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A Study of Six Interventions Strategies in Altering Attendance Behaviors of High School Students

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A STUDY OF SIX INTERVENTIONS STRATEGIES IN ALTERING ATTENDANCE BEHAVIORS OF HIGH SCHOOL STUDENTS

(TITLE)

BY

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B. S. in Ed., Eastern Illinois University, 1966
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CHAPTER I

INTRODUCTION

Our present, highly industrialized society has come to increasingly regard the high school diploma as a necessary requisite for employment. This has worked well for the majority since two-thirds of all students now graduate from high school.[1] Those who do not graduate, however, often become casualties of the "system" since they comprise the bulk of the unemployed in this country, enter manual labor positions which are being increasingly taken over by automated devices, and, upon finding jobs, are usually among the first to be laid off when cutbacks occur. There can be little doubt that dropouts deserve attention from social scientists because of the problems which they pose both for society and for themselves.

The great majority of dropouts are not, nor are they likely to become, delinquents. Yet, they do constitute a societal problem if for no other reason than that they swell our welfare rolls in a time when there is increasing public clamor to ease the welfare burden. The economic waste is compounded by the fact that 60 percent of the dropouts have average or better intelligence and could be employed in a broad spectrum of jobs, given the proper training and acceptance.[2] John F. Kennedy, aware of this wasted potential, expressed well our

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[1] Schreiber, D. ed. The School Dropout. New York: National Education Association, 1964.

[2] Warner, O, "The Scholastic Ability of School Dropouts", School Life, 1964, 47: 21-22.

societal concern about droputs in his 1963 State of the Union message to Congress:

> The future of any country which is dependent on the will and wisdom of its citizens is damaged, and irreparably damaged, whenever any of its children is not educated to the fullest extent of his capacity, from grade school through graduate school. Today, an estimated four out of every 10 students in the fifth grade will not even finish high school--and that is a waste we cannot afford.

Certainly this must be a source of concern for educators who have accepted the popular notion that public schools are to educate all students through at least high school.

Although society suffers when large numbers of its members are unemployed or are employed in positions below those for which they are capable, the greatest damage is done to the dropout himself, since, in our society, a man's identity is integrally tied to his job. If John Doe is introduced as a high school teacher, he can be immediately categorized as to formal education, approximate salary, social status, and even to certain values and attitudes. John's perception of himself--hence, his self-concept--reflects the societal perception. On the other hand, if John Doe happens to be a dropout who is tenuously employed at a car wash, he shares with society at large a perception of himself which is much less favorable than the perception accorded the teacher. If, like many dropouts, he experiences periods of unemployment, it becomes particularly hard for him to perceive himself as a worthwhile, independent person. Anyone would find this situation difficult, but it is especially so for the dropout who must often confront the realities of his job market immediately after going through a school system

in which he has been subtly led to believe that he is not quite as good as others. One is forced to speculate what contribution this sort of vocational situation might play in the greater rate of emotional disturbance experienced by the lower socio-economic classes.[3]

There can be little doubt, then, that the failure of capable students to graduate from high school is a national problem which deserves some attention. However, most of the research attention to dropouts has come in the form of descriptive studies made with the assumption that the number of dropouts can be reduced if it can be learned why students leave school before graduation. Beyond some studies examining the efficiency of existing counseling programs, there have been few studies of intervention strategies used to retain potential dropouts in high school.

One reason for the shortage of studies evaluating methods of retaining potential dropouts in high school is that, as field studies, they pose problems for the researcher. The phenomena being dealt with in such action research are in their natural settings and control of all variables is virtually impossible. Despite this lack of "cleanness", however, action research is equal in value to the more rigidly controlled laboratory experiment since it permits the examination of problems of greater scope than is possible in more limited research and it allows richer observations and the generation of hypotheses which

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[3]Hollingshead, A., and Redlich, F. Social Class and Mental Illness, New York: Wiley, 1958; Srole, L., Langner, T., Michael, S., Opeler, M., and Rennie, T. Mental Health in the Metropolis: Midtown Manhattan Study, Volume I, New York: McGraw-Hill, 1962.

can then be taken into the laboratory to be examined under more controlled conditions. Most important, however, are the immediate gains possible for the participants: The researcher is trying to solve genuine problems and the experimental treatments will be helpful in providing, not only long term gains, but also immediate help to those involved. The present student is of this sort.

Statement of the Problem

The primary intent of the present study is to test, in a field situation, the efficacy of six intervention strategies in altering attendance behaviors of students identified as potential dropouts, and in inducing in them positive personality change.

Delimitations of the Study

This study measure behavior change in the potential dropouts only during and immediately following treatment. There is no implied prediction of what the longer term effects might be.

The purpose of this study is simply to ascertain whether differential effectiveness among the treatments exists. It makes no attempt to determine why. In other words, it is to assess effectiveness, not to explain it.

Definition of Terms

The following constitute the definition of some of the concepts and terms employed in the present study.

Dropout - Any person who voluntarily terminates his schooling before graduating from high school.

Home-school liaison person - Non-degreed persons who are hired for this study to assist in preventing potential dropouts from leaving school by carrying out those duties described for them in this paper.

Potential dropout - A student identified, via the method described in this paper, as one likely to leave school before graduation.

Professional counseling - That strategy employed by the guidance counselors at Westview High School. To give a more formal definition would be a risk misrepresenting that which occurred.

Summary

Approximately one out of every three students voluntarily quits school before high school graduation. This is a situation deserving attention for the problem it presents both society and the individual dropout. However, most studies of dropouts have been only descriptive. This study attempts to assess the relative value of six intervention treatments in altering the attendance behavior of potential dropouts and in facilitating positive behavior change in them.

CHAPTER II

REVIEW OF THE LITERATURE

Characteristics of Dropouts

A student's act of quitting school before graduation is a multi-determined one. Although the quitting student may give a single reason for his action, it is more likely that this "reason" is only the last of a long series of causes. Neither is there a typical dropout syndrome, for the characteristics of dropouts are as varied as are the characteristics of those who remain in school to graduate. Yet, there are a number of characteristics which occur with sufficient frequency among dropouts that they merit attention. Perhaps it would be fruitful to quickly review the more common of those factors which relate to early school withdrawal. Note that since, prior to his act of quitting, the dropout was a "potential dropout", the following must also be considered to be true of potential dropouts.

Perhaps the best way to organize this review is to set up the rather arbitrary dichotomy between those factors which are unique to the individual dropout and those factors which relate to school. Looking first at those uniquely individual factors, one finds that dropouts are most typically male. Reviewing 83 research studies, Blough found that 69 reported a marked difference in dropout rate by sex and that 61 of these indicated a greater proportion of boys.[4] This sex difference is

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[4]Blough, T.B. A Critical Analysis of Selected Research Literature on the Problem of School Dropouts, Unpublished doctoral dissertation, University of Pittsburgh, 1956.

also reflected in the reasons given for quitting but that the next frequency was work (25%) for boys while it was marriage (27%) for girls.

It is a common perception that dropping out occurs most frequently among nonwhites. The reality of this perception is born out in a study by the U.S. Department of Agriculture which indicated that for 16 and 17 year olds, there were the following dropout rates: all native-born Whites, 15%; all foreign-born Whites, 19%; Blacks, 24%; Indians, 29%; Japanese and Chinese, 5%; other, 16%.[5]

Studies also seem to bear out the popular notion that dropouts have lower intelligence scores than are graduates. For example, Stice studied 9,500 high school students who has taken an academic aptitude test as sophomores.[6] Dividing these students into those who scored in the highest one-third, the middle one-third, and the lowest one-third, he found that 91, 80, and 69 percent, respectively, of each of these groups graduate. Another study of seven communities found that 21 percent of graduates, but 46 percent of dropouts had I.Q. scores lower than 90.[7] In substantial agreement are figures by Warner whose results summarize nine surveys of over 21,000 dropouts.[8]

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[5]Cowhig, J. Characteristics of School Dropouts and High School Graduates Farm and Non-Farm, 1960. U.S. Department of Agriculture, Economic and Statistical Analysis Division, Economic Research Service, Agriculture Economic Report No. 65. Washington, D.C.: Government Printing Office, December, 1964.

[6]Stice, G. Talent Losses Before High School Graduation, Paper presented to Section Q, American Association for the Advancement of Science, Chicago, December 30, 1959, Princeton, New Jersey: Educational Testing Service, January, 1960.

[7]United States Department of Labor, Bureau of Labor Statistics, School and Early Employment Experience of Youth: A Report on Seven Communities, 1952-1957, Bulletin no. 1277, Washington D.C.: Government Printing Office, August, 1960.

[8]Warner, O. "The Scholastic Ability of School Dropouts", School Life, 1964, 47: 21-22.

His results are as follows:

I.Q. Level	% of the Population	% of Dropouts
110 and above	30.7%	11%
90-109	46.5%	50%
80-89	14.5%	20%
Below 80	8.2%	19%

The evidence as to whether or not stayins are in better psychological health than dropouts is inconsistent. One study of 105 potential dropouts who had at least average intelligence concluded that these students were all either neurotic or were having problems due to faulty character development.[9] On the other hand, French and Cardon--who also looked at average or above abilities dropouts--concluded that the individual dropout "is, from all indications, a fairly sound individual".[10] They did find that, as compared to graduates matched in ability and socioeconomic class, male (and unmarried female) dropouts were more uninhibited, assertive, rebellious, and independent. Female dropouts who married tended to be less socially oriented, more shy, and retiring, and more inclined to work alone.

Probably the most tenable hypothesis is that dropouts must have less adequate perceptions of themselves than do stayins. This is supported by one study which found that dropouts were less likely than stayins to see themselves in control of their own fate.[11] In

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[9]Lichter, S., Rapien, E., Seibert, F., Sklansky, M. The Dropouts: A Treatment Study of Intellectually Capable Students Who Drop Out of High School, New York: The Free Press of Glencoe, 1962.

[10]French, J., and Cardon, B. Employment Status and Characteristics of High School Dropouts of High Ability, University Park: Pennsylvania State University, 1966.

[11]Johnson, T. An Examination of Some Relationships Between Anomia and Selected Personality and Sociological Correlates in a Sample of High School Dropouts, Unpublished doctoral dissertation, University of California, Berkeley, 1969.

addition, Young found that dropouts were more frequently interested in the so-called manipulative occupations (mechanical, artistic, and clerical) than in the cognitive occupations (scientific, literary, and persuasive).[12]

In looking at school-related factors characteristic of dropouts, one of the most significant and consistent findings is the markedly retarded reading ability of dropouts. For example, Snepp found that of 159 dropouts, only 30 percent were reading at or above their appropriate grade level while 22 percent, 26 percent, and 21 percent were retarded, respectively, one, two, and three or more years.[13] Penty compared 593 tenth graders who scored in the lowest quartile on their last reading test with an equal number of those who scored in the highest quartile and found that while 49.9 percent of the first group eventually dropped out, only 14.5 percent of the latter group did.[14] When she then compared reading level with mental age, Penty concluded that 96 percent of the 276 poorest reading dropouts had a potential for growth in reading ability ranging from 3 months to more than 8 years.

Nonpromotion, or grade failure, seems highly associated with dropping out. Bowman and Matthews compared grade failures among dropouts, graduates matched on I.W., and all stayins.[15] They found

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[12]Young, J. "Lost, Strayed, Or Stolen", Clearing House, 1954, 29: 89-92.

[13]Snepp, D. "Can We Salvage The Dropouts?", Clearing House, 1956, 31: 19-54.

[14]Penty, R. "Reading Ability and High School Dropouts", Education Digest, 1960, 25: 1-3.

