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Mental Health Research in an Academic Setting

By ALFRED B. HEILBRUN, JR.

The goals of human research conducted by psychologists in an academic setting might seem at first glance as divergent as the varied interests of the individual researchers. While one concentrates on the relationships between motivational variables and "simple" learning, another investigates the conditions under which complex motor skills are acquired, another studies the effect of stress upon Rorschach performance, and still another attempts to devise some objective measure which can discriminate between individuals characterized by low and high achievement needs. There is, or at least should be, a goal common to all psychological research, however, that being the establishment of a well-defined body of relationships sufficient in scope to allow for prediction of human behavior in the same fashion as the behavior of masses is predictable for the physicist given information regarding certain well-defined variables. It is my position then that all psychological research, if it is worth doing, has implications for mental health insofar as it contributes to the establishment of this body of relationships. It seems logical to assume that we will be able to understand, predict, and control aberrant behavior only after we can accomplish these ends in the realm of normal behavior. The science of astronomy came to understand and predict the aberrant of the solar bodies such as the eclipse of the sun or the appearance of a comet only after it had formulated the laws governing the normal or expected behavior of bodies in our solar system.

However, this afternoon we are concerned with a delimited area of research—that bearing directly on mental health or mental illness—and I will confine my remarks to studies which fall at least broadly into this area. Let me preface such a survey with a few

comments about mental health or mental illness research in an academic setting such as the State University of Iowa. Aside from studies conducted in hospitals affiliated with the College of Medicine, which I do not define as academic settings, research typically utilizes a very special population of subjects—college students. This population is characterized by an absence of serious behavior pathology as well as intellectual and motivational levels well above the broader populations to which we might wish to generalize our results. Two restrictions are inherent in this situation. First, if aberrant behavior is to be studied, it must be produced by experimental manipulation of the subject's environment. Second, any generalization of conclusions made to populations other than college students should be restricted by intellectual, motivational, or any other known differences to the extent that these variables were important in producing the results obtained in the studies. Even research conducted in a mental health facility within an academic setting cannot afford to neglect the select character of its subjects despite the presence of behavior pathology.

A Survey of the Research

One method of surveying research conducted at the State University of Iowa having implications for mental health would be to take a time sample of doctoral dissertation studies. Such research typically represents the mutual interests of the supervisory staff and the student researchers. The period between 1949-56 was arbitrarily chosen. Studies to be reported will fall roughly into three categories: (1) Psychological testing; (2) Experimentally produced stress, and (3) Psychotherapeutic processes.

A. Psychological testing

1. *Rorschach*

By far the bulk of research conducted during this period having to do with formal testing procedures was focused on the Rorschach Inkblot test, undoubtedly the most widely used instrument for clinical assessment of personality disorders.

Three studies investigated relationships between the chromatic color variable on the Rorschach and indices of behavior. It should be recalled that responses to color have traditionally been interpreted as reflecting levels of emotionality. Fitzgerald (6) found that the ability to integrate form and color of the inkblots was significantly correlated with group ratings of social adjustment. One group consisted of an entire fifth grade of 24 children and the other consisted of 28 active members of a social club at the University. The rho correlations between form-color scores and adaptability for these groups were $+ .51$ and $+ .54$, respectively.

A later study by Van Metre (19) failed to confirm Fitzgerald's findings when eleventh and twelfth grade students were used as subjects. In the first phase of her experiment she administered fifteen colored cards collected from the Rorschach, Behm and Harrower inkblot tests. Significant though low order correlations were found with ratings of social adaptability and emotional maturity. In the second phase when standard Rorschach plates were used with different S's, no significant correlations were found.

Cantor (4) tested the commonly accepted hypothesis that lack of responsiveness to color on the Rorschach indicates "emotional constriction". Seventy-six college students were matched on the basis of an a priori judgmental scale defined as measuring "emotional constriction", as well as by age and sex. He then administered the regular Rorschach cards to one group and an achromatic series to the other. He found no significant differences between these groups on productivity and latency of response measures, both assumed to be indices of constriction. Also no significant differences between productivity or latency measures and different levels of the constriction scale were found. He concluded that Rorschach performance in terms of these two measures remains unaffected by the presence or absence of color.

Bandura (2), studying the behavior correlates of the white space response on the Rorschach, found a moderate correlation of $+0.35$ with the Necker Cube test which measures tendency toward perceptual reversal. This suggested the influence of reversal in responding to the white space and not the blot. However, the only significant correlation between number of white space responses and hypothesized personality characteristics was a low $+0.27$ with teachers ratings of negativism for these high school students. Surprisingly, the number of reversals on the Necker Cube showed moderate to good correlations with teachers' ratings: negativism, $+0.25$; assertiveness, $+0.40$; inadequacy, -0.68 ; and self-distrust, -0.87 .

Other studies involving the Rorschach and its personality correlates which will not be described because of time limitations include those of Steisel (15), Keyes (11), Arkoff (1), and Racusen (14). In these, such behavioral areas as suggestibility, "realistic" behavior, and creativity were investigated.

2. *Achievement Imagery*

Hedlund (7) attempted to construct an objective multi-

ple-choice test to measure an individual's need for achievement. S's were required to look at a series of TAT-like pictures and then to choose a statement from among three to describe what was occurring in the picture. One statement for each picture was judged to reflect a need for achievement while the other two were matched for social desirability. He found that the test had a low internal consistency and did not predict performance on an anagrams task or classroom achievement. This test has since been revised (9).

