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Emphasis on Adolescents and Young Adults

BEHAVIORAL ASSESSMENT OF OCCUPATIONAL SKILLS OF LEARNING DISABLED ADOLESCENTS

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The University of Kansas Institute for Research in Learning Disabilities is supported by a contract (#300-77-0494) with the Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, U. S. Office of Education, through Title VI-G of Public Law 91-230. The University of Kansas Institute, a joint research effort involving the Department of Special Education and the Bureau of Child Research, has specified the learning disabled adolescent and young adult as the target population. The major responsibility of the Institute is to develop effective means of identifying learning disabled populations at the secondary level and to construct interventions that will have an effect upon school performance and life adjustment. Many areas of research have been designed to study the problems of LD adolescents and young adults in both school and non-school settings (e.g., employment, juvenile justice, military, etc.)

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Cooperating Agencies

Were it not for the cooperation of many agencies in the public and private sector, the research efforts of The University of Kansas Institute for Research in Learning Disabilities could not be conducted. The Institute has maintained an on-going dialogue with participating school districts and agencies to give focus to the research questions and issues that we address as an Institute. We see this dialogue as a means of reducing the gap between research and practice. This communication also allows us to design procedures that: (a) protect the LD adolescent or young adult, (b) disrupt the on-going program as little as possible, and (c) provide appropriate research data.

The majority of our research to this time has been conducted in public school settings in both Kansas and Missouri. School districts in Kansas which are participating in various studies include: United School District (USD) 384, Blue Valley; USD 500, Kansas City; USD 469, Lansing; USD 497, Lawrence; USD 453, Leavenworth; USD 233, Olathe; USD 305, Salina; USD 450, Shawnee Heights; USD 512, Shawnee Mission, USD 464, Tonganoxie; USD 202, Turner; and USD 501, Topeka. Studies are also being conducted in Center School District and the New School for Human Education, Kansas City, Missouri; the School District of St. Joseph, St. Joseph, Missouri; Delta County, Colorado School District; Montrose County, Colorado School District; Elkhart Community Schools, Elkhart, Indiana; and Beaverton School District, Beaverton, Oregon. Many Child Service Demonstration Centers throughout the country have also contributed to our efforts.

Agencies currently participating in research in the juvenile justice system are the Overland Park, Kansas Youth Diversion Project and the Douglas, Johnson, and Leavenworth County, Kansas Juvenile Courts. Other agencies have participated in out-of-school studies--Achievement Place and Penn House of Lawrence, Kansas, Kansas State Industrial Reformatory, Hutchinson, Kansas; the U.S. Military; and the Job Corps. Numerous employers in the public and private sector have also aided us with studies in employment.

While the agencies mentioned above allowed us to contact individuals and supported our efforts, the cooperation of those individuals--LD adolescents and young adults; parents; professionals in education, the criminal justice system, the business community, and the military--have provided the valuable data for our research. This information will assist us in our research endeavors that have the potential of yielding greatest payoff for interventions with the LD adolescent and young adult.

Abstract

Little information is currently available on the functional competencies of learning disabled adolescents. This study, using direct observation and measurement techniques, analyzed the differences in occupational skills among learning disabled youths and their non-learning disabled peers. The results showed low levels of employment-related skills for both groups of high school adolescents. However, the non-LD high school students performed significantly better on the job-related skills. These differences were more marked for non-social interaction skills. These findings suggest the need for the development of employment preparation methods designed to teach the skills involved in finding and retaining employment.

BEHAVIORAL ASSESSMENT OF OCCUPATIONAL SKILLS OF LEARNING DISABLED YOUTHS

A number of researchers (e.g., Cruickshank, 1977; Hardin, 1978) have noted the importance of developing an epidemiological data base for learning disabilities. Epidemiology, originating in the public health field, is the study of the distribution and determinants of the prevalence of a problem (Bloom, 1977). The development of a data base for the distribution and determinants of learning disabilities might have a variety of consequences for both the learning disabilities field and for people with learning disabilities.

Deshler (1978) noted that the establishment of an epidemiology data base before initiation of programmatic research and development efforts might prevent the perpetuation of unfounded assumptions. Further, Keogh, Major, Reid, Gandara, and Omori (1978) state that without an adequate data base, any data obtained will run the risk of being inconsistent and impossible to replicate. Thus, data on the incidence and determinants of learning disabilities might lead eventually to improved interventions that enhance the learning disabled person's ability to function more effectively in schools, at home, in the community, and in employment settings (Deshler, 1978).