[15]Bowman, P., and Matthews, C. Motivations of Youth for Leaving School, U.S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Project No. 2000. Quincy, Illinois: University of Chicago and Quincy Youth Development Project, 1960.

that dropouts were four times as likely to have failed a grade than was the matched control group and three times more likely than the stayin group. Related to this is subject failure: one study found that four-fifths of the boy and two-thirds of the girl dropouts were failing in at least one subject.[16]

As compared to stayins, dropouts are more likely to experience frequent absences. Eighty percent of the dropouts in Snepp's study had chronic attendance problems.[17] Van Dyke and Hoyt found that, of 180 days, dropouts were absent an average of 15 as compared to only 6 for the stayins.[18]

Bowman and Matthews found that 77 percent of matched graduates, but only 29 percent of dropouts definitely reported liking school.[19] On the other hand, two-thirds of dropouts versus 12 percent of the stayins definitely disliked school. Perhaps this is related to the tendency for dropouts to be non-participants in school activities.[20]

The above characteristics are among those most often associated with dropouts, but they are not inclusive. A better idea of the range

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[16]United States Department of Labor, Bureau of Labor Statistics, School And Early Employment Experience of Youth: A Report on Seven Communities, 1952-1957, Bulletin no. 1277, Washington, D.C.: Government Printing Office, August, 1960.

[17]Snepp, D. "Can We Salvage The Dropouts?", Clearing House, 1956, 31: 19-54.

[18]VanDyke, L., and Hoyt, K. The Dropout Problem in Iowa High Schools, U.S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Project No. 160, Iowa City: University of Iowa and Iowa State Department of Public Instruction, 1958.

[19]Bowman, P., and Matthews, C. Motivations of Youth for Leaving School, U.S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Project No. 2000. Quincy, Illinois: University of Chicago and Quincy Youth Development Project, 1960.

[20]Ibid.; Snepp, D. "Can We Salvage The Dropouts?", Clearing House, 1956, 31: 19-54.

of factors which are significantly associated with dropouts may be had by examining the list which Lacy complied after a thorough review of the literature.[21] No order of importance is implied in the following list:

I. Reading retardation
   A. Two years or more
   B. Lowest quarter of reading ability

II. Grade retention
   A. At least one year
   B. Usually two years older than class -roup
   C. Average in class

III. History of school failures
   A. Academic marks below "C" from 9th grade on
   B. Academically retarded
   C. Progressively more "D"'s and "E"'s as he continues through school

IV. Nonparticipation in school activities

V. Low socioeconomic status of parents
   A. Resides in low socioeconomic area--less than average for community

VI. Non-white

VII. Ill health--serious physical handicap

VIII. School discipline problem
   A. Active antagonism tc teachers and administrators

IX. Poor home situation
   A. Broken home
   B. Multiple family dwellings

X. Poor Attendance record--frequent tardiness
   A. Deteriorating attendance pattern from elementary to secondary school

XI. Male

XII. Low scholastic aptitude
   A. Lower language than non-language scores
   B. Mostly below 104 I.Q. (the median of high school students)
   C. Half below 90

XIII. Sixteen years or older

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[21] Lacy, C. A Comparative Study of the Effectiveness of Two Counseling Approaches With Potential Dropouts, Unpublished Doctoral dissertation, Wayne State University, 1967.

XIV. Frequent change of schools

XV. Performance consistently below potential

XVI. Poor educational background of parents
A. Not high school graduates

XVII. Not accepted by high school staff

XVIII. Owns car

XIX. Father in semi-skilled or unskilled job--or unemployed

XX. Record of delinquency

XXI. Not able financially to engage in peer activities

XXII. Poor gym participation

XXXII. Most likely on general or commercial curriculum rather then academic

XXIV. Below grade level in arithmetic ability

XXV. More children in family than parents can readily support

XXVI. No father at home

Dropout Intervention Strategies

As the above summary makes quite clear, the factors associated with dropping out of school are many and varied. Yet the basic. overriding factor seems to be that dropouts simply feel that schools are not meeting their present or future needs. Any dropout prevention program will thus have to insure that the schools are meeting enough student needs that they will not look elsewhere for need fulfillment. Ideally, such a program should be developmental in nature and being to concentrate on "high-risk" students from the time they enter elementary school. Given the paucity of such programs, however, there is a present real need for "crisis-oriented" dropout programs aimed at the high school age students who are in eminent danger of leaving school before graduation. Typical of the many

proposals made for droput prevention programs is that of Cohen which is essentially for "crisis-oriented" intervention. He contended that fewer dropouts would occur if more schools would provide the following:

1. Intensive remedial and guidance services.
2. A combination work-study program in the later grades
3. A feeling to all students that they belong in school
4. Community help and citizen support
5. Social workers to visit homes and work with parents
6. Studies of dropouts, schools, community services, and opportunities in order to develop constructive services to aid youngsters who have quite school as well as to help prevent others from dropping out.
7. Development of the objective of building community cooperation and responsibility for assuring each youngster an opportunity to achieve his full potential
8. School officials who are convinced that all students are important, even those in danger of quitting.

One of the basic tenets of education is that behavior--including attitudes toward school--can be changed. It is therefore logical that programs incorporating elements of the above "armchaired" proposals might work. Yet, there are relatively few empirical tests of crisis-oriented prevention programs. This section will review those experimental attempts.

In what appears to be one of the better studies of this sort, Davis hypothesized that potential dropouts can be kept in school if only they feel that someone in the school really cares about them as people and genuinely wants to help them.[23] To test this, he had a jury of administrators pick 9th graders whom they felt were likely to quit school during the 10th grade. These 42 subjects were randomly assigned to either the treatment or the control group. The treatment group was then given the following special attention during their 10th grade year: Teachers and counselors established friendship relationships with them; they were taken on field trips, formal and informal counseling

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[23]Davis, D. "An Experimental Study of Potential Dropouts", Personnel and Guidance Journal, 1962, 40: 799-802.

sessions were held with them; and consultants were invited in to discuss with staff and personnel delinquency and dropout problems.

At the end of the school year the treatment group, as compared to the control group, received significantly fewer (p .002) failing grades and were referred to the principal for discipline significantly less often (p .001). While three members of the control group dropped out of school during the school year, none of the treatment group did. There was no difference between the groups in the realism of the subjects' self-concept as measured by the accuracy of their estimation of what their scores on the Differential Aptitude Test would be.

A study which was based in part on that of Davis was done by Simon Kirby.[24] From 1197 sophomores, 146 were identified as potential dropouts (i.e., students who had four or more characteristics representing two or more of the following general problems areas: personal, social, school, family, ability, and performance) and assigned to either a no-treatment control group or the treatment group in which individuals received the regularly repeated friendly attention of teachers and/or counselors in one of five ways: (1) Friendship--students not in classes of participating teachers were met once a week for a friendly visit by one of these teachers, (2) Classrooms--students in classes of participating teachers were worked within the classroom situation, (3) Vocational--students were enrolled in a 3-hour block of vocational classes with participating teachers, (4) Individual Counseling, (5) Group Counseling.

Although the dropout rate for each of the experimental subgroups

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[24]Kirby, S. An Experimental Study of an Organized Program of Teachers' and Counselors' Friendly Interest in Potential Dropouts, Unpublished doctoral dissertation, University of Colorado, 1966.

except the Friendship condition was "considerably less than that of the control group" after one year of treatment, a chi-square data analysis revealed no significant differences. However, a significant difference was found when a Fisher t-test was used in one comparison of the experimental group with the control group. Those in the experimental group who dropped out stayed in school 41.2 days longer than those in the control group who dropped out (p .01).

Another study using a teacher-student friendship treatment was made by the New York City Board of Education with 15 year-olds who showed the characteristics of early school leavers.[25] In each of four different high schools, potential dropouts were put into one of two matched groups of 125 students each. A full-time teacher-counselor worked with one group for two years while the other group was assigned to the regular guidance program of the individual school.

It was concluded from this study that while there was no significant difference in rate of student graduation between the two groups, "members of both groups were graduated in much larger numbers than could possibly be expected". A further discovery was made that "intensive work with teachers, revolving about individual students, results not only in the improved education and adjustment of the particular students involved, but also in the other students in the classes of those teachers".

Camp also employed teacher-counselors.[26] A group of male students (aged 14-17) who had failed at least one course during the previous semester and who were considered by the counselors as likely to quit

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[25] Boston Guidance News

[26] Camp, W. "A Successful Classroom Program for Potential High School Dropouts", Vocational Guidance Quarterly, 1966, 14: 187-191.

school were identified as potential dropouts. Of these, eighteen were randomly selected for the experimental group and assigned to a special class taught by a teacher-counselor. This class, which seems to have had many of the same characteristics as a counseling group, was unstructured and the content which the subjects selected ranged from a discussion of values to inspection of occupational information.

In pre-post semi-structured interviews with counselors, the experimental group showed significantly greater (p..05 or beyond) positive change than controls on such variables as: pride in self and achievement; vocational information; value of formal education; class activities evaluation; discipline. They were also absent less frequently than the control group.

Charles Lacy sought to compare the effectiveness of advice-giving and non-advice-giving counselors in preventing potential dropouts from quitting school.[27] Two counselors, one judged to be an "advice-giver" and the other to be a "non-advice-giver" were drawn from each of three high schools (judgment of advice-giving tendencies was made by experienced counselors who rated tapes of counseling interactions). These six counselors were then evaluated on their effectiveness in retaining 311 sixteen year olds who had been identified as potential dropouts (by an instrument developed for this study) At the end of a year, a chi-square statistical analysis revealed no significant difference in the number of dropouts between the groups. Two shortcomings of this study were the lack of a no-treatment control group

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[27] Lacy, C. A Comparative Study of the Effectiveness of Two Counseling Approaches With Potential Dropouts, Unpublished Doctoral dissertation, Wayne State University, 1967.

and a systematic way of bringing about counselor-client interactions. There was no attempt made to change counselor behaviors from those inherent in a traditional guidance program. Thus, many of the potential dropouts may have had no contact at all with the counselors whose effectiveness was being evaluted!

Using the basic rationale that "it takes one to know and work with one", Dye and his coworkers made "counselor aides" of former high school dropouts (six female and four male; average age, 27).[28] Given civil service status and eight hours of seminar per week at the local junior college, these aides worked with 105 male and 145 female potential dropouts at five high schools (a potential dropout was a student who had missed 20 or more days of school during the previous year or who had dismissal proceedings pending). The aides' role was to provide a friendly relationship and to tender help in any way they could. Often this meant acting as a go-between for the student and school personnel or making referrals to appropriate social agencies. Although they gave no figures to substantiate it, the authors claimed great success for the treatment. Further, using the POI as a pre-post measurement, there was statistically significant growth by the counselor-aides toward self-actualization.

Stumpf discussed a program for which a counselor was hired specifically to work with potential dropouts.[29] Unfortunately, no statistics were given to verify the reported success of this counselor

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[28]Dye, R., Ruhig, T., and Tanaka, I. Dropout! An Evaluation of a Pilot Dropout Project, Commission on Manpower and Full Employment, State of Hawaii, 1968, (ERIC #ED031-714).

[29]Stumpf, N. "They Didn't Drop Out", Illinois Education, 1965 54: 120-121.

who, in addition to regular "counseling", became involved doing much tutorial, remedial work with his clients. Stumpf did give anecdotal evidence of effectiveness, such as the case of the student whose grade-point-average rose from 0.5 to 3/5 (4.0 = A), but it is difficult to infer causality in such cases.

Tyler Hess tested the relative efficacy of individual and group counseling with potential dropouts.[30] The 55 fifteen year old potential dropouts, who were identified by using the Pupil Holding Power Data Form, were assigned to one of five conditions: (1) Group Counseling, (2) Individual Counseling; (3) Control Group A (group tutoring); (4) Control Group B (individual tutoring); (5) Control Group C (no treatment). Treatment lasted for a six month period and the primary outcome criterion was pre-pose change scores on the California Test of Personality. A one-way ANOVA yielded no significant differences in the changes on self-adjustment scores while both group and individual counseling treatment groups showed higher change on social-adjustment than did the controls. There were no significant differences in among group comparisons of grade-point averages and teacher evaluations.