3. *Anxiety Scale*

A scale intended to measure manifest anxiety was originally devised by Taylor (18) through a selection of items from the Minnesota Multiphasic Personality Inventory judged to measure this variable. Heineman (8) concerned himself with the development of a forced-choice form of the anxiety-scale designed to reduce the effects of social desirability in determination of responses. This was accomplished by forcing an S to choose between a statement about himself indicating manifest anxiety and another statement for social desirability but not indicating anxiety.

4. *Rigidity Scale*

Katz (11) investigated rigidity as a general personality characteristic using several measures purported to measure the trait of rigidity. The rather low intercorrelations between these measures when administered to 72 college students led him to question the concept of rigidity as a personality trait influencing behavior in widely differing situations.

5. *Word Association Test*

Brown (3) constructed a word association test with 15 words selected for each of 6 motivational areas. Counselors rated 21 counselees on amount of disturbance exhibited in each of these areas and in 19 out of these 21 S's there was a positive correlation between mean verbal reaction times to words within these areas and counselor's ratings. Thus an increased reaction time tended to be associated with counselors' ratings of disturbance.

B. Experimentally produced stress

In way of evaluating the continuity between normal and schizophrenic behavior, Senf (17) attempted to experimentally produce the distractibility so often described in schizophrenia in a group of college students. She used simple reaction time to an auditory stimulus as her task variable and imposed three levels of distraction. One group was tested without distraction; a second group listened to a series of sounds under instructions

to identify them later; and the third group heard the same sounds after instructions to fit them into a story. She found that RT's increased with increase in distraction. However, she failed to find the predicted schizophrenic pattern when reaction times were compared under conditions of constant and irregular administration of the warning stimulus.

Eversmeyer (5) measured the effect of verbal threat of shock plus actual administration of shock upon speed of reaction time and strength of temporal generalization. She found that the stress group showed initial faster reaction times but even following the delivery of shock to these S's response differences from a non-shock group soon disappeared. There were no effects of stress upon response generalization.

The effects of experimentally-induced stress upon performance was also studied by Westrope (20). She required her S's, who were college students, to do a digit-symbol task under standard conditions and then to perform the same task when they were ostensibly being observed through a one-way screen by three psychologists who would shock them if their performance was "substandard." She found that the observed decrement in scores under the stress condition was unrelated to any of the purported indices of intellectual control on the Rorschach. There was suggestive evidence that anxious people (where anxiety was defined independently of the stress condition) suffer a greater decrement in performance under stress than relatively non-anxious people.

C. Psychotherapeutic processes

Pomeroy (14) investigated the hypothesis that a "permissive and reassuring" counseling situation following a stressful learning experience on a stylus maze would enhance the performance of S's on a subsequent task of the same nature. Stress in the initial situation was induced by distracting stimuli, implication that performance was related to intelligence, and repeated derogation of the S's performance. Comparison of scores on the first and second tasks (same maze rotated 180 degrees) for this stress-counseled group to the scores obtained by the stress-rest, non-stress-counseled, and non-stress-rest groups demonstrated a significant enhancement of performance attributable to the counseling procedure. Pomeroy hypothesized that this result could be attributed to the reduction of stress produced which could be assumed to elicit responses interfering with successful performance.

Peck (13) studied the effects of two types of counseling situations following a fear-inducing situation. She matched three groups of female college students with respect to mean

scores on the Taylor Anxiety Scale and administered each *S* a word association test especially constructed to serve as a measure of emotional disturbance induced by a forthcoming experimental situation. From a few days to several weeks later each *S* was requested to return individually to the experimental rooms where instructions to enter were posted on the door. The following series of experiences occurred once the *S* entered the darkened room and complied with further posted instructions: (1) a large dead lizard was visualized on a sink next to the instructions; a small dead mouse had to be handled; the opening of a box led to a moderate shock and the sounding of a loud gong; and the head of a man in a jar had to be examined to ascertain certain details of the specimen. Following this one group was counseled in the *E*'s office, another in the presence of the fear-arousing cues, and the third was not counseled. The word association test was then readministered and the two administrations were compared. She found that counseling in the *absence* of cues to anxiety was effective for the non-anxious. Counseling in the *presence* of these cues showed the opposite pattern. Peck's conclusions embraced the notion that anxiety must be high but not too high if counseling based on reassurance is to be effective.

CONCLUDING REMARKS

I hope this sample of doctoral studies has provided at least the flavor of the kinds of academic research which might contribute to an eventual understanding of the nature of mental health and mental illness.

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Mental Health Research in a Psychiatric Setting

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Modern psychiatric facilities are usually staffed by representatives of psychiatry, psychology, social work, nursing, occupational therapy, and recreational therapy. While each group has in one way or another indicated interest in research, the current overwhelming need for treatment and the dearth of professionally trained personnel have made it necessary for many workers to neglect research activities almost entirely. By tradition and purpose, most psychiatric hospitals focus on service functions and the clinician in this setting is expected to accept this as his principal responsibility. Too often research is viewed as a luxury to be enjoyed sometime in the future when the case load is lighter and leisure time is available.

The particular setting of which I am a member is in function and purpose somewhat different from this sort of psychiatric hospital. It is, as some of you know, primarily a teaching hospital integrated with the College of Medicine at the University of Iowa. The hospital is staffed by the faculty of the Department of Psychiatry who use its facilities for teaching, training, and research activities. While services are provided, patients may be accepted or rejected on the basis of their value in teaching, training, and research, and generally these factors have priority over the individual patient's need for treatment. Research in this setting is not only encouraged, but an expected function of the professional staff.

As I understand it, my assignment today is to discuss some of the problems as well as some of the special features of this setting, and others like it, for research in mental health. The advantages or