Intervention research designed to produce effective methods for teaching functional competencies might be preceded by epidemiological research intended to gather data on the levels of social and nonsocial skills thought to be required for successful everyday living. The ability to apply basic skills to the coping situations associated with finding and keeping a job

would appear to be important for survival in today's society (Roth, 1976). Further, the particular importance of such skills for achieving the job-related goals of learning disabled youths has been noted (Newcomer, 1978; Touzel, 1978; Wiederholt, 1978).

Some research has examined the levels of skills of learning disabled children that might contribute to their effectiveness in everyday situations. For example, Bryan and her colleagues found that LD children often lack such behaviors as socially considerate communications, positive statements, offers to help, and cooperation; they often ignore others and make hasty judgments (Bryan & Bryan, 1978; Bryan & Pflaum, 1978). However, little epidemiological data exist on the levels of social skills in learning disabled adolescents (Meyen & Deshler, 1978). Such data on the level of occupational skills for learning disabled youths might contribute to judgements about which skills to teach and how such functional competencies might be taught.

The purpose of the present study was to gather epidemiological data on the magnitude of differences in occupational skills among learning disabled youths and their non-learning disabled peers. This was examined by the direct observation and measurement of job-related behaviors for each group. Such data on the distribution of differences in job-related skills may contribute to the development of promising employment preparation methods for learning disabled adolescents.

Method

Participants

Two groups of participants were involved in the study: learning disabled high school students and a random selection of high school students.

All participants lived in a midwestern city of 60,000 that has one senior high school with approximately 1,800 students. Each participant was informed of the purposes of the research and consented to participate. A similar informed consent procedure was followed for the parents of students under 18 years of age. For their participation, each student received a five dollar incentive payment.

The 25 learning disabled school students participating in the study had been identified by high school personnel as learning disabled. This classification was based on individual intelligence test scores (WISC-R; WAIS). A discrepancy between the Performance Scale I.Q. and the Verbal Scale I.Q. of at least 13 points was required to be placed in the program. The participants' full scale I.Q. scores ranged from 80 to 111 ($\bar{x}$ = 91.53). In addition, each participant showed a discrepancy between his/her achievement and potential performance as demonstrated on the achievement and cognitive sections of the Woodcock-Johnson Psycho-Educational Battery. The participants' reading cluster scores ranged from 443 to 525 ($\bar{x}$ = 492); their math cluster scores ranged from 475 to 548 ($\bar{x}$ = 515); and their written cluster scores ranged from 443 to 527 ($\bar{x}$ = 493).

A home check, conducted by the school social worker indicated that participants were not environmentally or culturally disadvantaged and that the participants' medical history did not contribute to the disability. Each student was assigned to a resource room at the high school for at least one class per day. Public school personnel contacted the students and their parents to request their participation in the study. Of the 39 high school students identified by school personnel as learning disabled, 25 agreed to participate in this study. The participants ranged in age from 15 to 19 years; in grade level from 10th to 12th ($\bar{x}$ = 10.56) and in work experience from none to five part-time jobs ($\bar{x}$ = 2.5).

A control group of 25 high school students was formed by selecting students at random from high school directory. These participants and their parents were similarly contacted, and meetings were scheduled for those who agreed to participate. A total of 52 students were contacted before 25 agreed to participate. These students ranged in age from 15 to 18 years, in grade level from 10th to 12th ($\bar{x}$ = 10.48) and in work experience from none to six part-time jobs ($\bar{x}$ = 2.5).

Setting

Assessments of occupational skills were made in an office containing a desk, chairs, paper, pencils, and a telephone. Each session was recorded on audiotape, with the cassette recorder in view of the subject. For situations involving interactions with employment personnel (e.g., job interviewer), an experimenter was present to play the role of the person from the job setting.

Occupational Skills Assessment Instrument

An occupational skills assessment instrument (Mathews, Whang, & Fawcett, 1980) was used to measure the job-related skills of each participant.[1] The instrument was designed to provide an opportunity for participants to practice a number of job-related skills in analogue situations. In this way, the performance of participants could be directly observed for each stage of the employment process. The results of the Mathews et al. (1980) study, examining the reliability and validity of the occupational skills assessment instrument, showed that the situations involved in the assessment were considered by participants and employment experts to be important and representative. In addition, satisfaction ratings provided by employment experts who viewed videotaped samples of participants' performance of the occupational skills were highly correlated with the observed performance of the participants. Further, the participants' performance, as observed with the behavioral assessment instrument, was highly correlated with observations using another measure of job-related behavior.