Another study which used a group counseling condition was that of Young.[31] The subjects--ninth grade male potential dropouts who would be 16 before the study was completed--were placed for one year in one of three treatment groups: (1) reading emphasis; (2) work-study; (3) guidance group. Using the outcome criteria of retention, attitudes,

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[30]Hess, T. A Comparison of Group Counseling With Individual Counseling in the Modification of Self-Adjustment and Social-Adjustment of Fifteen Year Old Males Identified as Potential Dropouts, Unpublished doctoral dissertation, University of Virginia, 1969.

[31]Young, W. "The Effectiveness of Selected School Programs for Potential Dropouts", Dissertation Abstracts, 1966, 26-A: 4516.

conduct, and achievement, it was found that the three groups combined were significantly better than a control group (p. .03). However, the work-study group was more successful (p. .025) than each of the other two groups which were essentially equal to each other.

Using more of a behavior modification approach, McDonald and others examined the efficacy of establishing a reward system to alter attendance behaviors.[32] In the first part of this two part study, six chronic nonattending students were visited, it was discovered what consequences would be reinforcing for each of them, and a deal was made that these reinforcers would be administered to them, contingent upon their school attendance. Attendance during the period that the "deals" were in effect was significantly greater than a baseline rate established prior to treatment. When this treatment was discontinued for a two week interval, attendance again declined, then increased again when the treatment was reinstated.

In a second part of this study, the effectiveness of this treatment was compared to that of more traditional counseling. During the ten week treatment period, "deals" were negotiated and adhered to with 20 nonattenders, while 15 others were seen by an experienced counselor for an average of 6.9 sessions. While the contingency-based treatment again achieved significant gain over the baseline rate (established by observation over the 6.5 weeks prior to treatment), the attendance of those seeing the counselor actually dropped. However, at the fifth week, it was found that those in the counseling treatment were being subjected to peer ridicule and measures were instituted to insure privacy.

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[32] McDonald, W., Gallimore, R. and McDonald G. "Contingency Counseling by School Personnel: An Economical Model of Intervention", Journal of Applied Behavioral Analysis, 1070, 3: 175-182.

By the end of treatment, the attendance of this group had risen so that it was essentially equal to the baseline rate. Although it would be difficult to draw any conclusions about the relative effectiveness of the two treatments. This study does suggest a skillfully run operantly based dropout prevention program might have merit. After all, there are many workers in our society who find no intrinsic satisfaction in their jobs, but who continue to attend to that job because they receive a rather powerful reinforcer--money. Certainly this approach deserves further study.

A study utilizing social casework methods was reported by Lichter and his associates.[33] One hundred five white, middle class adolescents who were considered potential dropouts were referred to a private agency by the Chicago public schools. Seventy students (33 girls and 37 boys) came for four or more interviews and constituted the Treatment Group. The following conclusions were drawn about them:

> "Forty-eight percent of the Treatment Group improved in emotional or personality functioning; 60 percent of the forty students who remained in school improved in school adaptation; and 46 percent of the fifty-six students of legal school-leaving age continued in school." (P. 256)

This study, then, suggests that social casework, which can be regarded as a method of counseling, may be effective in working with potential dropouts. Unfortunately, the lack of statistical comparisons between the Treatment Group and a control group render any conclusions about the effectiveness of treatment impossible. Difficulties in interpretation of the results are increased by the use of such "fuzzy" terms as "personality functioning" and "school adaptation".

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[33] Lichter, S., Rapien, E., Seibert, F., Sklansky, M. The Dropouts: A Treatment Study of Intellectually Capably Students Who Drop Out of High School, New York: The Free Press of Glencoe, 1962.

Karnes and others identified 91 students of lower socioeconomic status who were considered to be dropout and delinquency prone.[34] These subjects were then provided with a carefully designed two-year vocationally oriented program which also included personal counseling for both the subjects and their parents by a social worker. Compared to a matched control group which went through a regular program without such benefits, the experimental group had significantly better attendance, fewer dropouts, and better school adjustment.

In a study reported by the United States Commissioner of Education, 51 percent of actual or potential dropouts from six high schools who were contracted for summer counseling returned to school the following September.[35] In the six districts, the percentage returning ranged from a low of 5 percent to a high of 100 percent. No conclusions about the effectiveness of summer contracts can be drawn, since this study involved no control groups, but it does suggest one method that should be explored for possible use in dropout prevention programs.

One study which examined the efficacy of a summer counseling program in holding potential dropouts in school was done by Safar.[36] Five hundred sixty four students who were going to enter the ninth, tenth, eleventh, and twelfth grades were identified as likely not to

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[34]Karnes, and others. The Efficacy of a Prevocational Curriculum and Services Designed to Rehabilitate Slow Learners Who are School Dropout, Delinquency, and Unemployment Prone, Final Report, Champaign, Illinois, Community Unit 4 School District, 1966, (ERIC) #ED016-106).

[35]A.P.G.A. Staff Report, "The Dropout Problem", Guideposts, 1964, 7.

[36]Safar, D. Effects of a Summer Counseling Program With Potential Dropouts, Wyoming State Department of Education, 1966, (ERIC #ED010-097).

return to school at the end of the summer (criteria: failing in more than one school subject; demanding much disciplinary action; counselor judgement based on such factors as unfavorable home conditions, poor attendance, lack of interest in school). Then depending upon the condition to which they received over the summer: counseling; counseling in conjunction with their parents; no treatment. No description of what the counseling entailed or the number of sessions was given. A chi-square analysis revealed no significant difference among groups in rate of return at the end of that summer or in rate of retention during the following school year.

In a pilot project, David McClelland explored the use with potential dropouts of his achievement motivation training program which has been successfully used with businessmen.[37] Subjects were boys in a suburban Boston high school who were identified as being in danger of quitting school and who, with parental approval, had volunteered to participate. Training took place during summer recess in a rural, live-in camp, and consisted of five days of intensive concentration on several areas:

1. Learning about the achievement syndrome through such means as writing stories containing amounts of achievement imagery and playing games in which they acted like a person who had a high achievement motivation.
2. Exercises in self-study
3. Planning future activities after the course
4. Learning individual responsibility from group living

Ten students graduated from the two different five day courses while eleven other students came to the camp but left before the course

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[37]McClelland, D. Achievement Motivation Training for Potential High School Dropouts, Achievement Motivation Working Paper Number 4, Cambridge, Massachusetts: Harvard University, Graduate School of Education, 1968, (ERIC #ED029-067).

was over. During the following year, it found that, as compared to a matched control group, the graduates of the program had significantly higher grades and significantly fewer dropouts. Their attendance was also better, but not significantly so.

The results of this exploratory study are impressive-especially since McClelland's achievement motivation concept is very much akin to Rotter's concept of Internality (to be discussed later). It is unlikely that this treatment could serve all potential dropouts, though, because more than one-half of the subjects who entered treatment quit before completion. A comparison of the program's terminators and graduates revealed that, prior to treatment, the quitters had significantly lower self-esteem and grade-point averages. In other words, this program seems promising for some potential dropouts, but not for those who are most seriously in need of a crises intervention program.

One quite global conclusion might be tentatively inferred from the above studies: If students who have been identified as potential dropouts are given special, friendly interest and attention by school personnel (or by persons perceived by the students to be in some way related to the school), then certain school connected behaviors of those students may improve. Any more specific conclusions would be impossible to make for the following reasons: (1) there is no common method of identifying potential dropouts used in these studies; (2) different populations were dealt with--there is no assurance that the characteristics of a potential dropout in one study are not wholly different from those of the potential dropout of another study; (3) Outcome measures differed from study to study, including such diverse criteria as GPA, personality inventories, attendance behavior, discipline

problems, the act of dropping out, and so on; (4) inadequate research design and/or statistical procedures in many studies precluded meaningful interpretation of results.

Locus of Control

The theory which is probably having the most impact currently on applied psychology and education is that of B.F. Skinner.[38] In essence, this theory postulates that the consequences (i.e., reinforcers) of an individual's action either strengthen or weaken the probability of the recurrence of the action. The implications for such thinking are great. In fact, programs based on this principle and bearing such names as "behavior modification", "operant conditioning", and "token economy" are being increasingly used by such professionals as teachers and psychotherapists and Skinner has gone so far as to argue for a utopian society based on the proper administration of reinforcers.[39]

Yet, Julian Rotter has advanced a social learning theory which is not quite so simple as that of Skinner since he postulates a mediating variable (expectancy) between the action and its consequence.[40] That is, before a consequence can act as a reinforcer for an action, the individual has to see that the consequence is causally related to the action. If the individual lacks this perception of causality between his action and its consequence, the consequence will have no

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[38]Skinner, B. Science and Human Behavior, New York: McMillian, 1953.

[39]Skinner, B. Waldon Two, New York: McMillian, 1948; Skinner, B. Beyond Freedom and Digrity, New York: Alfred A. Knopf, 1971.

[40]Rotter, J. Social Learning and Clinical Psychology, Englewood Cliffs, New Jersey: Prentice-Hall, 1954; Rotter, J. "Generalized Expectancies for Internal Versus External Control of Reinforcement", Psychological Monographs, 1966, 80(1): 1-28.

effect on the probability of the future occurence of that action.

This expectancy is itself maintained according to Skinner's operant laws: Once the person has been a causal relationship between an action and its consequence, the future occurence or non-occurence of that consequence will either reinforce or extinguish the expectance. A practical example of how this might work is to be seen in the hypothetical situation in which a child always receives the same low grades, regardless of the quality of his work. Eventually his expectancy that grades are contingent on scholastic performance is extinguished and grades cease to be reinforced for him. Even should he now begin to get high grades when he performs well, he will discount them as being a result of "luck".

An early study which examined how expectancies affect behavior was done by Phares.[41] He used a very difficult color matching task in which half of his subjects (Condition I) were instructed that success was dependent upon skill. He found that a report that they were successful or unsuccessful had significantly more effect on the performance of subjects in Condition II than on those in Condition I. In other words, because subjects in Condition I did not see a causal link between their actions and success or failure, it made litter difference in their responding to know that they were succeeding or failing. However, a report of success or failure was interpreted as a positive or a negative reinforcement by those in Condition II and their behavior was altered accordingly. Similar studies since then

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[41]Phares, E. "Expectancy Changes in Skill and Chance Situations", Journal of Abnormal and Social Psychology, 1957, 54: 339-342.

have consistently verified this effect which expectancy has on performance.[42]

In life, some people experience more consistency in their action-reinforcement patterns than do others. All persons tend to form a "psychological average" of expectancies--generalized expectancy--which influences the extent to which they feel that they are able to influence situational outcomes. Thus, in the general population, we find a continuum on the dimension that Rotter has labelled locus of control: People at one end believe that the rewards and punishments which they receive are administered by other people or by some larger power such as luck or fate regardless of their own actions (externally controlled people) at the other end of the continuum are those people who believe that, through their own actions, they can control all the reinforcements that they receive (internally contolled people).[43] The internal-external (I-E) construct can thus be regarded as an individual's personal orientation concerning the degree to which he sees events being contingent upon his behavior.

Reviewing the literature on locus of control, Rotter concluded that the internal individual, as opposed to the external individual is likely to:

> (a) be more alert to those aspects of his environment which provide useful information for his behavior; (b) take steps to improve his environmental condition; (c) place greater value on skill or achievement reinforcements and be generally more

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[42] James, W., and Rotter, J. "Partial and 100% Reinforcement Under Chance and Skill Conditions", Journal of Experimental Psychology, 1958, 55: 397-403; Blackman, S. "Some Factors Affecting the Perception of Events as Chance Determined", Journal of Psychology, 1962, 54: 197-202.

