	641.21	4	160.30	5.06**
Time X Subjects within groups	5506.74	174	31.64	

**p = .01

Mean Scores

Groups X Time Periods

	Time 1	Time 2	Time 3
Vol Group (N = 30)	46.7	51.3	53.6
Control I (N = 30)	52.3	49.9	50.8
Control II (N = 30)	43.7	44.5	45.0

Table 5

Analysis of Variance for E vs C Groups on
SD Mental Hospital Concept

Source	SS	df	MS	F
Between Subjects				
Groups	4912.05	2	2456.03	13.63**
Subjects within groups	15670.09	87	180.11	
Within Subjects				
Time	2433.69	2	1216.84	24.16**
Groups X Time	1817.30	4	454.32	9.02**
Time X Subjects within groups	8761.66	174	50.35	

**p = .01

Mean Scores

Groups X Time Periods

	Time 1	Time 2	Time 3
Vol Group (N = 30)	60.8	50.6	44.8
Control I (N = 30)	64.6	61.6	60.8
Control II (N = 30)	59.8	59.0	58.0