The instrument used a series of role-playing tests to measure the participant's performance of thirteen different employment-related skills. The skills included in the assessment were: 1) getting a job lead from a friend, 2) writing a letter to request an interview in response to a help-wanted advertisement, 3) telephoning a potential employer to obtain a job interview (when there is a job opening), 4) telephoning a potential employer to obtain a job interview (when there is not a job opening), 5) participating in a job interview, 6) writing a letter to follow-up a job interview, 7) accepting a suggestion from an employer, 8) accepting criticism from an employer, 9) providing constructive criticism to a co-worker, 10) explaining a problem to a supervisor, 11) complimenting a co-worker on a job done well, 12) accepting a compliment from a co-worker, and 13) completing a federal income tax form. These thirteen tasks represent a range of social interaction, writing and computational skills applied to important aspects of obtaining and retaining employment.

Observational Procedure

Each student participated in the thirteen job-related situations contained in the occupational skills assessment instrument. A role-playing evaluation script (Fawcett, Mathews, Fletcher, Morrow, and Stokes, 1976; Mathews and Fawcett, 1979) was used for each of the ten social-interaction situations; written materials or forms were used for the three non-social interaction situations. Each script specified the verbal statements and physical activities that the experimenter was to say or do. For example, for the task of accepting a suggestion from an employer, one of the researchers followed a script to play the role of a supervisor while the participant acted as if s/he were actually an employee. Each of the role playing situations was recorded on audiotape to allow for the scoring of each participant's performance of the job-related tasks.

All participants were instructed to perform each job-related task "as if" they were in the actual employment situation. An experimenter, following a script, described the situation to be acted out (e.g., "In this situation, I will play the part of ....") and played the role of the person with whom the participant was to interact. Before or during these role-playing situations, the participants were not informed of the responses that were considered to be appropriate by the researchers. After the completion of the assessment, the experimenter answered any questions that participants had about their performance or the assessment situations. Each of the role-playing situations was recorded on audiotape to allow for the scoring of each participant's performance of the job-related tasks.

For the three non-social interaction situations (writing a letter in response to a help-wanted advertisement, writing a letter to follow-up a job interview, and completing a federal income tax form), participants received a written description of the task to be performed (e.g., a sample help-wanted advertisement from the local newspaper) and the materials required to perform the task (e.g., paper, pencils). Each participant produced written products which could later be scored for the percentage of occurrence of specified responses.

A checklist was developed for each of the job-related skills in the occupational skills assessment instrument. This list was composed of the behaviors identified by employment experts and the employment training literature as being involved in the competent performance of each of the thirteen job-related tasks. The thirteen tasks contained a mean of nine discrete behaviors to be performed by the participant. The number of steps ranged from two (for accepting a compliment from a supervisor) to seventeen (for participating in a job interview and completing a federal income tax form).

An observer scored each participant's performance from either the written products or audiotaped role-playing sessions. To assess the level of interobserver agreement, a second observer using a checklist independently scored the occurrence or non-occurrence of each target behavior from the same audiotapes and written products. Interobserver agreement was measured by an item-by-item comparison of the scoring of the target behaviors for each of the job-related situations. Total reliability was calculated by dividing the number of agreements by the number agreements plus disagreements multiplied by 100. Total reliability averaged 94% (ranging from 80% to 100%) for all situations.

Results

The performance of job-related skills by learning disabled adolescents was compared to that of other high school students.

Table 1 about here

Table 1 shows the mean percentage and range of specified behaviors performed by both groups of participants. These percentages were obtained by dividing the number of correct responses by the total number of required responses on the checklist multiplied by 100. The overall mean percentage of occupational skills for learning disabled adolescents was 26% (ranging from 16% to 37%); for non-LD adolescents the overall mean was 46% (ranging from 20% to 65%). To determine the statistical significance of the differences between group means on each of the 13 skills, F-tests were conducted. A significance level of .01 was used. The differences obtained between the mean scores on seven of the thirteen skills were significant. Skill areas for which significant differences were obtained are denoted by an asterisk in Table 1. Four of these skills were social skills, and three involved writing or computation.

The job-related tasks were divided into two categories: social and non-social interaction skills. The overall mean percentage of social interaction skills performed by the learning disabled adolescents was 32% (ranging from 21% to 51%); 35% (ranging from 18% to 44%) was observed for non-LD adolescents. The overall mean percentage of non-social interaction skills performed by the LD adolescents was 20% (ranging from 7% to 36%); for non-LD adolescents the overall mean percentage of non-social interaction skills was 57% (ranging from 6% to 89%). Based on an F-tests, differences between the non-social interaction scores of the two groups were found to be statistically significant at ($p < .01$). However, the differences between the social interaction scores of the two groups were not statistically significant.

Discussion

The findings of this epidemiological research show low levels of employment-related skills for these high school adolescents. The results show that the non-LD high school students performed significantly better on seven of the thirteen job-related skills. Thus, these preliminary findings suggest a possible relationship between the classification of learning disability and larger deficits in occupational skills related to obtaining and and keeping employment.