[43] Rotter, J. "Generalized Expectancies for Internal Versus External Control of Reinforcement", Psychological Monographs, 1966, 80(1): 1-28.

concerned with his ability particularly his failure; and (d) be resistive to subtle attempts to influence him.(p. 25)[44]

Rigg found in his literature review that most studies characterize internals as being more consistent and predictable than externals while Lefcourt has posited that externality may be related to psycholpathology, withdrawal, and apathy.[45] Further, Phares, Richie, and Davis suggest that externality may function as a defense against threat and Simmons found that externals have maladaptive levels of aspiration.[46]

The original instrument to assess this I-E personality variable was devised by Phares and revised by Janes.[47] Further revisions and refinements have followed, and the final forms, used in this study, is discussed by Rotter.[48] The score of this 29 item questionnaire is simply the sum of all items answered in the external direction. At the time Rotter summarized the literature on the I-E Scale, he found that the range of scores went from 5.48 for a sample of Peace Corps trainees to a high of 10.00 for a sample of 18 year old Boston youth.[49]

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[44]Rotter, J. "Generalized Expectancies for Internal Versus External Control of Reinforcement", Psychological Monographs, 1966, 80(1): 1-28.

[45]Rigg, L. Children's Perception of Personal and Parental Locus of Control as Related to Academic Achievement, Unpublished doctoral dissertation, University of Illinois, 1972; Lefcourt, H. "Internal vs. External Control of Reinforcements: A Review", Psychological Bulletin, 1966, 4: 206-220.

[46]Phares, E., Richie, and Davis; Simmons.

[47]Phares, E. "Expectancy Changes in Skill and Chance Situations", Journal of Abnormal and Social Psychology, 1957, 54: 339-342; James, W. Internal Versus External Control of Reinforcement as a Basic Variable in Learning Theory, Unpublished doctoral dissertation, Ohio State University, 1957.

[48]Rotter, loc. cit.

[49]Ibid.

It is thus noteworthy that Johnson obtained an average score of 10.76 for a group of dropouts which he studied.[50] He also found trends for those who left school earliest to have the highest externality scores and for those who expressed a desire to go to a trade or business school to be more internal.

Research on Values as Outcome Criteria

A focus for treatment and evaluation is suggested if Beech's definition that a value "is a belief about how to behave or about an end state of existence which a person considers worth attaining" is accepted: If values are antecedents of behaviors, then an intervention strategy which changes values will ultimately, although indirectly, change behaviors.[51] Even if one accepts the contention of some theorists that the converse is true--that behavior change precedes value change--there is still a legitimate case to be made for using value change as an outcome criterion.[52] In fact, this idea of measuring treatment efficacy in terms of "positive" value change does have such proponents as Auerbach who argued that therapy can not be considered successful if a client has not changed some previously held values.[53]

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[50]Johnson, T. An Examination of Some Relationships Between Anomia and Selected Personality and Sociological Correlates in a Sample of High School Dropouts, Unpublished doctoral dissertation, University of California, Berkeley, 1969.

[51]Beech, R. "Value Systems, Attitudes, and Interpersonal Attraction", Dissertation Abstracts, 1967, 28 (3-A), 1125-1126.

[52]Ullman, L., and Krasner, L. A Psychological Approach to Abnormal Behavior, Englewood Cliffs, N.J.: Prentice-Hall Inc., 1969; Festinger, L. A Theory of Cognitive Dissonance, Evanston, Illinois: Row, Peterson, 1957.

[53]Auerbach, J. "Value Changes in Therapy", in W. Wolff, ed., Personality: Symposia on Topical Issues: Values in Personality Research, 1950, Chapter 4.

Perhaps one of the best known studies relating to this topic is that of Rosenthal.[54] He found that clients who were rated by their therapists as being more improved had changed their values more toward those of their therapist than had clients who were rated as less improved. Despite its serious methodological flaws, this study has spurred many related ones.

Welkowitz, Cohen, and Ortmeyer used the Strong Vocational Interest Blank and the Way to Live Scale in studying the values of 38 therapists and 44 patients at two psychoanalytic training centers.[55] They found that therapists were closer in value orientation to clients which they selected than to randomly assigned clients (p.01) and that those patients rated most improved by their therapists were, on post-testing, significantly closer (p.01) to their therapists values than were those rated least improved. Hassee found that there was a tendency for those clients whose values were least similar to their therapist's at the beginning of treatment to be rated as most improved.[56] However, in these cases, the clients' values tended to move toward those of the therapist. Holtzman also found the therapy success-value congruence relationship whole.[57] Almond and his associates found that the vast

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[54]Rosenthal, D. "Changes in Some Moral Values Following Psychotherapy", Journal of Consulting Psychology, 1955, 19: 431-436.

[55]Welkowitz, J., Cohen, J., and Ortmeyer, D. "Value System Similarity: Investigation of Patient-Therapist Dyads", Journal of Consulting Psychology, 1967, 31: 48-55.

[56]Hasse, R. "Non-Intellective Correlates of Value Congruence and Value Change in Counseling", Dissertation Abstracts, 1968, 29-A: 2201.

[57]Holtzman, M. "The Significance of the Value Systems of Patient and Therapist for the Outcome of Psycholtherapy", Dissertation Abstracts, 1962, 22-A: 4073.

majority of hospitalized psychiatric patients changed their values toward the perceived value system of the ward community.[58]

Yet, not all studies have obtained similar results to the above. Navas and Landfield and McGreevy and Daane found that while clients did shift their values, it was not necessarily toward those of the counselor.[59] In other studies there has been found a curvilinear relationship between counseling success and the movement toward congruence of counselor-client values.[60] That is, there was an optimal level of client-counselor value similarity attained, above or below which the client was less likely to be considered to have had a successful outcome.

The common element of all of the above studies is simply that a successful psychological treatment is one which affects value change on those in the treatment. Value change can thus be considered a legitimate criterion for treatment efficacy.

Self-Understanding

The importance of self-understanding is central in phenomenological self-theories of personality. Combs and Snygg who are among the best known self-theorists, contend that an adequate personality is characterized by self-perception while the inadequate personality

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[58]Almond, R., Keniston, K., and Boltax, S. "Patient Value Change in Milieu Therapy", Archives of General Psychiatry, 1969, 20: 339-351.

[59]Navas, M. and Landfield, A. "Improvement in Psychotherapy and Adoption of the Therapist's Meaning System", Psychological Reports, 1963, 13: 97-98; McGreevy, C., and Daane, C. "Changes in Semantic Differential Meaning That Accompany Counseling", Journal of Counseling Psychology, 1967, 14: 526-534.

[60]Gerler, W. Outcome of Psychotherapy as a Function of Client-Counselor Similarity, Unpublished doctoral dissertation, University of Illinois, 1958.

is threatened by recognition of some realities.[61] Rogers feels that positive mental health can only exist when there is a harmonious integration between a person's perceived self and his organismic reality.[62] This bears also on that person's interpersonal relationships, for the greater the congruence between these two facets of himself, the greater is his understanding and acceptance of others.

To correct incongruence between perceived self and organismic reality, a person might enter a therapeutic relationships in which, if successful, he "becomes more integrated, more effective. He shows fewer of the characteristics which are usually termed neurotic and psychotic, and more of the characteristics of the healthy, well-functioning person. He changes his perception of himself, becoming more realistic in his views of himself..."[63]

One method of systematically studying the notions which a person has about himself is the Q-sort which was developed by a colleague of Rogers.[64] In this method of assessment, the individual is given a packet of statements (e.g., "I am a hard worker", "I am an impulsive person") and is asked to sort them into a prearranged distribution along a continuum from those most like the individual doing the sorting to those least characteristic of him.

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[61] Combs, A., and Snygg, D. Individual Behavior: A Perceptual Approach to Behavior, New York: Harper & Row, 1959.

[62] Rogers, C. Client-Centered Therapy: Its Current Practice, Implications, and Theory, Boston: Houghton Mifflin, 1951.

[63] Rogers, C. On Becoming A Person: A Therapist's View of Psychotherapy, Boston: Houghton Mifflin, 1961.

[64] Stephenson, W. The Study of Behavior, Chicago, University of Chicago Press, 1953.

Although accuracy of self-perception is central to psychotherapy and personal counseling, it has an equally control place in guidance. Frank Parsons, who is generally recognized as the founder of the guidance movement, contended that the act of vocational choice is a rational one involving three elements: (1) accurate self-knowledge; (2) knowledge of the conditions and requirements of work opportunities; (3) a process of "true reasoning" to incorporate these first two elements in a decision.[65] Implicit in this model is the assumption that important life decisions can be made if one first has the requisite self-knowledge. Indeed, this assumption has been a major impetus for the growth of differential psychology with its tests of interest, personality, and aptitude.

Myers notes that:

> "Since so much of the practice of guidance consisted of the communication of tests to clients, it followed quite naturally that the effects of such activity should be seized upon as a useful criterion of counseling outcome. The usual paradigm for such research is to extract from the student some estimate of his personal characteristics, provide him with information on his test results, and then ask him to estimate his characteristics again. The difference between the pre- and post estimates provides the evidence for the impact of the treatment." (p. 866)[66]

A variation of the above preestimation/test interpretation/post estimation paradigm has been to substitute some other treatment than test interpretation into the model. For example, Delaney and Delaney gave a group experience to supervisors of student teachers to assess

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[65]Parsons, F. Choosing a Vocation, Boston: Houghton Mifflin, Co., 1909.

[66]Myers, R. "Research of Educational and Vocational Counseling", in Handbook of Psychotherapy and Behavior Change: An Empirical Analysis, by A. Bergin and S. Garfield, ed., New York: Wiley, 1971.

its effects on them and, ultimately, their supervisors.[67] Prior to treatment, they were asked to take the 16 Personality Factor Questionnaire (16PF) and to then estimate how they thought they scored on each of the variables. After treatment, they again predicted their scores. Discrepancies between pre-prediction and actual scores were then compared with the discrepancies between post-predictions and actual scores to see if the treatment developed more accurate self-perception. No significant differences were found. McDermott used the same technique in comparing the effectiveness of individual counseling with a team approach to counseling.[68] He found no significant increase in accuracy of self-perception among either clients or counselors.

Davis used a similar approach with potential droputs.[69] As a measure of the accuracy of their self-perceptions, subjects were asked to predict, after treatment, their scores on the Differential Aptitude Test. He found no significant differences between the treatment group which had been given one year of friendly attention by school personnel and a no-treatment control group.

Summary

The multiplicity of factors associated with dropping out of school was discussed. It was posited that the basic overriding factor is the perception by dropouts that schools simply do not meet their

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[67] Delaney, E., and Delaney, D. "The Effects of a Group Experience on the Self-Awareness of Supervisor Trainees and Teacher Trainees in Superivison", Journal of the Student Personnel Association for Teacher Education, 1971, 10: 32-37.

[68] McDermott, P.B. The Investigation and Development of the Parameters of a Team-System Approach to Counseling, Unpublished doctoral disssertation, University of Illinois, 1972.

[69] Davis, D. "An Experimental Study of Potential Dropouts", Personnel and Guidance Journal, 1962, 40: 799-802.

present or future needs and that this should be the focus of "crisis oriented" (as opposed to developmental) dropout prevention programs. While many crisis oriented dropout programs seemed effective, the lack of a common method of identifying potential dropouts, the different populations dealt with, and the diverse out come criteria, rendered meaningful integration of results difficult. Perhaps the most valid conclusion which can be drawn from these studies if special attention by school personnel is given to potential dropouts, then certain of their school connected behaviors may be improved.

Rotter has theoretically developed and empirically supported a personality construct which he calls locus of control. According to this, each person varies (along the internal to external continuum) behavior. There is some evidence that dropouts are more externally controlled--they feel that they have little control over that which happens to them in life.

Values are an individual's personal orientation toward or against certain behaviors and should, therefore, be expected to change aftet that individual has undergone successful psychological treatment. Studies supporting the use of value change as an outcome criterion were reviewed. Finally, theoretical arguments for a client having an increased realism of self-perception after psychological treatment were given, along with several studies which have used this as an outcome criterion.

CHAPTER III

PROCEDURE

Sample

Freshmen and seniors are generally least likely to drop out of school since the former are often too young and the latter are quite near graduation. Thus, those in the sophomore and junior classes account for 70 percent of the dropouts nationally and constitute the group which may be most economically concentrated on to hold in school.[70] For this reason, the sample was sophomore and junior students enrolled at Westview and Eastridge high schools at Kankakee, Illinois.

Kankakee uses school busing to achieve balance in its schools. The two high schools are consequently well match for race, socio-economic status, and other variables relevant to this study. It was assume for the purpose of this study, then, that students from the two high schools came from the same population.

Subjects

Subjects were sophomore and junior students from Eastridge and Westview high schools in Kankakee, Illinois. They were identified by all of the teachers who had sophomores and/or juniors in during the

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[70] French, J., and Cardon, B. Employment Status and Characteristics of High School Dropouts of High Ability, University Park: Pennsylvania State University, 1966.

first period of the day in which all students are in school (Period 3 at Eastridge; Period 4 at Westview). These teachers completed a Student Identification Form (SIF) for each sophomore and junior in their classes during this period by ranking each such student on a five-point Likkert type scale from "most unlikely to finish school"(1) through "most likely to finish school" (5). In making this rating, teachers were to keep in mind such variables as the following: the student's attendance record; the student's overall grade point average; perception of the student's attitudes toward school, teachers, curriculum, etc.; subjective "feelings" about the student's behavior in the school environment.

All students who were ranked with a one or a two on the SIF (N: 94) were initially included in this study and another 60 subjects were randomly selected from approximately 150 who were ranked with a Three. These 154 S's were then randomly assigned to one of the six treatment groups or to the no-treatment control group.

Since labeling often serves as a self-fulfilling prophesy, the subjects were at no time led to believe that they had been identified as potential dropouts.[71] They were simply told that they were chosen to help school officials in studying and facilitating career planning and development.

Instrumentation

Quantitative assessment was made using three paper-pencil inventories. The 16 PF was given only once before treatment, but the subjects predicted their own scores both pre- and post treatment.

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[71]Ullman, L., and Krasner, L. A Psychological Approach to Abnormal Behavior, Englewood Cliffs, N.J.: Prentice-Hall Inc., 1969.

The Rotter Internal-External Scale (I-E Scale) was administered pre- and post while the Survey of Interpersonal Values (SIV) was administered only post-treatment. In addition, a record was kept for each subject until the end of the treatment and the number of class periods which he skipped on the days he was in attendance.

Survey of Interpersonal Values

Developed by Leonard Gordon, the SIV consists of thirty sets of three statements, and is forced choice in design.[72] The examinee is asked to pick one statement in each of the three that represents what is most important to him and one statement that represents what is least important to him. One statement in each set is not responded to.

The SIV is designed to assess certain critical values, or basic motivational patterns, involving the individual's relationships to other people or their relationships to him. These values are important in the individual's personal, social, marital, and occupational adjustment since they determine what he characteristically does in situations.

The six scales of the SIV were derived through factor analysis. The manual states that "insofar as the factors found confirm, to a very large extent, those found in other factor analysis, the SIV scales may be considered to represent reliable, discrete categories and, in this sense, can be said to have factorial validity. This claim is strengthened by the fact that, subsequent to the factor analysis, the scales maintained their internal consistency through repeated item

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[72]Gordon, L. Survey of Interpersonal Values, Science Research Associates, 1967.

analysis for samples of various composition." (p. 6) Further data is given showing the relationship between the SIV scales and other measures. These scales and the definition of each as given in the manual are:

> S-Support: Being treated with understanding, receiving encouragement from other people, being treated with kindness and consideration.
>
> C-Conformity: Doing what is socially correct, following regulations closely, doing what is accepted and proper, being a conformist.
>
> R-Recognition: Being looked up to and admired, being considered important, attracting favorable notice, achieving recognition.
>
> I-Independance: Having the right to do whatever one wants to do, being free to make one's own decisions, being free to do things in one's own way.
>
> B-Benevolence: Doing things for other people, sharing with others, helping the unfortunate, being generous.
>
> L-Leadership: Being in charge of other people, having authority over others, being in a position of leadership or power. (p. 3)

Rotter's Internal-External Control Scale

Developed by Rotter and his associates for experimental purposes, the I-E scale is a 29 item forced choice test including six filler items intended to make the purpose of the test somewhat more ambiguous. For each item, the examinee must indicate his preference for either a statement indicating a belief that rewards and punishments occur with no relationship to one's actions, or for a statement with the implicit belief that rewards and punishments are the consequences of one's actions. The former belief is characteristic of one with an external locus of control while the letter is characteristic of one with an internal locus of control. The score on this scale is simply the sum of all the items in the external direction.

Sixteen Personality Factor Questionnaires

Cattell comprehensively reviewed the literature on personality to find all the personality traits which major theorists have described. Using this list as a starting point, the factor analyzed items from available personality questionnaires and behavioral ratings checklists and found fifteen source traits or sixteen with intelligence. (A trait is a "mental structure", an inference made from observed behavior to account for behavioral consistency and regularity; a "source trait" represents an underlying variable which enters into the determination of behavioral syndromes and which can be identified only via factor analysis.) Although he has since "discovered" seven other source traits, it was the original ones which he sought to measure in the factor analytically derived questionnaire he first developed in 1949. That instrument, the Sixteen Personality Factor Questionnaire (16 PF), has undergone several revisions (in 1956-1957, 1961-1961, 1967-1968) and is now regarded as one of the best instruments available to assess personality.

The 16 PF consists of 187 statements for which the respondent is to pick the answer he prefers from three alternatives. The factors measured by this scale and their factor names (letters) are the following expressed as continua: reserved to outgoing (a); less intelligent to more intelligent (B); affected by feeling to emotionally stable (C); humble to assertive (E); sober to happy-go-lucky (F); expedient to conscientious (G); shy to venturesome (H); tough-minded to tender-minded (I); trusting to suspicious (L); practical to imaginative (M); forthright to shrewd (n); self-assured to apprehensive (O); conservative to experimenting (Q_1); group-dependent to self-sufficient (Q_2); undisciplined

self-conflict to controlled (Q_3); relaxed to tense (Q_4).

Nichols examined the stability of these traits in a four-year test-retest of the 16 PF and found that coefficients ranged from a low of .23 (factor B) to a high of .64 (factor H) with most being in the range of .50.[73] This indicates that though the measured traits tend to change with learning and maturation, they are generally stable. However, certain traits (Q_3, M, N, L) are more liable to fluctuation with the subject's psychological state than are others. Intelligence (factor B) seems least reliable upon retesting, probably because of practice effects.[74]

In a test-retest over two months (the approximate treatment time in this study), Cattell and his associates found that stability coefficients ranged from .63 (factor B) to .88 (factor H) with most being in the mid 70's.[75] Thus, there seems to be evidence for the high stability of the traits being measured.

The way in which the 16PF was used in this study is predicted on the stability of the traits it measures. Before treatment, each subject was administered the 16PF and was immediately afterward handed the 16PF Test Profile sheet and asked to predict how he thought he scored on each of the traits. After treatment, subjects again made a prediction on another profile sheet. Using a formula developed by Delaney and Delaney, discrepancies between the prediction and actual

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[73] Nichols, R. "Personality Change and The College", National Merit Scholarship Cooperative Research Reports, Evanston, Illinois, 1965.

[74] Cattell, R., Eber, H., and Tatsuoka, M. Handbook for the Sixteen Personality Factor Questionnaire (16 PF), Champaign, Illinois, Institute for Personality and Ability Testing, 1970.

[75] Ibid.

scores were compared with the discrepancies between post-prediction and actual scores to see if treatment developed more accurate self-perception.[76]

Experimental Procedure

One hundred fifty-four students were selected for this project on the basis of their ratings on the SIF. Of these, 94 scored a one or a two and the rest were randomly selected from those who scored three. Selection was made from the two schools as follows:

22 students - Strategy 1	22 students - Strategy 4
22 students - Strategy 2	22 students - Strategy 5
22 students - Strategy 3	22 students - Strategy 6
22 students - Control	
88 students	66 students = total

Intervention Strategies

The 154 experimental subjects were randomly assigned to groups, treatment or control, of 22 each for a period of ten weeks. The strategies are as follows:

1. Counselor Aide Group (CAG)

This group of 22 Eastridge High students was asked to learn how to help others in their "career planning and development" and told that, upon completion of training, they would be given the option of working during the following semester with one or more incoming freshmen. They were trained by an advanced doctoral student from the University of Illinois, Urbana, in basic counseling skills, especially those of attending and reflecting. This group met for eight one-hour sessions during which the group members suggested typical problems which they had

[76] Delaney, E., and Delaney, D. "The Effects of a Group Experience on the Self-Awareness of Supervisor Trainees and Teacher Trainees in Supervision", Journal of the Student Personnel Association for Teacher Education, 1971, 10: 32-37.

encountered and ways of dealing with them were explored in role-plays between a "counselor" and a "client" (selected from among the group members). Audio and video-tape feedback of the role-plays was given with selected junior high students and discussed. Mock counseling interviews were also conducted during each of three visits to a junior high school.

2. Home Visitation Group (HVG)

Home Visitation Group consist of 22 Eastridge High students. This strategy employed the direct intervention of three home visits per student by the Eastridge Home Liaison Counselor (a Black, female high school graduate with previous social casework experience) who was instructed that she was to tell parents that she was trying to study students' "career planning and development" (although discussion was not bound to that topic). These visits were made by appointment, usually in the evenings. In most cases, the student was also present during the meeting of the Home Liaison Counselor and his parents.

3. Peer Leader Groups (PLG)

Peer Leader Groups in which 22 Eastridge High students were randomly assigned into two groups of eleven each. Each PLG group was led by co-leaders (paired in male-female, Black, White fashion) who had met each of the following conditions: (1) rated on the SIF as "most likely to complete high school"; (2) identified by the Eastridge High human relations consultant as a person "looked up to" by other students in the school. Each group met for ten one-hour sessions which were to center on (but not be limited to (the assigned topic: Career planning and development.

4. Individual Help Group (IHG)

Individual Help Group consisting of 22 Westview High students.

The Westview Home Liaison Counselor (a white, female high school graduate) met with each of these students to help them with their "career planning and development", although many concerns were actually discussed. Each student was seen for seven one-hour sessions.

5. Professional Counseling Group (PCG)

Professional Counseling Group consisting of 22 Westview High students who were seen by the school's professional counselors for the purpose of helping them with their "career planning and development". Each counselor (4) was randomly assigned five students with whom he was to meet for five 30-50 minute sessions.

6. Adult Leader Groups (ALG)

Adult Leader Groups consisting of 22 Westview High students randomly assigned into two groups of five and two groups of six. Each group employed co-leaders from the community (male and female; median age in the early 40's with the range from the early 20's to the late 60's; occupationally including housewives, retired teachers, a physician, a psychologist, and a community youth worker) who had been selected by the Westview Home Liaison Counselor. Each group met with each adult pair for a total of eight hours in the ten-week session. They were assigned (but not limited to) the discussion topic; Career planning and development.

7. Treatment Control Group

Treatment Control Group consisting of 22 Eastridge High students who received no treatment and served as the control for the six strategy groups.

8. Descriptive Control Group

Descriptive Control Group consisting of 20 Westview High students who received no treatment and who were rated on the SIF as five's

(students most likely to complete high school). This group served to provide descriptive data by comparisons to the Treatment Control Group.

Hypotheses

The purpose of this study was to evaluate and to compare the effectiveness of six different intervention strategies with potential dropouts. Increased attendance is an important measure of effectiveness. The hypotheses under consideration in this study, stated in the null form, relative to attendance behavior were:

Hypothesis 1: There are not statistically significant differences among control and treatment groups in days missed from school by subjects in the fourteen weeks from the beginning of the semester until the end of treatment.

Hypothesis 2: There are not statistically significant differences among control and treatment groups in the number of classes skipped by subjects on the days they were present in the fourteen weeks from the beginning of the semester to the end of treatment.

The effectiveness of crisis oriented dropout prevention programs such as this, in common with other psychological treatments, may be inferred by assessing changes in the subjects' interpersonal values. One instrument for measuring such values is the Survey of Interpersonal Values. The hypothesis, stated in the null form, under consideration of this study relative to the SIV was:

Hypothesis 3: There are no statistically significant differences among control and treatment groups in post-treatment values of the subjects, as measured by the six scales of the SIV.