It is interesting to note that the learning disabled adolescents had the greatest difficulty performing in non-social interaction situations, such as writing a letter to an employer or completing a federal income tax form, that require writing and computational skills. Conversely, the normative sample of high school students performed better on the non-social interaction tasks than the situations requiring social skills. The large

between-group differences in the performance of non-social interaction skills might be attributed to the lower reading, writing, and mathmatical proficiency levels generally observed in learning disabled students (Alley & Deshler, 1979).

The overall level of performance of social interaction skills by the learning disabled adolescents was not significantly different from the normative sample of high school students. However, statistically significant differences were found for the social skills of participating in a job interview, accepting criticism from an employer, providing constructive criticism to a co-worker, and explaining a problem to a supervisor.

Previous research (Bryan & Bryan, 1978) on the social skills of learning disabled children showed that LD children were less skilled in social interaction situations than are non-LD children. The findings of the present study suggest the importance of further research in the area of the social skills of LD adolescents to determine if the same types and magnitudes of skill deficits observed in elementary school children occur in adolescents.

A judgment about the importance of the deficits in occupational skills observed in both LD and non-LD adolesents should be based on information about the importance of the skills and information about the normative level of skills found in successfully employed persons. Previous research (Mathews, et al., 1980) indicates that the job-related skills observed in the occupational skills assessment are considered to be important by employment experts and employers. In addition, recent research by Mathews, Whang, and Fawcett (Note 1) showed that successfully employed adults performed significantly better on the occupational skills assessment ($\bar{x}$ = 77%)

than did unemployed adults ($\bar{x}$ = 51%). Taken together, these data indicate that both the LD students and their non-LD peers performed well below skill levels observed for successfully employed adults.

The findings of the present study suggest the importance of the development of effective methods of teaching job-related skills to adolescents who are about to enter the job market. The job-related skills identified in the occupational skills assessment instrument might be particularly critical for adolescents with learning disabilities who do not have the academic credentials of their peers. Training learning disabled adolescents in the job-related skills that they are found to be deficient might help them compensate for their learning disabilities in the competition for satisfactory employment.

Reference Note

1. Mathews, R.M., Whang, P.L., & Fawcett, S.B. Behavioral assessment of job related skills. Unpublished manuscript, University of Kansas.

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Footnotes

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[1]The occupational skills assessment instrument, rating forms, and instructions for their use are available from the authors, Center for Public Affairs, University of Kansas, Lawrence, KS 66045.

Table 1

Mean Percentage of Occupational Skills Observed

Job-Related Tasks	Number of Behaviors in the Task	LD Adolescents (N=25)		Non-LD Adolescents (N=25)	
		Mean Percent Appropriate	Range	Mean Percent Appropriate	Range
Social Interaction Skills					
1. Getting a job lead from a friend	9	28%	(11-67%)	29%	(11-56%)
2. Telephoning a potential employer to arrange a job interview (when there is a job opening)	11	17%	(0-45%)	19%	(0-45%)
3. Telephoning a potential employer to arrange a job interview (when there is not a job opening)	12	20%	(0-58%)	22%	(0-50%)
4. Participating in a job interview*	17	34%	(18-59%)	41%	(24-65%)
5. Accepting a suggestion from an employer	4	25%	(0-50%)	25%	(25%)
6. Accepting criticism from an employer*	7	27%	(14-57%)	39%	(29-71%)
7. Providing constructive criticism to a co-worker*	8	25%	(0-50%)	37%	(13-63%)
8. Explaining a problem to a supervisor*	9	30%	(0-56%)	38%	(22-56%)
9. Complimenting a co-worker on a job done well	3	61%	(33-100%)	51%	(33-100%)
10. Accepting a compliment from a co-worker	2	58%	(0-100%)	46%	(0-100%)

Table 1

Mean Percentage of Occupational Skills Observed

Job-Related Tasks	Number of Behaviors in the Task	LD Adolescents (N=25)		Non-LD Adolescents (N=25)	
		Mean Percent Appropriate	Range	Mean Percent Appropriate	Range
Non-Social Interaction Skills					
1. Writing a letter to request an interview in response to a help wanted advertisement*	10	19%	(0-50%)	46%	(0-80%)
2. Writing a letter to follow-up a job interview*	7	17%	(0-43%)	58%	(0-86%)
3. Completing a federal income tax form*	17	24%	(0-41%)	67%	(12-100%)

Table 1. The job-related tasks observed in the occupational skills assessment. A statistically significant difference ($p < .01$) was noted for items denoted with an asterisk (*).