Reality of self-perception has been a goal for clients of both guidance personnel and some psychotherapists. In this study, reality of a subject's self-perception was assessed by his accuracy in predicting

his scores on the Sixteen Personality Factor Questionnaire. The hypothesis under consideration in this study, stated in the null form, relative to the reality of self perception was:

Hypothesis 4: There are no statistically significant differences among control and treatment groups in the reality of the subjects' self-perception as measured by discrepancy scores on the 16 PF.

The extent to which a person perceives himself controlled by his environment has been related to behavioral pathology and, of special concern in this study, to dropping out of school. The Rotter Internality-Externality scale was used in this study to measure this variable. The hypothesis under consideration in this study, stated in the null form, relative to the I-E scale was:

Hypothesis 5: There are no significant differences among the control and treatment groups in the correlation between pre- and post-treatment I-E scores of subjects.

Summary

In this study, tenth and eleventh grade potential dropouts from two high schools were identified by a rating form which was given to their teachers. After pre-testing, they were randomly assigned to one of six intervention strategies or to a no-treatment control group. Appropriate attendance records were kept and post-test were administered after the ten weeks of treatment. The purpose of the study was to assess the relative ability of each treatment mode in improving attendance behavior, in increasing accuracy of self-perception, in altering the degree to which the subjects perceive themselves to be in control of their environments, and in changing certain values.

CHAPTER IV

RESULTS AND DISCUSSION

Comparison of Treatment and Control Groups

This study sought to evaluate the relative effectiveness of six intervention strategies with potential dropouts. Four basic criterion measures were employed. The significance level used for analysis in this study was .20 since type I and type II errors were of approximately equal importance. Winer says:

> "No absolute standards can be set up for determining the appropriate level of significance and power that a test should have. The frequent use of the .05 and .01 levels of significance is a matter of a convention having little scientific or logical basis. When the power of tests is likely to be low under these levels of significance, and when type I and type II errors are of approximately equal importance, the .30 and .20 levels of significance may be more appropriate than the .05 and .01 levels."[77]

Subjects who were retained for final analysis of data were those who had met the appropriate criterion: those in groups 1, 3 and 6 who had attended four or more group meetings; those in groups 4 and 5 who had attended each treatment session; those in group 2 who were still in school and whose parents had been visited all three times. These structures caused a loss of the total number of subjects in each group. In addition, difficulties in testing subjects and in keeping adequate records caused data on one or more dependent variables to be lost for some subjects.

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[77] Winer, B. Statistical Principles in Experimental Design, New York: McGraw-Hill, Inc., 1971.

Table I summarizes the numbers left in each group and the numbers used in statistical comparisons of the dependent variables.

TABLE I

NUMBERS OF SUBJECTS BY GROUP FOR EACH DEPENDENT VARIABLE

Group	Total N	Rotter N	SIV N	Skips N	Absences N	16 PF N
1. CAG	11	6	10	7	9	6
2. HVG	16	11	16	11	13	15
3. PLG	11	9	11	9	7	8
4. IHG	12	12	12	12	12	11
5. PCG	13	12	13	12	12	10
6. ALG	14	14	14	14	14	14
7. Control	17	10	17	14	14	13

Due to administrative error, some subjects at Eastridge High were included in either two or three treatments simultaneously. This constituted a confounding variable and two ways of dealing with the problem suggested themselves: deletion of data for those multiple-treated subjects from those groups in which they were included and lumping the data from these subjects in each group with which they participated. As Lasky discusses, the latter is the more conservative alternative--if the data for some subjects are included in two or more groups, the difference between the means of those groups is lessened. It was for this reason that it was decided to include the data for each subject in each group of which he was a member. The soundness of this procedure was borne out when, as a check, the data were analyzed both ways and found to be virtually the same.

A one-way analysis of variance was used to analyze the difference among groups in numbers of classes skipped. As Table II shows, there was a significant (p..001) difference obtained. However, using the Scheffe method of post hoc analysis, a significant difference (p. .01)

was found between the four groups at Eastridge and three which were at Westview.[78] This would suggest that the significant difference obtained in the analysis of variance was an artifact of the school attended and, so, spurious.

TABLE II

ANALYSIS OF VARIANCE OF THE NUMBER OF CLASSES SKIPPED

Source	df	SS	MS	F
Between group	6	3,952.31	658.72	6.982*
Within group	72	6,792.88	94.46	

*P .001

Again using a one-way analysis of variance, it was found that there was a significant difference (p. .16) among groups in the number of days missed from school. This is shown in Table III. No post hoc analysis was made, but the mean for each group is shown in Table IV where it can be seen that only the PCG group missed more days than did the control group.

TABLE III

ANALYSIS OF VARIANCE OF THE NUMBER OF DAYS ABSENT FROM SCHOOL

Source	df	SS	MS	F
Between group	6	249.43	41.57	1.5888
Within group	74	1,937.45	26.18	

[78]Glass, G., and Stanley, J. Statistical Methods in Education and Psychology, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

TABLE IV

MEAN NUMBER OF DAYS MISSED BY GROUP

Group	3-PLG	1-CAG	4-IHG	2-HVG	6-ALG	7-Control	5-PCG
Mean	6.00	6.44	7.58	7.92	9.14	10.57	11.25

For each of the six scales of the SIV, a one-way ANOVA was run to check for differences among groups. As shown in Table V, differences were significant for three of the scales at the .20 level or less. The Newman-Keuls method of a posteriori comparison was used to test for differences among means.

TABLE V

ANALYSIS OF VARIANCE OF THE SIV SCALES

Scale	Source of variation	df	SS	MS	F
Support	Between group	6	97.51	16.25	.364
	Within group	86	3,841.72	44.67	
Conformity	Between group	6	116.04	19.34	.452
	Within group	85	3,636.87	42.78	
Recognition	Between group	6	142.82	23.80	.657
	Within group	86	3,116.74	36.24	
Independence	Between group	6	842.62	140.44	3.165***
	Within group	86	3,815.64	44.37	
Benevolence	Between group	6	403.17	67.19	1.443*
	Within group	85	3,958.66	46.57	
Leadership	Between group	6	444.38	74.06	1.836**
	Within group	83	3,347.27		

* p .20
** p .10
*** p .01

As shown in Table VI, subjects in group 4 (IHG) valued independence significantly more (p .05) than did those groups 3 (PLG) and 2 (HVG). Those in group 5 (PCG) also scored higher (p .05) on this dimension than did the PLG group. Again, however, a Scheffe analysis revealed a significant difference (p .05) between the groups at each of the two schools, making it questionable to assume that any differences

among groups were a function of treatment.

TABLE VI

NEWMAN-KEULS ANALYSIS OF SIV INDEPENDENCE SCALES

Rank	1	2	3	4	5	6	7
Group	3	2	1	6	7	5	4
Mean	12.8	14.25	15.50	17.93	18.35	19.85	22.00
		2.07	3.32	5.75	6.17	7.67*	9.82**
			1.25	3.68	4.10	5.60	7.75*
				2.43	2.85	4.35	6.50
					0.42	1.92	4.07
						1.50	3.65
							2.15
q	2.82	3.39	3.73	3.94	3.96	4.14	4.28
W	5.26	6.31	6.94	7.37	7.37	7.70	7.96

* p .05
** P .01

As shown in Table VII, the subjects in group 5 (PCG) valued leadership significantly more (p .10) than did those in group 1 (CAG). No significance was found between the groups at each of the schools when a Scheffe was used.

TABLE VII

NEWMAN-KEULS ANALYSIS OF THE SIV LEADERSHIP SCALE

Rank	1	2	3	4	5	6	7
Group	1	2	3	6	7	4	5
Mean	6.78	8.31	9.90	10.64	11.40	13.25	13.77
		1.53	3.12	3.86	4.62	6.74	6.99*
			1.59	2.33	3.09	4.94	5.46
				0.74	1.50	3.35	3.87
					0,76	2.61	3.13
						1.85	2.37
							0.52
q		2.35	2.94	3.29	3.54	3.73	3.88
W		4.25	5.29	5.92	6.37	6.71	6.98

* p .10

There was a significant difference (p .20) among groups in the extent to which they valued benevolence. No post hoc analysis was made, but the obtained means for each group are shown in Table VIII where it can be clearly seen that there is a difference between schools (groups 1-3, 7 vs 4-6) even though a Scheffe revealed that the difference was not significant at the .25 level.

TABLE VIII

MEAN SCORE ON THE SIV BENEVOLENCE SCALE

Group	1-CAG	7-Control	3-PLG	2-HVG	5-PCG	4-IHG	6-ALG
Mean	12.30	12.31	13.63	14.75	16.54	17.42	17.57

Self-awareness was operationally defined as the change in ability to estimate one's obtained scores on the 16 PF. Using the following computational techniques, an Index of Discrepance (ID) was found for each person: the sum of the squared differences between the pretreatment estimated (E) and obtained (O) scores on each of the 16 PF scales was divided by 16, and its square root was taken.[79] The same procedure was used for the post-treatment estimate of scores. The ID was the difference between the 2 values.

$$ID = \sum_{1}^{16} \frac{(E-O)^2_{Pres}}{16} \quad \sum_{1}^{16} \frac{(E-O)^2_{Post}}{16}$$

[79] Delaney, E., and Delaney, D. "The Effects of a Group Experience on the Self-Awareness of Supervisor Trainees and Teacher Trainees in Supervision", Journal of the Student Personnel Association for Teacher Education, 1971, 10: 32-37.

A one-way analysis of variance was run to determine if there were ID score differences among groups. As shown in Table IX no significant differences were obtained.

TABLE IX

ANALYSIS OF VARIANCE OF THE ID SCORES ON THE 16 PF

Source	df	SS	MS	F
Between Group	6	5.87	.98	.474
Within Group	70	144.39	2.06	

The extent to which subjects perceive themselves to be in control of their environment was measured both pre- and post-treatment with the Rotter I-E scale. For each group, correlations were computed for the pre-post measures, then a t-test for correlations was run as a check on consistency.[80] As seen in Table X, the only experimental group which had a significant (p .05) consistency score was the control group. Thus, even though the pre-post change score moved in a positve direction for some groups and in a negative direction for others, there was change for all groups except the control--suggesting that perhaps there was some element in each of the treatments which rendered the scores unstable. This last conclusion is given more support when it is seen that the consistency score for group (Descriptive Control Group; to be discussed in another section) was also significant (p .01).

[80] Winer, B. Statistical Principles in Experimental Design, New York: McGraw-Hill, Inc., 1971.

TABLE X

ROTTER CONSISTENCY SCORES BY TREATMENT GROUP

Group	N	Pre-X	Pre-S.D.	Post-X	Post S.D.	r	t
1. CAG	6	9.17	2.64	10.33	4.63	.70	1.95
2. HVG	11	11.82	2.75	11.50	3.40	.58	2.15
3. PLG	9	11.67	3.28	13.00	1.93	.49	1.50
4. IHG	12	10.92	3.03	10.17	2.85	.44	1.56
5. PCG	12	11.16	2.69	12.42	3.03	.18	0.57
6. ALG	14	11.29	3.32	10.29	3.38	.44	1.68
7. Control	10	11.50	3.24	10.46	4.03	.67	2.56*
8. Descr. contr.	19	11.79	3.77	11.37	4.00	.81	5.71**

* p .05
** p .01

An analysis of variance was also run on the Rotter I-E scores. As shown in Table XI, there were no significant differences among groups or between pre- and post-testing.

Even though the interaction effects between groups and testing occasions was not significant at the criterion level of .20, it is noteworthy that it was significant at the .30 level, suggesting that there was differential change pre- to post-testing among groups.

TABLE XI

ANALYSIS OF VARIANCE OF THE ROTTER I-E SCALE SCORES

Source	df	SS	MS	F
Groups (A)	6	73.79	12.29	.87
Subjects within groups a/	67	940.45	14.04	
Occasions (B)	1	.11	.11	.02
A x B	6	39.33	6.56	1.23
B (subjects within groups) b/	67	357.56	5.34	

a/ Error for group effects.
b/ Error term occasions and groups x occasions interaction.

Comparisons Between Treatment and Descriptive Control Groups

At the same time that the seven experimental groups (6 treatment and 1 control) were formed, another group was selected for comparison purposes. This group of 20 students was randomly selected from among those Westview students who were rated with a five on the SIF (i.e., "most likely to remain in school"). Using the same dependent variables as the main study, this group was then compared, via t-tests, with the no-treatment control group (which had been selected from among those who had received a 1.2 or 3 on the SIF).

TABLE XII

SIV: POTENTIAL DROPOUTS VS. STAYINS

Variable	Potential D.O.'s X	Stayins' X	df	t
Support	14.6	18.9	35	2.14*
Conformity	14.9	10.6	35	2.14*
Recognition	9.5	11.0	35	.78
Independence	18.4	20.4	35	.81
Benevolence	12.3	17.6	34	2.34*
Leadership	11.4	11.1	33	.17

* p .05

As seen in Table XII, there was a significant difference (p .05) between the two groups on three of the six scales of the SIV: the Stayins valued Support and Benevolence significantly more (p .05) than did the Potential Dropouts while the latter group valued Conformity to a significantly greater (p .05) degree than did the former group.

TABLE XIII

ROTTER: POTENTIAL DROPOUTS VS. STAYINS

Variable	Potential D.O.'s X	Stayins' X	df	t
Rotter (pre)	11.5	11.7	27	.21
Rotter (post)	10.4	11.3	30	.63

There was no significant difference between the two groups in the degree to which they perceived themselves to be in control of their own reinforcers (as measured by the Rotter I-E scale). The figures for both the pre and the post measurement of this dimension are shown in Table XIII.

TABLE XIV

ATTENDANCE: POTENTIAL DROPOUTS VS. STAYINS

Variable	Potential D.O.'s X	Stayins' X	df	t
Skips	6.1	3.4	31	1.60*
Absences	10.5	2.4	32	5.31**

* p .10.
** p .01.

There was a clear differentiation of the two groups in attendance behavior. As the figures in Table XIV show, the potential dropouts skipped significantly more (p .10) classes on the days in which they were in school and were absent significantly more often (p .01) than were the stayins.

TABLE XV

16 PF PRIMARY FACTORS: POTENTIAL DROPOUTS VS STAYINS

Variable	Potential D.O.'s	Stayins	df	t
A	5.7	5.8	33	.14
B	4.6	6.7	33	4.99***
C	5.7	4.7	33	1.28
E	4.9	6.5	33	2.01*
F	5.0	5.9	33	1.66*
G	4.8	4.9	33	.15
H	5.3	4.9	33	.47
I	5.6	5.3	33	.50
L	4.5	6.8	33	3.33***
M	5.3	5.1	33	.36
N	6.5	4.9	33	2.23**
O	6.13	5.15	33	1.39
Q_1	4.9	5.6	33	1.23
Q_2	5.5	5.8	33	.43
Q_3	6.7	4.7	33	3.17***
Q_4	4.3	6.3	33	2.68**

* p .10.
** p .05.
*** p .01.

As shown in Table XV there were significant differences between the two groups on the 16 primary factors measured by the 16 PF. As compared to the potential dropouts, the stayins were significantly more intelligent (Factor B p .01), suspicious (Factor L p .01), tense (Factor Q_4 p .05), assertive (Factor E p .10), and enthusiastic (Factor F p .10) than were the potential dropouts. On the other hand, the potential dropouts were significantly more concerned with maintaining a self-concept consisting of a clear, consistent pattern of socially approved behavior (Factor Q_3 p .01) and were significantly more shrewd (Factor N p .05) than were the stayins.

TABLE XVI

16 PF SECOND-STRATUM FACTORS: POTENTIAL DROPOUTS VS. STAYINS

Variable	Potential D.O.'s X	Stayins' X	dg	t
Q_1	4.8	5.6	33	1.34*
Q_2	5.0	6.2	33	1.78**
Q_3	4.5	5.8	33	2.03**
Q_4	4.9	6.3	33	2.51**

* p .10.
** p .05.

Cattell and his associates have found six to nine second-stratum factors which were derived from factor analysis of primary factors.

> "Psychologically, the second-stratum factors may be viewed as broader influences or organizers contributing to the primaries and accounting for their being correlated. For example, ego weakness, C, ergic tension, Q_4, guilt proneness, O, etc., are all expressions of anxiety, Q_1.[81]

Those second-order factors computed for this study were: Introversion to extraversion, Q_I; adjustment to anxiety, Q_{II}; pathemia to cortertia (Tough Poise), Q_{III}; subdued to independent, Q_{IV}.

As seen in Table XVI, stayins were significantly more extraverted (Q_I p .10), anxious (Q_{II} p .05), "toughly poised" (Q_{III} p .05; this va variable describes individuals who are alert and who handle problems at a "dry", objective level), and independent (Q_{IV} p .05) than were potential drcpouts.

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[81]Cattell, R., Eber, H., and Tatsuoka, M. Handbook for the Sixteen Personality Factor Questionnaire (16 PF), Champaign, Illinois, Institute for Personality and Ability Testing, 1970.

TABLE XVII

16 PF CRITERION SCORES: POTENTIAL DROPOUTS VS. STAYINS

Variable	Potential D.O.'s X	Stayins' X	df	t
Neuroticism	5.7	5.4	33	.38
Leadership	5.4	5.3	33	.14
Creativity	4.9	5.9	33	1.87*

* p .05.

The results shown in Table XVI show that, of the three criterion scores derived from a regression equation using 16 PF factors, only one score differentiated between the stayins and potential dropouts; Stayins were significantly higher (p .05) on creativity.

Discussion of the Experimental Treatment Results

Before the results can be meaningfully discussed, recognition must first be made of the interschool differences which were found. The differences were present for both behavioral and personality measures and it is likely that there is a separate cause for each of these differences. The first seems to have been a greater rigor in recording class skips at Westview. Since the difference between the two schools on this measure was so clear cut and striking, this explanation seems most plausible.

The other factor may have been the presence of a real population difference between the two schools in the extent to which subjects valued independence. Perhaps this is a function of environments which differentially nuture independence at the two schools.

A primary question to be answered in a discussion of the results is: Did the treatments affect change: The answer, coming from the results on three criteria, seems to be an affirmative one. First, of the Rotter I-E scale consistency scores (Table X), only the no-treatment control group's were significantly stable from pre- to post-testing. The fact that the descriptive control group's consistency was also significant further underscores the import of this finding. Clearly, the treatments influenced, for better or worse, the extent to which these subjects perceived themselves to be in control of their environments.

Another indicator of treatment effectiveness is to be found in the mean number of days absent by groups (Table IV): only the subjects in the professional counseling treatment missed more school days than did the control group subjects. This suggests that 5 of the 6 treatments were, to some extent, effective in curtailing absenteeism. This result

is of considerable import since absenteeism has been consistently found to be associated with dropping out of school.

The third indicator of treatment effectiveness is reflected in the ordering of results on the SIV Benevolence scale, Table VIII. Only members of the counselor aide group scored lower. Thus, after treatment, the members of 5 of the 6 treatment groups valued Benevolence, or "doing things for people", to a greater extent than did those of the control group.

No treatment effectiveness was reflected in the analysis of ID scores, the measure of increased reality of self-perception. However, several conditions make it unlikely that the dimension of increased self-knowledge was tapped by the method which this study employed to do that:

1. The predictions, both pre- and post-treatment, were made in a cafeteria setting where one student could easily watch his neighbor respond. It is unlikely that a person would admit to having less than desirable personality traits under those conditions.

2. The scales are much more complex than can be adequately explained by the few words on the profile sheet. To assure sufficient understanding, a short explanation should have been given verbally to each subject before he made his prediction.

3. Even if the definitions given on the profile were sufficient to explain the 16 PF traits, it is questionable that the subjects of this study were able to grasp the full import of many words. For example, one end of Factor G is defined as "conscientious, persevering, staid, moralistic"--all being words which are not likely to be in the vocabulary of 10th and 11th grade potential dropouts.

In looking at differential treatment effectiveness, there seems

little to be said about the home visitation group since. on all outcome measures, its scores were near the medium. Except that its subjects were highest in valuing Benevolence, essentially the same thing is true of the adult leader group.

There is some indication that the professional counseling group may have had detrimental effects on its subjects. Its Rotter I-E scale pre- to post-testing consistency score (Table X) was lowest of all groups--that is, there was greatest change--and the change was in an undesirable direction, toward less perceived control of environment. Further, members of this groups exceeded all other groups, including the control group, in the number of school days missed. However, not all indicators were negative for this treatment, because the members of this group were highest on the SIV Leadership scale (valuing "being in charge of other people") and were significantly higher on that scale than were the counselor aide group subjects. Also their score on the SIV Independence scale was exceeded only by that of the individual help group subjects and was significantly higher than that of the peer leader group.

Results for the counselor aide group were mixed and it is difficult to reconcile them. Members of this group missed school less frequently than those of all other groups except the peer leader group. However, it is most interesting to note that this group was exceeded by all other groups in valuing doing things for others (Table VIII; SIV Benevolence) and being in charge of people (Table VII; SIV Leadership). The former value score is of especial interest since this treatment, with its role plays and counseling analogue sessions, concentrated almost exclusively on helping others.

The peer leader group members missed the fewest days of school (Table IV), a most important indicator of effectiveness when treating potential dropouts. However, as seen in Table VI, members of this group valued Independence, "being able to do things in one's own way", least of all groups and significantly less so than members of the individual help and professional counseling groups. It is possible that the formation of strong group cohesiveness makes the group members value Independence less. This is made the more plausible when one realizes that the two groups scoring significantly higher on this dimension (IHG and PCG) both used an individual counseling model.

Members of the individual help group valued Independence to a greater degree than did members of all other groups and significantly more so than the members of the peer leader and home visitation groups. Further, they were exceeded by only one group in their valuing both of Benevolence and of Leadership.

In determining differential treatment effectiveness, one must certainly take into account the cost of each treatment in professional man-hours. The professional counseling group was the most expensive treatment since it required master's level personnel to see each student individually for each of three sessions. Because the resultant changes were questionable at best and negative at worst, this treatment is clearly the least desirable.

The lack of many clear-cut indications make it difficult to order the counselor aide, home visitation, and adult leader groups. However, some consideration should be given to relatively high cost of the home visitation group. "Community spirit" is engendered when adults are brought in from the community to engage in discourse with students and

this treatment is inexpensive. The counselor aide group was at about the median for treatment expense and should tentatively be retained since it did seem to reduce absenteeism and since it is possible that the effectiveness of this group will become more apparent when its members begin next term to "counselor" incoming freshmen.

The individual help group is of relatively high cost, yet its effectiveness seems to be such that it should be seriously considered for any droput prevention program. However, it seems clear that the most effective group when results and cost are compared is the peer leader group since the only professional time expended was that of identifying and recruiting group members and leaders. A further bonus was that the group members seemed to enjoy and otherwise profit from the experience, as evidence by their invitation to the principal to attend one of their sessions to discuss with them substantive school issues and by their organization and sponsorship of a school dance.

Discussion of the Treatment vs. Descriptive Control Group Comparisons

It is quite obvious from the results that certain real differences exist between potential dropouts and stayins and that these differences can be detected with both the behavioral and the personality measures which were employed. The most striking behavioral difference between the two groups appeared in the number of days absent (Table XIV). This supports the findings of the many studies which have found a relationship between absenteeism and dropping out of school. A related, but not quite so striking, difference was found between the groups in number of classes skipped, the potential dropouts having missed the greater number.

In measured personality constructs, the differences between the two groups were again clear-cut. For example, significant differences existed between the two groups on 3 of the 6 SIV scales (Table XII). The stayin group placed a greater value on "being treated with understanding" (Support) and "doing things for other people" (Benevolence). It is a frequent observation that potential dropouts present behavior problems in school and that they often do not really feel a part of the school. Given this history, it is unlikely that they have been "treated with understanding" for quite some time and that they have learned to seek their rewards elsewhere, thus valuing Support less. Further, if one does not find support in his environment, he is unlikely to value its converse, "doing things for other people" (Benevolence).

One other SIV scale, Conformity, differentiated the two groups. It was the potential dropout group which more highly valued "doing what is socially correct; being a conformist". Certainly it is not to a larger social norm group, but to his own peer reference group that the potential dropout is conforming. This has some logical basis, for the stayins are likely finding their reinforcements in the school setting and possibly even in their own homes to a greater extent than are the potential dropouts, who are thus left to find them in their peer group. The price for that social reinforcement is conformity to group norms.

There was no difference between the two groups on either the pre- or the post-treatment Rotter I-E score, thus indicating that members of both groups were essentially the same in the extent to which they perceived themselves to be in control of their environments. This result is not in accord with those of previous studies. Perhaps

if the potential dropout group were subdivided according to some variable, such as number of days absent, differences along this personality dimension would become apparent.

Seven of the 16 PF primary factors were predictors of group membership (Table XV). Consistent with other studies, the stayin group was the more intelligent (Factor B). The stayins also experienced protension (high Factor L; suspicious, hard to fool) to a much greater extent than did the potential dropouts. This is consonant with the observation of Cattel and others (1970) that: "The protension person reports in questionnaire and biographical items that he comes from a parental home which he admired, and which had lively intellectual interests; he is contemptuous of the average...."[82]

The stayins were more dominant or assertive (Factor E), an unsurprising finding since this traits positively correlates with social status and is less likely to be present in persons who meet continual frustration--as the potential dropout often seems to. The stayins were also more enthusiastic or happy-go-lucky (Factor F), the origins of this trait seeming to be "a less punishing, more optimism - creating environment".[83]

Stayins were significantly more tense than were the potential dropouts. It is likely that this reflects lower aspiration levels among potential dropouts. Whatever the cause, this difference in tenseness can readily explain different scholastic performance between the two groups, for it is a well known psychological truism that a task is best

[82]Cattell, R., Eber, H., and Tatsuoka, M. Handbook for the Sixteen Personality Factor Questionnaire (16 PF), Champaign, Illinois, Institute for Personality and Ability Testing, 1970.

[83]Ibid.

learned if an optimal level of tension exists. Below this optimal level, tension is disruptive. It is likely that the tension of the stayin group is more within that optimal range.

The potential dropouts were substantially more shrewd (Factor N). This seems to fit the previous findings that: "In subcultural groups of adults, the N+ pattern is repeatedly associated with reactions of dislike of the school classroom and accepted academic goodness, which better fits the rebellious 'street-urchin-smartness' concept".[84] The opposite end of this continuum, toward which the stayin group is closer, is that of unpretentiousness of naturalness.

Finally, potential dropouts scored higher on Factor Q_3, thus indicating a greater concern about and regard for self-concept and social image. This seems quite similar to the results of the SIV Conformity scale and the comments made there would seem to apply equally as well here.

All four of the 16 PF second order factors utlized here were valid group predictors and the stayins scored higher on each of them than did the potential dropouts (Table XVI). Stayins tended to be more extroverted (Q_I) and anxious (Q_{II}). It is of interest that the stayins were significantly more Independent (Q_{IV}), yet there was no such between group difference on the SIV Independence scale (though stayins did score somewhat higher). Perhaps this is explained by the fact that valuing Independence is merely perceiving it as a desirable state of existence while the trait Independence reflects an already attained state. Finally, the stayins were higher on Corteria (Tough

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[84] Cattell, R., Eber, H., and Tatsuoka, M. Handbook for the Sixteen Personality Factor Questionnaire (16 PF), Champaign, Illinois, Institute for Personality and Ability Testing, 1970.

Poise, Q_{III}) reflecting a readiness to handle problems at a "dry", cognitive, objective level as opposed to operating from a mood level, especially that of frustration and depression. And finally, stayins scored significantly higher than did potential dropouts on the criterion score, Creativity. This was arrived at with a regression equation derived from 16 PF scores of writers and artists who were regarded as creative.

An integration of the above would thus picture the stayin, in relation to the potential dropout, as an enthusiastic, extroverted person who presents himself openly and who values both being treated with understanding and doing things for other people. Yet, he feels less need to conform or to worry about how he is presenting himself socially and, indeed, tends to be more independent and assertive. Intellectually, the stayin is superior to the potential dropout in abstract thinking ability and creativity and more likely to deal with problems in a "dry" cognitive (as opposed to emotional) manner. He does tend to be more tense and anxious but at levels which are facilitative rather than detrimental.

Contrasted with the stayin, the potential dropout is much more likely to be frequently absent from school and to skip classes when he is there. Although he is less concerned about being treated with understanding or about doing things for other people, he is quite dependent upon his peer group for social support and is, accordingly, a more submissive person who values conformity, who worries about how he is perceived by others, and who tends to be more calculating and shrewd in his dealings with people. Further, he is more introverted and sober and he experiences lower levels of tension and anxiety,

possibly because he has lower aspiration levels. Intellectually, he tends to think more concretely, as opposed to abstractly, and to deal with problems emotionally rather than merely rationally.

Summary of Chapter IV

In summation, the following points can be made:

1. Post-treatment comparisons of the no-treatment control and experimental groups were made by one-way analysis of variance which were run on the following outcome criteria: (a) number of absences from school; (b) number of class skips; (c) each of the SIV scales; (d) ID scores. In addition, correlations were run on the pre-post Rotter I-E scale scores of each group and t-test were run on each of these correlations. A two-way (observations and groups) analysis of variance was also run on the I-E scores.

2. Using p .20 as the level needed for significance, among group differences were found on the following outcome measures: (a) number of absences from school; (b) number of class skips; (c) 3 of the 6 SIV scales (Independence, Benevolence, Leadership). Further, only the no-treatment and descriptive control groups had significant pre-post treatment Rotter I-E scores. Between school differences were found when a Scheffe post hoc analysis was made of the absences and SIV Independ-nce criterion scores. The Newman-Keuls method of post hoc analysis was used on those ANOVA's with significance levels of p .10.

3. There was evidence for treatment effectiveness across groups when compared to the control group. Differential treatment effective ness was examined and, taking treatment cost into account, it was concluded that the Peer Leader Group treatment was most effective and

possibly even detrimental. The results for the other treatments were less conclusive.

4. In an ancillary study which was to run to gain further information, the no-treatment group (i.e., potential dropouts) was compared to a descriptive control group of students who were least likely to quit school. T-test were run on the following variables: (a) number of absences from school; (b) number of class skips; (c) each of the 6 SIV scales; (d) Rotter I-E scale scores, pre- and post-treatment; (e) the 16 primary traits of the 16 PF; (f) 4 secondary traits of the 16 PF; (g) 3 criterion scores derived, via regression equation, from 16 PF results.

5. Significant (p .10) between group differences were found on the following criteria: (a) number of absences from school; (b) number of class skips; (c) 3 of the 6 SIV scales (Support, Conformity, Benevolence); (d) 7 of the 16 PF primary traits; (e) each of the four 16 PF secondary traits (introversion-extroversion; anxiety; independence; tendency to handle problems in a affective - cognitive manner); (f) one 16 PF criterion score (Creativity). With these results, it was possible to construct profiles of both the "average" stayin and the "average" potential dropout.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Post-treatment comparisons of the no-treatment control and experimental groups were made by one-way analysis of variance. Using p .20 as the level needed for significance, among group differences were found on the following outcome measures: (a) number of absences from school; (b) number of class skips; (c) 3 of the 6 SIV scales (Independence, Benevolence, Leadership). Further, only the no-treatment and descriptive (described below) control groups had significant pre-post treatment Rotter I-E scores. Between-school differences were found when a Scheffe post hoc analysis was made of the skips and SIV Independence criterion scores. It was postulated that these between school differences could be attributed to a differential accuracy in recording skips and a real population difference in Independence. The Newman-Keuls method of post hoc analysis was used on those ANOVA's with significance levels of p .10.

There was evidence (I-E scores, absences, and SIV Benevolence scores) for treatment effectiveness across groups when compared to a control groups. Differential treatment effectiveness was examined and, taking treatment cost into account, it was concluded that the Peer Leader Group was most effective, while the Professional Counseling Group was least effective and possible even detrimental. The results for the other groups was less conclusive. However, the ascendency of the Peer Leader Group may be questionable since they received

special attention in the form of a newspaper write-up.

In an ancillary study which was run for the purpose of gathering further information, the no-treatment control group (i.e., potential dropouts) was compared to a descriptive control group of students who were least likely to drop out of school.

Significant (p .10) between-group differences were found on the following criteria: (a) number of absences from school; (b) number of class skips; (c) 3 of the 6 SIV scales (Support, Conformity, Benevolence); (d) 7 of the 16 PF primary traits; (e) each of the four 16 PF secondary traits (introversion-extroversion; anxiety; independence; tendency to handle problems in an affective, cognitive manner); (f) one 16 PF criterion score (Creativity).

With these results, it was possible to construct a profile of the potential dropout as contrasted to the stayin. The potential dropout is much more likely to be frequently absent from school and to skip classes when he is there. Although he is less concerned about being treated with understanding or about doing things for other people, he is quite dependent upon his peer group for social support and is, accordingly, a more submissive person who values conformity, who worries about how he is perceived by others, and who tends to be more calculating and shrewd in his dealings with people. Further, he is more introverted and sober and he experiences lower levels of tension and anxiety, possible because he has lower aspiration levels. Intellectually, he tends to think more concretely, as opposed to abstractly, to deal with problems emotionally rather than merely rationally, and to be less creative.

Recommendations

The general treatment effectiveness in this experiment indicates

that high schools can exert some influence on potential dropouts within a relatively short period of time. Since the elements common to all treatments appear to have been those of friendly interest and attention, and since cost was unrelated to effectiveness, the implications for schools are even more promising: School personnel have only to examine their resources and existing programs to decide how potential dropouts in their schools may be best provided those conditions which will make them feel appreciated as individuals.

A further recommendation is that guidance counselors should carefully examine their roles in relation to potential dropouts. This study indicates that routine counseling of potential dropouts on a one-to-one basis seems unjustified. However, since it is counselors who are most often responsible for dropout treatment programs, they should carefully seek the role in which they may have the greatest impact. Perhaps the role might most profitably be that of consultant and coordinator.

Recommendations for Future Research

The following ideas are recommended for future research in the area of dropout intervention strategies:

1. A longer range follow-up should be made of subjects in this study to ascertain the relative effectiveness of the treatments in holding potential dropouts in school.

2. This study was exploratory and had a certain administrative "looseness" about it. Replication should be made with tighter control over the conditions and with longer term treatments.

3. Further exploratory studies should examine the manner in which guidance personnel can have maximum impact upon potential dropouts.

4. Since treatment studies typically analyze the results for only those subjects who complete treatment, studies

should:

(a) Examine the characteristics of treatment dropouts and the effects (positive or negative) which the limited amount of treatment had on them.

(b) Attempt to "diagnose" potential dropouts and "prescribe" the most effective treatment program for each.

Epilogue

This experiment was undertaken with the dual goal of examining the effectiveness of certain treatments and of exerting a positive force on persons identified as potential dropouts. If was a field study and a certain amount of "sloppiness" had been expected, yet the extent to which it occurred was still surprising and, initially, even dismaying. What had not been anticipated was the commitment of the treatment personnel which took precedence over the need for experimental purity in their minds: Their's was an immediate rather than long-range focus.

Still, the results were such that a general treatment effectiveness was indicated and some differential treatment effects observed. No less important than the cold statistical results obtained was the real effect on real students. At the very least, attendance behaviors improved, and at the most--although there are no figures here to prove it--one or more of the subjects who would have otherwise quit school did not.

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